Texas A&M International University
A. R. Sanchez, Jr. School of Business
Center for the Study of Western Hemispheric Trade

In Partnership with

Universidad Autónoma de Tamaulipas
Facultad de Comercio, Administración y Ciencias Sociales

25th Annual
Western Hemispheric Trade Conference
April 14 - 16, 2021

Conference Proceedings

ABOUT THE CENTER

The Center for the Study of Western Hemispheric Trade (CSWHT) at Texas A&M International University (TAMIU) is a public service institute founded to study globalization with a special emphasis on the Western Hemisphere. The Center is a part of the A. R. Sanchez, Jr. School of Business (ARSSB), and it supports the college as well as the entire Texas A&M International University community by organizing conferences, seminars, lecture series, and other public events, in addition to conducting and promoting research.

Ongoing activities of the Center include the International Bank of Commerce & Commerce Bank Keynote Speaker Series, TAMIU's Annual Western Hemispheric Trade Conference, the regular publication of *The International Trade Journal*, the flagship and highly successful academic journal now in its 35th year of publication, and its online Working Paper Series which provides a forum for disseminating works-in-progress reflecting the broad range of research activities of TAMIU's ARSSB faculty and students.

Mission

The Center has as its mission to study and promote research on globalization with special emphasis on the Western Hemisphere. The Center aims to increase awareness and knowledge about Western Hemispheric countries and their economical, political, and social interactions. The Center spotlights Texas A&M International University and the City of Laredo as key resources of information, research, training, and conferences focusing on the Western Hemisphere. Consistent with the mission of the School of Business, the Center promotes education and teaching through its various programs.

The CSWHT was created in 1995, and
TAMIU's Western Hemispheric Trade Center opened its doors in September 2001.

CONTENTS

Financial Management Issues

Global Business Issues: Foreign Investments & Insurance, Leadership, and Culture

Global Business Issues: Knowledge Management, Technology, and Entry Mode Selection

Issues in Education & Consumption in China

Issues in International Trade: The WTO, Trade Agreements, and IPR Protection

Issues in Management: Language, Trust, and the Covid-19 Pandemic

Regional Business Issues: Competitiveness, Alternative Markets, and Corruption

Special Session for Graduate Students

Covid-19: Impacto en la Economía

Covid-19: Impacto en Pymes y Negocios

Cuestiones de Servicios y Regulaciones Gubernamentales

Desarrollo de Personal, el Medio Ambiente y La Economia Naranja

Responsabilidad Social Corporativa

Temas en Educación Superior: El Impacto de Covid-19 y el Ingles

Temas de Tecnología

WELCOME

Dear Conference Participant:

Texas A&M International University's (TAMIU) A. R. Sanchez, Jr. School of Business (ARSSB) takes pride in welcoming you to its 25th Annual Western Hemispheric Trade Conference. The Conference is co-sponsored by the Center for the Study of Western Hemispheric Trade (CSWHT) in partnership with México's Universidad Autónoma de Tamaulipas (UAT) Facultad de Comercio, Administración y Ciencias Sociales. The Conference is being held April 14-16, 2021.

All conference activities will be held virtually via WebEx. Due to the uncertainty of the COVID-19 pandemic, the Center transitioned to a fully virtual Conference for 2021 with the health and safety of our participants as our primary concern.

We are proud to present three outstanding keynote speakers: Ambassador Earl Anthony Wayne, Distinguished Diplomat in Residence at American University's School of International Service; Dr. Darrell M. West, VP and Director of Governance Studies and Senior Fellow for the Center for Technology Innovation at Brookings Institution; and Dr. David Brown, Associate Professor of Economics at the University of Alberta and Canada Research Chair (CRC) in Energy Economics and Policy. We hope you will be able to attend their virtual keynote addresses.

A total of 111 papers will be presented throughout 28 academic sessions. Participants in this year's Partial Least Squares (PLS) Applications Symposium will be included in the academic sessions. The PLS Applications Symposium is chaired by Dr. Ned Kock, Regents Professor and Chair of the ARSSB's Division of International Business & Technology Studies.

We are pleased to welcome you as our "virtual" guest and participant in this year's Conference and hope you have the opportunity to build professional contacts, find potential collaborators, receive helpful feedback on your work as well as provide constructive commentary on the research being presented. The electronic proceedings for this Conference are available on our website: http://freetrade.tamiu.edu/.

Sincerely,

R. Stephen Sears, Ph.D.
Dean and Radcliffe Killam
Distinguished Professor of Finance
A. R. Sanchez, Jr. School of Business
Texas A&M International University
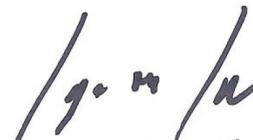
George R.G. Clarke, Ph.D.
Director, CSWHT and
Professor of Economics
A. R. Sanchez, Jr. School of Business
Texas A&M International University

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CONFERENCE AGENDA

Wednesday, April 14, 2021

12:30 p.m. CST **Concurrent Academic Sessions**
WebEx Location: https://go.tamiu.edu/whtc-sessions-1-4

Session 1: Issues in Trade, Production, and Pricing
Sesión 2: Cuestiones Laborales
Sesión 3: Temas de Consumo y Comercio
Sesión 4: Temas de Tecnología

3 p.m. CST **Concurrent Academic Sessions**
WebEx Location: https://go.tamiu.edu/whtc-sessions-5-8

Session 5: Financial Management Issues
Sesión 6: Cuestiones de Servicios y Regulaciones Gubernamentales
Sesión 7: Cuestiones de Seguridad Digital, Mercadotecnia y Procedimiento
Sesión 8: COVID-19: Temas de Redes Sociales, Comerciales y Calidad de Vida

5:30 p.m. CST **IBC Bank & Commerce Bank Keynote Speaker Series**
WebEx Location: https://go.tamiu.edu/wayne

Welcoming Remarks
Pablo Arenaz, Ph.D., President, TAMIU
Introduction
George R.G. Clarke, Ph.D., Director, CSWHT, ARSSB, TAMIU

The Importance of Getting U.S.—México Relations Right
Ambassador Earl Anthony Wayne, Distinguished Diplomat in Residence, School of International Service, American University

Thursday, April 15, 2021

10 a.m. CST **Concurrent Academic Sessions**
WebEx Location: https://go.tamiu.edu/whtc-sessions-9-12

Session 9: Global Business Issues: Knowledge Management, Technology, and Entry Mode Selection
Session 10: Issues in Management: Language, Trust, and the COVID-19 Pandemic
Sesión 11: Desarrollo de Personal, el Medio Ambiente y la Economía Naranja
Sesión 12: Temas en Comercio Digital

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Conference Agenda

12:30 p.m. **Concurrent Academic Sessions**
CST   WebEx Location: https://go.tamiu.edu/whtc-sessions-13-16

Session 13: Issues in International Trade: The WTO, Trade Agreements, and
    IPR Protection
Session 14: PLSAS Multidisciplinary Research Applications
Sesión 15: Responsabilidad Social Corporativa
Sesión 16: COVID-19: Impacto en la Economía

3 p.m. **Keynote Address**
CST   WebEx Location: https://go.tamiu.edu/whtc-keynote-west

Welcoming Remarks
    Thomas R. Mitchell, Ph.D., Provost and VP for Academic Affairs, TAMIU
Introduction
    George R.G. Clarke, Ph.D., Director, CSWHT, ARSSB, TAMIU

Should You Be Worried about Artificial Intelligence?
    Darrell West, Ph.D., Vice President and Director of Governance Studies
    and Senior Fellow for the Center for Technology Innovation, Brookings
    Institution

5 p.m. **Concurrent Academic Sessions**
CST   WebEx Location: https://go.tamiu.edu/whtc-sessions-17-20

Session 17: Environmental Protection as a "Public Good": A Civic Perspective
Session 18: Special Session for Graduate Students
Sesión 19: COVID-19: Temas de Negocios, Mercadotecnia y Comercio
Sesión 20: Comercio entre Estados Unidos y México

8:30 a.m. **Concurrent Academic Sessions**
CST   WebEx Location: https://go.tamiu.edu/whtc-sessions-21-24

Session 21: Global Business Issues: Foreign Investments & Insurance,
    Leadership, and Culture
Session 22: Agricultural Trade in India & ICT's Effect on Remittances in
    Sub-Saharan Africa
Sesión 23: Temas en Educación Superior: El Impacto de COVID-19 y el
    Ingles
Sesión 24: Administración de Empresas

Conference Agenda

Friday, April 16, 2021 (cont.)

11 a.m.
CST

Concurrent Academic Sessions
WebEx Location: https://go.tamiu.edu/whtc-sessions-25-28

Session 25: Issues in Education & Consumption in China
Session 26: Regional Business Issues: Competitiveness, Alternative Markets, and Corruption
Sesión 27: Cuestiones en el Comercio Internacional
Sesión 28: COVID-19: Impacto en PyMES y Negocios

1:30 p.m.
CST

Keynote Address
WebEx Location: https://go.tamiu.edu/whtc-keynote-brown

Welcoming Remarks
  R. Stephen Sears, Ph.D., Dean, ARSSB, TAMIU
Introduction
  George R.G. Clarke, Ph.D., Director, CSWHT, ARSSB, TAMIU

Electricity Market Design: Preparing for a High Renewable Resource Future
  David Brown, Ph.D., Associate Professor of Economics, University of Alberta and Canada Research Chair (CRC) in Energy Economics and Policy

3 p.m.
CST

Announcement of Student Awards & Closing Remarks
WebEx Location: https://go.tamiu.edu/whtc-keynote-brown

George R.G. Clarke, Ph.D., Director, CSWHT, ARSSB, TAMIU

THE INTERNATIONAL

A. R. SANCHEZ, JR. SCHOOL OF BUSINESS

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VERDAD, BELLEZA, PROBIDAD

IIUAT

ABOUT OUR SPEAKERS

Ambassador Earl Anthony Wayne

Ambassador Earl Anthony Wayne is a Distinguished Diplomat in Residence at American University's School of International Service. He is also a Public Policy Fellow at the Woodrow Wilson International Center for Scholars and Co-Chair of its Mexico Institute Advisory Board. He is a Senior Non-Resident Advisor at the Atlantic Council and at the Center for Security and International Studies, and serves on the Board of the American Academy of Diplomacy. Wayne writes, speaks, and consults on a wide range of topics.

Ambassador Wayne served as a U.S. diplomat from 1975 to 2015, including as the U.S. Ambassador to Argentina (2006—2009), the Coordinating Director for Development and Economic Affairs and Deputy U.S. Ambassador in Kabul, Afghanistan (2009—2011), and the U.S. Ambassador to México (2011—2015). He was the Assistant Secretary of State for Economic and Business Affairs (EB) under three Secretaries of State (2000—2006). The U.S. Senate confirmed him as a Career Ambassador, the highest rank in the U.S. Foreign Service, in 2010.

He received multiple honors during his government service, including the 2017 Director General's Cup for the Foreign Service and the 2015 Cobb Award for Initiative and Success in Trade Development. Wayne received an MPA from Harvard University's JFK School of Government, MAs from Princeton University and Stanford University, and a BA from the University of California, Berkeley.

The Importance of Getting U.S.—México Relations Right
Keynote Address | Wednesday, April 14, 2021 | 5:30 p.m. CST
Location: https://go.tamiu.edu/wayne
Sponsored by IBC Bank & Commerce Bank

Ambassador Wayne will talk about key issues in bilateral relations and developments in México.

ABOUT OUR SPEAKERS
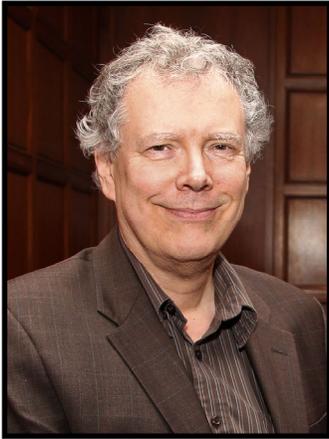
Darrell M. West, Ph.D.

Darrell M. West is Vice President and Director of Governance Studies and holds the Douglas Dillon Chair at Brookings Institution. He is Co-Editor-in-Chief of *TechTank*. His current research focuses on artificial intelligence, robotics, and the future of work. West is also director of the John Hazen White Manufacturing Initiative. Prior to coming to Brookings, he was the John Hazen White Professor of Political Science and Public Policy and Director of the Taubman Center for Public Policy at Brown University.

His books include *Turning Point: Policymaking in the Era of Artificial Intelligence* (with co-author John R. Allen; Brookings Press, 2020), *Divided Politics, Divided Nation* (Brookings Press, 2019), *The Future of Work: Robots, AI, and Automation* (Brookings Press, 2018), *Megachange: Economic Disruption, Political Upheaval, and Social Strife in the 21st Century* (Brookings Institution Press, 2016), *Going Mobile: How Wireless Technology is Reshaping Our Lives* (Brookings Press, 2015), *Billionaires: Reflections on the Upper Crust* (Brookings Press, 2014), *Digital Schools: How Technology Can Transform Education* (Brookings Press, 2012), *The Next Wave: Using Digital Technology to Further Social and Political Innovation* (Brookings Press, 2011), *Brain Gain: Rethinking U.S. Immigration Policy* (Brookings Press, 2010), *Digital Medicine: Health Care in the Internet Era* (Brookings Press, 2009), *Digital Government: Technology and Public Sector Performance*, (Princeton University Press, 2005), and *Air Wars: Television Advertising in Election Campaigns* (Congressional Quarterly Press, 2005), among others.

His books have been translated into Chinese, Japanese, and Korean, and he is the winner of the American Political Science Association's Don K. Price award for best book on technology (for *Digital Government*) and the American Political Science Association's Doris Graber award for best book on political communications (for *Cross Talk*). His *Brain Gain* book won the ForeWord Review Book of the Year for political science and his *Billionaires* book won the ForeWord Book of the Year Silver Award for political science. In 2014, he was honored by Public Administration Review for having written one of the 75 most influential articles since 1940. This was for his article "E-Government and the Transformation of Service Delivery and Citizen Attitudes."

Should You Be Worried about Artificial Intelligence?
Keynote Address | Thursday, April 15, 2021 | 3 p.m. CST
Location: https://go.tamiu.edu/whtc-keynote-west

Dr. West will discuss what AI is, how it is being deployed, and its opportunities and risks. He will present a policy blueprint for moving forward with AI.

ABOUT OUR SPEAKERS

David Brown, Ph.D.

David Brown is an Associate Professor at the University of Alberta's Department of Economics. He holds a Canada Research Chair in Energy Economics and Policy and is the President of the Canadian Association for Energy Economics. David received B.S. degrees in Quantitative Economics and Mathematics at Miami University (Ohio) and an M.A. and Ph.D. in Economics from the University of Florida.

His research lies at the intersection of energy economics, industrial organization, and regulatory policy. He has published over two dozen articles in journals including the *Journal of Industrial Economics*, *International Journal of Industrial Organization*, *The Energy Journal*, *Resource and Energy Economics*, *Energy Economics*, and *Canadian Journal of Economics*, among others. His recent research considers questions related to electricity market design, market power execution in wholesale and retail electricity markets, designing regulations to motivate utilities to invest in cost-effective distributed energy resources, and analyzing the impacts of compensation policies on renewable investment.

Electricity Market Design: Preparing for a High Renewable Resource Future
Keynote Address | Friday, April 16, 2021 | 1:30 p.m. CST
Location: https://go.tamiu.edu/whtc-keynote-brown

Renewable resources such as wind and solar power continue to grow rapidly worldwide. In 2021, these resources are projected to reflect 70% of all new large-scale generation capacity additions in the United States. This growth is driven by numerous forces, including government policies targeted at reducing greenhouse gas emissions and cost reductions of up to 90% in the last decade due to innovation and learning-by-doing.

While these technologies provide numerous economic and environmental benefits, they also come with significant challenges for the electricity sector. The intermittency (variability) and zero-marginal cost nature of these technologies magnify existing obstacles and alter the historical operations of electricity markets. The difficulty of overcoming these barriers is magnified by the increasing frequency of extreme weather events such as the recent winter storm in Texas. In addition, the growing movement for increased electrification of heating and the transportation sector will heighten the importance of ensuring a low-cost, reliable, and resilient electricity sector.

This presentation will discuss the ongoing debates over the design and regulation of wholesale electricity markets in a high renewable energy resource future. The discussion will focus on traditional and evolving market designs and regulatory policy. Dr. Brown will discuss market reforms to energy-only markets, such as Texas's electricity market, to achieve a reliable supply of electricity that is resilient to extreme weather events and increased electrification.

The responsibility for views expressed, and accuracy of facts given are those of the authors. Such opinions do not necessarily reflect the position of Texas A&M International University, the A.R. Sanchez, Jr. School of Business, or the Center for the Study of Western Hemispheric Trade.

International Trading Prices of India's Cotton: Growth Rates, Elasticities and Foreign Trade Policy

Aman Kumar Sharma[1]
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M.B. Dastagiri
ICAR-National Academy of Agricultural Research Management, Hyderabad, India

Abstract

This paper analyses India's cotton production, price, and trade trends and recommends the government frame agriculture policies. The methodology employed is the estimation of CAGR, Instability Index, Export-import price elasticities of cotton, and identification of its top export import destinations. The study is based on the secondary collected from FAO, APEDA, DGCIS, Agristat, etc. Cotton, often called as white gold, is one of the most important fiber crops grown in India, known for its trade value than any other fiber crops like, jute and Mesta. Cotton cultivation in India is a source of livelihood for a considerable share of the farming community. The exports and imports of cotton from 1991 to 2019 were selected. The results found that cotton import prices are more than export prices indicating India does not have a comparative advantage in cotton. The export price growth rate of cotton was less than imports. Export-import prices of cotton were stable. The study found that the highest exports and imports growth rate for cotton was in Brazil and India respectively, while some countries also emerged as top export import destinations for cotton. As China's raw cotton imports from India is declining specially from 2012–13 onwards, India should not rely much on China, instead, it has to concentrate on Bangladesh, Vietnam and Taiwan whose export share is expected to increase in future. In addition, India need to establish world class manufacturing units along the cotton value chain to produce finished products which absorbs surplus domestic cotton and in turn provide additional employment opportunities. The study suggests that India should make multilateral agreements in these countries. A multilateral trade relationship with high CAGR countries would help in the smooth trade of cotton.

I. Introduction

Cotton is the most important fiber crop of India. Cultivation of cotton started approximately 7000 years ago in Mexico (New world) and in India and Pakistan (Old world). Out of roughly 43 species of cotton, only four are cultivated on a large scale (Gossypium hirsutum, Gossypium barbadense, Gossypium arboretum, Gossypium herbaceum). Cotton grows in tropical and subtropical parts of Asia, Africa, Australia and America. People cultivate cotton because of the seed that represent valuable source of fibers and oil. Each year, around 25million tons of cotton is produced in 70 countries around the world. International cotton trade is 12 billion dollars' worth business. China is the greatest manufacturer of cotton in the world. (Niranjan, 2017)

Trade is considered as an engine of economic growth for the agrarian economies like India. In the market economy, the allocation of resources is greatly influenced by the world price signals. International prices require economic determinacy. Sufficient and reliable information is prerequisite for proper decision making be it the domestic market or international market. World

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price means a price for a good or services in all countries other than one's own (Financial-dictionary, 2012).

As quoted by David Hallam, 2003, the effectiveness of price signals to bring about adjustments in supply and demand and the impact of world price variability on the producers and consumers is directly proportional to the extent to which world market prices are transmitted to domestic markets.

World price influence international trade. Under modern capitalism, major commercial export and import transactions, regular in nature and payable in freely convertible currency, are conducted at world price (Encyclopedia, 2010). A country exports goods and services with local price lower than the world price. On the other hand, it imports goods and services with higher local prices than the world price (Financial-dictionary, 2012). Based on the above explanations, the exports and imports prices are considered as world trading price.

According to (Workman, 2019)India was the third largest exporter of cotton in terms of value and exported around $6.3 billion worth of cotton. India is one of the largest producers as well as exporters of cotton yarn. The Indian textiles industry contributes around 11 per cent to total export earnings. The industry is also the second-largest employer in the country after agriculture, providing employment to over 51 million people directly and 68 million people indirectly, including unskilled women. The textiles industry is also expected to reach US$ 223 billion by 2021. Gujarat, Maharashtra, Telangana, Andhra Pradesh, Karnataka, Madhya Pradesh, Haryana, Rajasthan, and Punjab are the major cotton producers in India.
(IBEF, 2019)

Cotton Association of India (CAI, 2020) reported there is an increase of 3 lakh bales in the estimate of cotton export for the season made now compared to the CAI's previous estimate of 47 lakh bales made during the last month on account of more favorable conditions for exports of cotton from India.

The CAI has increased its estimate of cotton imports by 1 lakh bales to 16 lakh bales compared to its previous imports estimate of 15 lakh bales, however it is still half of the estimated 32 lakh bales. This decrease in the imports estimate is mainly on account of easy availability of cheaper cotton in domestic market and relatively costlier imported cotton due to depreciation in the value of Indian Rupee. (economictimes, 2020) The global cotton consumption has expanded at a CAGR of 3.1% and expected to grow further during 2019-2024. China, India, Pakistan, and Bangladesh are the largest cotton consumers in the world, accounting for more than 65% of global consumption.

For many years, China and India have been the major markets for cotton consumption. However, in recent years, cotton consumption has increased dramatically in Uzbekistan and Vietnam. (mordorintelligence, 2019)

In order to make proper decision or policy to improve on production, productivity and ensuring stability, the decision has to be guided by certain decision elements (such as the pattern, trend, growth rate, instability, and relationships that exist among the economic performance of the crop). The cotton industry has experienced series of policy interventions, technological progress, pests and climate variations over the years. (Sanjay, 2018)

Objectives

The specific objectives of the study are:

1) To analyse the export and import scenario of cotton in India.
2) To estimate the growth rates, trends, elasticity and instability of exports and imports in India.
3) To study the top export and import destinations of cotton.
4) To suggest the appropriate strategies and policies for increasing foreign trade of cotton.

II. Literature Review

Export Import Scenario of Cotton in India

India produces more than 25 percent of the world's cotton, India's cotton export share in cotton production is nearly 17 percent, but still export of cotton from the country needs special attention. The present study was conducted to evaluate the export performance and competitiveness of cotton of India by the way of studying the changes in the area, production and productivity of cotton, growth rate and instability in the area, production, productivity, and export of cotton during Period-I (1970-1971 to 1994-95) and Period-II (1995-96 to 2016-17) and overall period (1970-71 to 2016-17). In addition to this export competitiveness of cotton, Structural changes in Cotton export and import were examined. (Myneni, 2019)

Exports of cotton have skyrocketed from 0.05 million bales in the year 2001-02 to 11.4 million bales in the year 2013-14. While cotton import has gradually declined to a million bales and India has turned into the second-largest producer of cotton in the world. Indian cotton is slowly gaining popularity in the international market. To maintain the comparative advantages, the Indian cotton industry needs improvement in research facilities and modern technology. Indian cotton yields are still lower when compared to global trends. There is a need to enhance the yield levels, which will ultimately help to increase domestic production and gain an advantage in good foreign exchange through export. (venkatesh, 2017)

Stability Analysis of Raw Cotton Export

India is one of the major players in raw cotton exports and its share in the global cotton trade is forecasted to increase by 20 percent in 2023. The present study aims at quantifying the changing structure of Indian raw cotton exports using the first-order Markov Chain Approach for the period 2004-05 to 2014-15. The results highlighted that China, Bangladesh, Vietnam, and other countries group including Hong Kong, Thailand, Malaysia were the stable markets for Indian raw cotton exports while Pakistan, Turkey, Taiwan, and Indonesia were the unstable markets. As China's raw cotton imports from India are declining especially from 2012-13 onwards, India should not rely much on China, instead, it has to concentrate on Bangladesh and Vietnam who are expected to rise in terms of exports. In addition, India needs to establish excellent manufacturing units along the cotton value chain to produce finished products which absorb surplus domestic cotton and in turn provide additional employment opportunities. (Devendra, 2016)

Competitiveness of Indian Cotton

This study has critically examined the issue of Cotton subsidies in the USA as well as made a comparative analysis of the cotton sector between the USA and India. In the background, the USA claims that African cotton producers' plight was not due to the trade-distorting subsidies of the USA but was on account of an upward trend in cotton production in India and China in the subversion of market signals. This study also estimated the relative advantages in cotton production and cotton export diversification by calculation various indicators. The result shows that India is gaining ranks in the production and export of cotton in recent years. This study highlights that the USA has a 14 percent share in world production; however, its share in world export is 38 percent. USA exports 86 percent of its production to other countries. The cost of producing cotton is the highest in the USA, which is 4.5 to 6 times higher than in India. During 1995-2010, the USA has given about $37 billion as an incentive to cotton, producers, through various programs like counter-cyclical payments, commodity certificates, decoupled income, etc. Regardless of the increasing cost of cotton production, the USA has an artificial relative advantage in the cotton market due to the high level of domestic support given to farmers and big corporations in the USA.. (Sachin, 2014)

III. Design of the Study

Methodology

This is a foreign trade research study. Export and import of Cotton from India and other countries were selected. The study period is from 1990-91 to 2018-19. India is exporting these commodities to more than 130 countries. Countries are classified into the top 10 countries that accounted for major share of cotton exports and the rest as other countries. Data on the quantity, values, and prices of exports, imports, and destinations of agricultural commodities was collected. Secondary data sources are APEDA, DGCIS, NHB, FAO STAT, CMIE, Foreign Trade Year Book, Planning commission reports, and export companies. This research will analyse exports and import price growth rates, trends, and TOT of Cotton and its export destinations. The research will estimate import-export and price elasticity, exports market and price signals of India's cotton, identify major market destinations. Compound annual growth rates (CAGR), price elasticity, instability, and trends of exports and import prices analysis have been estimated by using the following formulae.

Compound Annual Growth Rate Formulae

The compound growth rate (r) will be calculated by fitting the Exponential function to the variables of interest viz., exports, prices for the period 1990-91to 2014-15.

$$Yt - Y0 \ (1+r)t \qquad\qquad 1$$

Assuming multiplicative error term in equation1, the model may be linearized by logarithmic transformation.

$$lnYt = A+ Bt +€ \qquad\qquad 2$$

Where A (=lnAo) and B (=ln (1+r)) are the parameters to be estimated by ordinary least square regression, t= time trend in the year, r = exp (B) -1

Price elasticity of exports formulae

$$ΣPe = \% \text{ change in quantity exports } / \% \text{ change in price}$$

The percentage change in quantity exports is % ΔQ, and the percentage change in price is % ΔP. We calculate % ΔQ as ΔQ/Qave and We Calculate % ΔP as ΔP/Pave .
So we calculate the price elasticity of exports as (ΔQ/ Qave)/ (ΔP/Pave).

Instability Index Formulae

Coefficient of variation = (Standard Deviation / Mean) *100

Terms of Trade Calculation

$TOT = Average\ Price\ of\ Exports\ Average\ Price\ of\ Imports = Px/Pm$

$↑ Price\ M\ or\ ↓ Price\ X → Deterioration\ ToT$

$↓ Price\ M\ or\ ↑ Price\ X → Improvement\ ToT$

IV. Results and Discussion

Economic precision is required on international prices, imports, and exports. There are no or limited empirical studies on world trading price signals research of India's cotton and agricultural commodities. This study analyses trade signals of imports exports and, prices of India's cotton and identification of its destinations. Finally, the study will suggest multispeed strategies for the promotion of trade.

Trends in Area and Production of Cotton

Cotton is one of the most traded commodities in the world. In 2019 12.35 million ha of cotton was planted and the production was 14.67 million tonnes. The area under cultivation grew by an annual rate of 1.78% from 1991-2019 and production grew by 3.94% during the same period. The production specifically improved from 2005 due to the removal of import quotas on the textile product by developed countries which resulted in better export opportunities.

Figure 1: Area and Production of Cotton (Trends) in India (1991-92 to 2018-19) (FAO, 1991-2019)
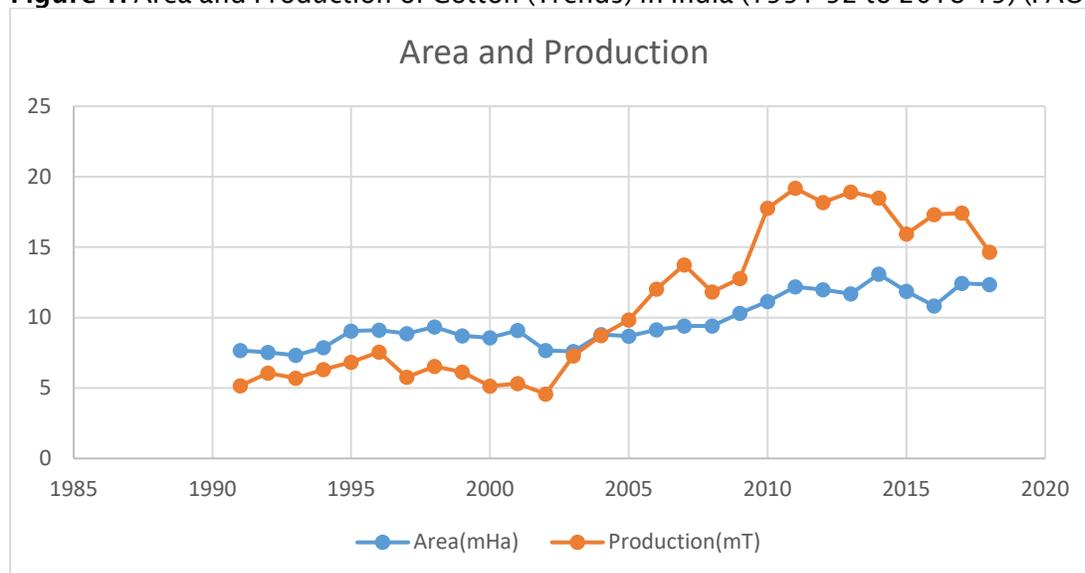
Import-Export Scenario

Table 1: Average Import-Export Prices and Terms of Trade of Cotton in India (FAO, 1991-2019)

	1991-2000	2001-2010	2011-2019	1991-2019
Average Export Price (Tonne/ US$)	1.26	1.25	1.72	1.41
Average Import Price (Tonne/ US$)	1.90	1.74	2.28	1.98
Terms of Trade	0.66	0.71	0.75	0.71

The average export-import prices and the Terms of Trade of India's cotton are presented in Table 1. Presently India is the fourth largest exporter of cotton. During the period of 1990-91 to 2018-19, the import prices of cotton were observed to be higher than the export prices. Also, the Terms of Trade in the same period were observed to be 0.71%. This indicates that India does not have a comparative advantage in cotton over other countries.

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Price, Quantity Growth Rates and Instability of India's Cotton

The annual compound growth rates and coefficient of variation of export-import quantity and prices, the price elasticity, and instability of India's cotton are presented in Table 2. During 1991-2019 both the import and export price growth rates were found to be positive. Figure 2 shows the trend of export-import prices in the same period.

During the period the import growth rate grew much more significantly than the export growth rate, almost better by 21%. The price elasticity for imports was found to be just over 1 indicating its elastic nature whereas for exports it was 0.37. The prices of both export and import, during the period of 1990-91 to 2017-18 were observed to be stable.

Table 2: Prices and Quantity Growth Rates and Instability of India's Cotton

	1991-2000	2001-2010	2010-2019	1991-2019	
Price Growth Rate	81.73	-23.98	42.0	26.3	Import
	-24.42	87.23	-12.9	4.98	Export
Price Elasticity	1.57	1.12	2.48	1.01	Import
	1.04	0.56	0.98	0.37	Export
Instability				32.95%	Import
				25.58%	Export

Figure 2: Export and Import Price Trends of Cotton in India
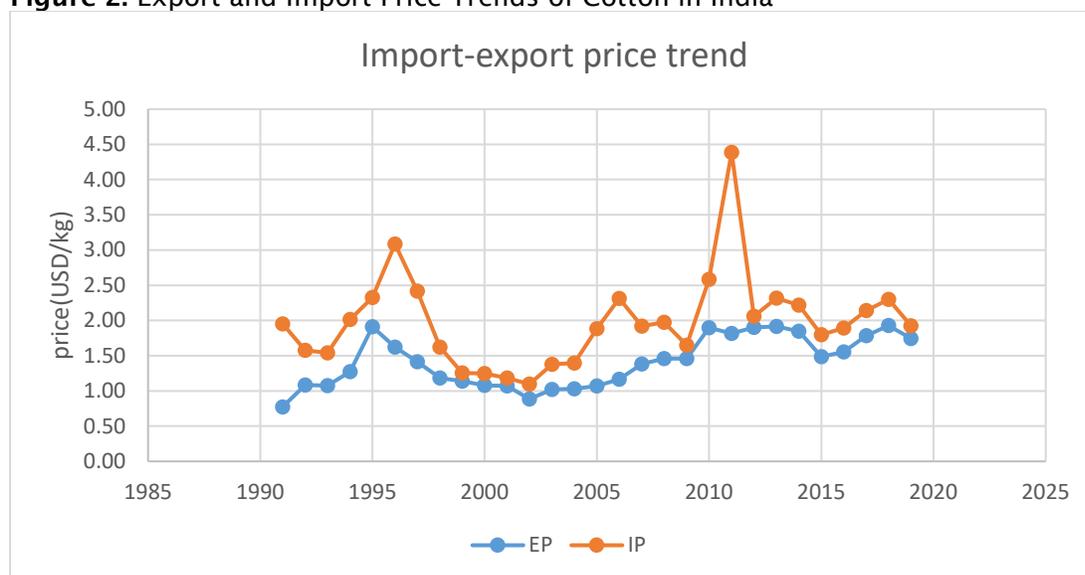
Growth Rate and Elasticity of Top 10 Export and Import Destinations of Cotton in the World

Table 3 shows the price growth rates and elasticity of top 10 importers of cotton in the world. The price elasticity in the period of 1990-91 to 2018-19 of Thailand(1.74), Pakistan(1.52), and VietNam(1.16) was found to be the highest among the top 10 whereas Bangladesh(0.80), China mainland(0.81) and Mexico(0.85) had the minimum.

Table 3: Growth Rate and Price Elasticity of Top 10 Importers of Cotton in the World (FAO, 1991-2019)

	1991-2000		2001-2010		2011-2019		1991-2019	
	Growth rate	Price elasticity	Growth rate	Price elasticity	Growth rate	Price elasticity	Growth rate	Price elasticity
China, mainland	-20.42	-0.95	54.66	5.16	-10.29	-4.68	5.50	0.81
VietNam	11.11	-7.38	13.63	5.48	21.99	-6.08	14.69	1.16
Bangladesh	15.19	-2.64	15.94	4.27	8.45	1.20	11.54	0.80
Turkey	32.08	-3.91	7.75	6.53	3.18	-6.90	10.87	0.92
India	81.73	-4.86	-23.98	9.05	30.72	-8.80	23.16	0.85
Indonesia	5.31	-3.57	-2.33	3.25	4.87	-7.51	2.91	0.91
Pakistan	73.58	-6.25	11.78	3.07	13.57	-8.88	31.33	1.52
Thailand	1.06	-3.87	-0.33	5.14	-2.95	-7.63	-1.06	1.74
Mexico	30.13	-3.51	-2.80	5.22	-4.00	-6.65	6.01	0.85
Malaysia	8.95	-4.21	-4.21	4.86	4.87	-8.11	5.46	0.91

Table 4: Growth Rate and Price Elasticity of Top 10 Exporters of Cotton in the World (FAO, 1991-2019)

	1991-2000		2001-2010		2011-2019		1991-2019	
	Growth rate	Price elasticity	Growth rate	Price elasticity	Growth rate	Price elasticity	Growth rate	Price elasticity
United States of America	-0.05	-2.88	5.19	5.94	3.69	-6.97	3.19	0.83
Brazil	-14.90	-0.85	14.86	4.84	2.73	-2.68	7.75	0.67
Australia	9.31	-3.32	-6.19	5.72	-7.05	-5.80	1.50	0.62
India	-24.42	3.76	87.23	6.55	-6.82	0.86	7.60	0.37
Greece	12.80	-4.45	-2.75	11.51	6.84	-3.66	3.11	0.75
Benin	13.40	-6.13	-5.07	3.15	25.72	-6.78	6.86	0.98
Côte d'Ivoire	5.79	-5.60	-3.14	3.34	13.03	-1.77	2.01	0.78
Burkina Faso	3.32	-1.94	4.43	4.35	3.18	-0.41	4.86	0.69
Uzbekistan	348.91	-0.14	-5.28	6.45	-9.93	-4.68		0.52
Turkey	-13.49	-2.56	-0.34	6.55	8.86	-5.48	-0.23	-1.02

Table 4 shows the top 10 exporters of cotton in the world. It can be observed that the price elasticity of Benin, USA, and Ivory Coast was the highest during the period 1991-2019. Turkey is observed to have a negative price elasticity.

It is observed that India, Brazil, and Benin had the highest growth rate from the period of 1991-2019.

V. Conclusion

World price means a price for a good or service in all countries other than one's own. World price influences international trade. The study findings have important implications to be considered in designing policies and programs for boosting cotton exports and imports, foreign earnings, and identification of destinations. There was a sharp increase in the export value from $642 million in 2008 to $4.5 billion in 2013. However, it followed a rapid decline till 2016 and reached to $1.3 billion. The cotton export in terms of volume experienced a similar trend. India has observed a recent decline in cotton production and exports, which can be majorly attributed to unstable weather and prolonged monsoons.

Whereas export and imports price growth rates of cotton were found to be positive during 1990-91 to 2018-19. The export prices growth rate was 4.98% and the import prices growth rate was 26.3%. The study found that during the period of 1990-91 to 2018-19, the import prices of ginger were higher than the export prices. The Terms of Trade in the same period have increased by 0.71% indicating that India no longer have a comparative advantage in cotton trade over other countries. The import price elasticity was 1.01% and the export price elasticity was 0.37% from 1990-91 to 2018-19. The terms of trade have improved during the period of study at around 0.71%. Both the export-import price growth rates of cotton were found to be positive, however the imports witnessed significant growth.

United States of America is the biggest exporter of cotton across the world, exporting over 30%, followed by Brazil, Australia and India. On the other hand, China is the world's largest importer of cotton followed by Vietnam, Bangladesh and Turkey.

The major export destination for India are Bangladesh, China and Vietnam. Whereas India imports majority of its cotton from the United States of America, Egypt and Ivory coast.

For many years, China and India have been the major markets for cotton consumption. However, in recent years, cotton consumption has increased dramatically in Uzbekistan and Vietnam. Since Vietnam exports most of its cotton to China duty free, India can fulfill the demand side for Vietnam.

The import price growth rate was highest in Pakistan, Vietnam, Turkey and Bangladesh. Therefore, India should try to export majorly to these countries. The price elasticity of Pakistan, Vietnam, Thailand and turkey were observed to be the highest. This indicates that India should increase its exports in these countries. Since trade relations with Pakistan are complicated, India should focus more on the latter countries.

The study can be used by exporters and importers of the commodity for market and price signals of the commodity. The study also has important implications to be considered in designing foreign trade agricultural policies and programs to boost trade and foreign earnings of export and import countries. The study suggests that a multilateral trade relationship with high CAGR countries would help in the smooth trade of cotton. The findings have important implications for policy research and R&D strategies and response and re-orientation of the R&D system to the changing trade scenario to benefit from WTO.

References

CAI. (2020). Retrieved from Cotton Association of India: https://www.caionline.in/

Devendra, L. a. (2016). Stability analysis of India's raw cotton export. economictimes. (2020). https://economictimes.indiatimes.com/news/economy/agriculture/indias-cotton-exports-likely-to-rise-19-in-2019-20-the-cotton-association-of-india/articleshow/77590227.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst. Retrieved 2020

Encyclopedia. (2010). world prices. Retrieved from the free dictionary: https://encyclopedia2.thefreedictionary.com/World+Prices

FAO. (1991-2019). Retrieved from faostat: http://www.fao.org/faostat/en/#data/TP

Financial-dictionary. (2012). world price. Retrieved from financial dictionary.com: World Price

IBEF. (2019). https://www.ibef.org/exports/cotton-industry-india.aspx. Retrieved 2020

mordorintelligence. (2019). Cotton market. Retrieved November 2020, from mordor intelligence: https://www.mordorintelligence.com/industry-reports/cotton-market

Myneni. (2019). https://krishikosh.egranth.ac.in/handle/1/5810145408. Retrieved November 8, 2020, from Krishikosh.

Niranjan, B. a. (2017). An analysis of trend in production, consumptionand trade of cotton in India.

Sachin, K. (2014). Competitiveness of Indian Agriculture Sector: A Case Study of Cotton Crop. Retrieved from science direct: https://www.sciencedirect.com/science/article/pii/S1877042814031085

Sanjay, S. a. (2018). Growth and instability in cotton.

venkatesh. (2017). https://krishikosh.egranth.ac.in/handle/1/5810073838. Retrieved November 6, 2020

Workman, D. (2019). Cotton exports by country. Retrieved from worldstopexports.com: http://www.worldstopexports.com/cotton-exports-by-country/

18

International Trading Prices of India's Ginger: Growth Rates, Elasticities and Foreign Trade Policy

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Abstract

India, known as the home of spices, boasts a long history of trading with the ancient civilizations of Rome and China. Ginger is grown in almost all parts of India since time immemorial. In India, Mizoram and Assam, Jharkand, West Bengal and Kerala are the leading producers of ginger. These states contribute more than 50 percent of the total ginger production. This paper analyzes India's ginger production, price, and trade trends and recommends the government frame agriculture policies. The methodology employed is the estimation of CAGR, Instability Index, Export-import price elasticities of ginger, and identification of its top export import destinations. The study is based on the secondary collected from FAO, APEDA, DGCIS, Agristat, etc. The results of this study show that export prices of ginger were higher than import prices indicating that India has a comparative advantage in this crop. The import price growth rate of ginger was observed to be higher than exports. It also found that India's major export destinations for ginger are Morocco, the United States, Bangladesh, and the UK, whereas major import destinations are Nigeria, Nepal, UAE, and China. The study suggests that a multilateral trade relationship with countries having high export imports share would help in smooth trade of ginger.

I. Introduction

Ginger is one of the most common spices consumed globally. Its demand has been growing for ages around the world, for different purposes. Ginger can be used for a variety of food or medicine items such as vegetables, candy, soda, pickles, and alcoholic beverages. Ginger is primarily used to treat nausea, but it is also used as an anti-inflammatory, a pain remedy, a warming remedy, and a cholesterol-lowering herb. This spice can grow in a wide variety of land types and areas, although yields are most if cultivated in a warm, humid environment. (KrishiJagran, 2020) Due to these favorable conditions, India has been among the top producers of ginger for many years. Ginger is one herb or crop that is cultivated almost in every state of India. The overall ginger production for 2018 as per the spices board was recorded to be 10,43,130 tonnes. (TheIndianBlog, 2020) Assam, the eastern state was the largest producer of ginger in India during the fiscal year 2018. This stood at nearly 168 thousand metric tons, contributing about 17.5 percent to the country's ginger production. Maharashtra followed, with West Bengal ranking third that same year. (Statista, 2020).

Indian economy is an agrarian economy. Agriculture contributes 16% towards the GDP of the country and employs 49% population of the country. India's trade with foreign countries is not of recent origin. Foreign trade has played a significant role in the economic development of our country. It not only helps us in earning foreign exchange but also provides us with an opportunity

of using diversified products produced in every corner of the world. The history of India traces trade with countries like Greece, Germany, China, Japan, Java, and Arabian countries since 1100 B.C. India's rich resources and comparative advantage in various products have attracted a lot of traders across the border.

Indian agriculture has to face competitiveness in international trade for each commodity due to liberalization and agreement of WTO. Spices are the major exports from India and it is generally expected that trade policies would influence the spice trade. In the area of export, ginger occupies the fifth position in terms of quality and the sixth position in export earnings among the spices. (Santosh Kumar Potnuru, 2018).

The global ginger market grew at a CAGR of around 5% during 2015-2019. (ExpertMarketResearch, 2020) In value terms, the ginger trade slightly fell from US$ 967.2 million in 2014 to US$ 884.7 million in 2018. China is the largest exporter of ginger across the world, exporting over 50%, followed by Netherlands, Thailand, Peru, and India. On the other hand, the US is the world's largest importer of ginger followed by Japan, the Netherlands, Pakistan, and Germany. (CATR, 2020). There has been a regular decline in exports of Indian ginger both in value and volume terms. From 2014 to 2018, the value of exported ginger plummeted from US$ 51.1 million to US$ 31.5 million in value terms and from 46.3 thousand tons to 20.5 thousand tons in volume terms. In 2018, India exported around US$ 31.5 million worth of ginger and imported approximately US$ 19.6 million. One of the reasons for this decline is our per-unit price of ginger. China's export of ginger is on the continuous rise due to its price competitiveness. There is almost a gap of US$ 600-650 per ton in the price of ginger per unit between India and China, China being price competitive. (CATR, 2020). Major export destinations of Indian ginger are Bangladesh, Saudi Arabia, UAE, Morocco, UK, and the US.

As mentioned above, the exports of ginger from India have been declining for the past few years. Therefore, a study on the export scenario and the comparative advantage of India for ginger export will help us making strategies and take measures to increase foreign trade of Ginger.

II. Objectives

The specific objectives of the study are;
1) To analyze the export and import scenario of Ginger in India.
2) To estimate the growth rates, trends, elasticity, and instability of exports and imports in India.
3) To study the top export and import destinations of ginger.
4) To suggest the appropriate strategies and policies for increasing foreign trade of ginger.

III. Literature Review

Export-Import Scenario of Ginger

Karthick et al conducted a study on Growth and Export Performance of Ginger in India– An Economic Analysis. It could be seen that the export of ginger in 1980-81 was 6811 tonnes and it reached the higher level of 18442 tonnes in 1993-94. Export was found to be the highest i.e. 28268 tonnes in 1996-97. It showed a declining trend from 1998-99 to 2003-04. The price per kg of ginger was less than 20 in most of the years during the Pre-WTO period and it had increased during the Post-WTO period. The highest price realized was `49.45/kg in 2006-07. This had contributed to a higher export value of ginger during the Post-WTO period. (V. Karthick, 2015).

Jambor *et al* (2018) conducted a study on Competitiveness in the Trade of Spices: A Global Evidence. This study reported that the global spice trade has been continuously increasing in the previous 25 years with a high concentration on both the export and import sides by country and by-product. India, China, and Vietnam were the biggest spice exporters in the world in 2011-

2015. While the United States, Germany, and Japan were leading the line in global spice imports during the same period. Most traded products were anise or badian, caraway, cardamoms, ginger, and cumin, altogether giving 63% of global spices trade in 2011- 2015, suggesting a high level of concentration. (Jambor, Toth, & Koroshegyi, 2018).

Estimating the Growth Rates, Trends, Elasticity, and Instability

Karthick *et al* (2015) conducted a study on the Growth and Export Performance of Ginger in India– An Economic Analysis. This study revealed that the ginger area had increased during the post-WTO period while the growth rate of production and productivity were positive but lower than the pre-WTO period. This is mainly due to the stagnation of productivity. Ginger had a negative growth rate in export quantity and value during post-WTO which was mainly due to stiff competition from other exporting countries. (V. Karthick, 2015).

Thomas & Sanil (2019) conducted a study on Competitiveness in Spice Export Trade from India. This study showed that export trade stability is also an important factor for the exporting countries to implement long-term policy interventions in the export sector. (Thomas, 1970).

Joshi *et al* (2015) using the Markov chain approach to analyze the stability of Indian spice exports in their study and found that the level of spice export stability was highly variable across the export destinations. (Deepika Joshi, 2014).

Naik & Hosamani (2013) have done a similar study for Indian turmeric and suggested the use of results from Markov chain analysis for targeting stable export destinations for strengthening export profile. The trade competitiveness of spices, like other agricultural commodities, can be sustainable only if continuous efforts are made in technology up-gradation, production efficiency enhancement, and sustenance of cost advantages (V.R. Naik, 2013).

The Comparative Advantage of India for Ginger Export

Jambor *et al* (2018) in his study reported that India, China, and Vietnam were the biggest spice exporters in the world in 2011-2015, accounting for 38% of the global spices trade. Over the last decade, India also has had a significant and growing share in spice exports thanks to its virtual monopoly on spice oils made from tropical aromatics but is also one of the biggest exporters of cumin, paprika, and spice mixtures. China, Vietnam, and Indonesia are located in the same climate zone so they have very similar and intensive flavored cuisines based on spices. Guatemala, India, Nepal, Singapore, and Indonesia exported 93% of the world's cardamom in 2011-2015. It is almost the same situation with paprika, ginger, cloves, and vanilla, coming from relatively few countries. Guatemala, Sri Lanka, and India had the highest Balassa indices in the period analyzed, while six countries out of the ten biggest exporters had a comparative advantage in 2011-2015. Indonesia and Singapore experienced the biggest fall in the period analyzed, while Germany and the Netherlands had a comparative disadvantage in global spices trade, despite being one of the biggest exporters. (Jambor, Toth, & Koroshegyi, 2018).

Centre for Advance Trade Research (2020) stated that there has been a regular decline in the exports of Indian ginger both in terms of value and volume. From 2014 to 2018, the value of exported ginger plummeted from US$ 51.1 million to US$ 31.5 million in value terms and from 46.3 thousand tons to 20.5 thousand tons in volume terms. Per unit price of ginger is one of the reasons for this decline in India. China's export of ginger is on the continuous rise due to its price competitiveness in the global market. There is almost a gap of US$ 600-650 per ton in the price of ginger per unit between India and China. (CATR, 2020).

IV. Design of study

Methodology

This is a foreign trade research study. Export and import of Ginger from India and also from other countries were selected. The study period is from 1990-91 to 2017-18. India is exporting these commodities to more than 130 countries. Countries will be classified into the top 10 countries that accounted major share of ginger exports and the rest as other countries. Data on the quantity, values, and prices of exports, imports, and destinations of agricultural commodities will be collected. Secondary data sources are APEDA, DGCIS, NHB, FAO STAT, CMIE, Foreign Trade Year Book, Planning commission reports, and export companies. This research will analyze exports and import price growth rates, trends, and TOT of ginger and its export destinations. The research will estimate import-export and price elasticity, exports market and price signals of India's cereals, identify major market destinations. Compound annual growth rates (CAGR), price elasticity, instability, and trends of exports and import prices analysis will be estimated by using the following formulae.

Compound Annual Growth Rate Formulae

The compound growth rate (r) will be calculated by fitting the Exponential function to the variables of interest viz., exports, prices for the period 1990-91to 2014-15.
Yt - Y0 (1+r)t ---------1
Assuming multiplicative error term in equation1, the model may be linearized by logarithmic transformation.
lnYt = A+ Bt +€ ----------2
Where A (=lnAo) and B (=ln (1+r)) are the parameters to be estimated by ordinary least square regression, t= time trend in the year, r = exp (B) -1

Price Elasticity of Exports Formulae

ΣPe = % change in quantity exports / % change in price
The percentage change in quantity exports is % ΔQ, and the percentage change in price is % ΔP. We calculate % ΔQ as ΔQ/Qave and We Calculate % ΔP as ΔP/Pave .
So we calculate the price elasticity of exports as (ΔQ/ Qave)/ (ΔP/Pave).

Instability Index Formulae

Coefficient of variation = (Standard Deviation / Mean) *100

Terms of Trade Calculation

$TOT = Average\ Price\ of\ Exports\ Average\ Price\ of\ Imports = Px/Pm$
$\uparrow Price\ M\ or\ \downarrow Price\ X \rightarrow Deterioration\ ToT$
$\downarrow Price\ M\ or\ \uparrow Price\ X \rightarrow Improvement\ ToT$

V. Results and Discussions

Economic precision is required on international prices, imports, and exports. There are no or limited empirical studies on world trading price signals research of India's oilseeds and agricultural commodities. This study analyses trade signals of imports exports and, prices of India's ginger and identification of its destinations. Finally, the study will suggest multispeed strategies for the promotion of trade.

Export-Import Scenario of India

Figure 1: Area and Production of Ginger (Trends) in India (1990-91 to 2017-19) (FAO, FAO Stat, 1991-2019)
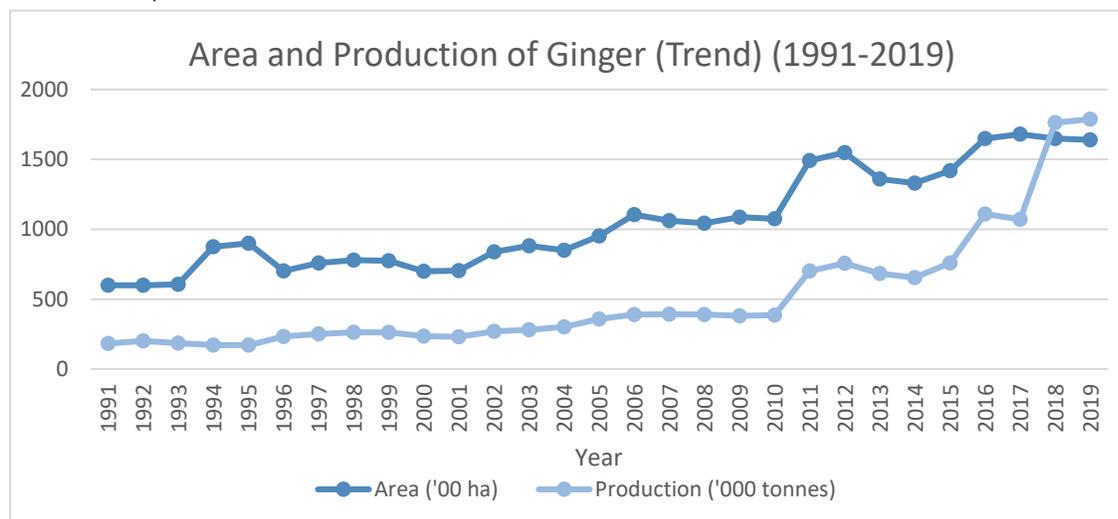
Ginger is one of the earliest recorded spices to be grown in India. From India spices like pepper, ginger, turmeric, chili, tejpat, small and large cardamom, coriander, cumin, and garlic, etc are produced and exported. In the year 2019, India's share of spices export earnings was 1.24%. India is the largest producer of ginger in the world and more than 50% of the ginger production in India is contributed by North East, Uttarakhand, and Sikkim. Also, most of its production in the North East is done organically. In the year 2019, the production of ginger in India was 1.78 Million Tonnes in an area of 1.64 Lakh ha. Figure 1 shows the trend in the Area and Production of Ginger over the years (1991-2019).

The average export-import prices and the Terms of Trade of India's Ginger are presented in Table 1. During the period of 1990-91 to 2017-18, the export prices of ginger were observed to be higher than the import prices. Also, the Terms of Trade in the same period were observed to increase by 2.67%. This indicates that India has a comparative advantage in ginger over other countries.

Table 1: Average Import Export Prices and Terms of Trade of Ginger in India

	1991-2000	2001-2010	2011-2018	1991-2018
Average Export Price (Tonne/ US$)	684.23	976.69	1505.14	1023.23
Average Import Price (Tonne/ US$)	249.46	337.82	608.69	383.65
Terms of Trade	2.74	2.89	2.47	2.67

(FAO, FAO Stat, 1991- 2019)

Export, Import Prices, and Quantity Growth rates & Instability of India's Ginger

The annual compound growth rates and coefficient of variation of export-import quantity and prices, the price elasticity, and instability of India's ginger are presented in Table 2. During 1990-91 to 2017-18, both export and imports price growth rates of ginger were found to be positive.

Figure 2 shows the trend of export-import prices in the same period. From 1991 to 2000 and 2010-2018, the quantity growth rates of exports were observed to be negative (-7.69% and -5.03% respectively). However, the growth rate of import prices was observed to be more than the growth rate of export prices. There is also a higher difference in the quantity growth rates of exports and imports, with imports having a higher growth rate. The price elasticities of export-import prices during 1990-91 to 2017-18 were observed to be positive. But, during 2010-18, the import price elasticity was observed to be negative. The standard deviation of an exponential distribution is equal to its mean, so its coefficient of variation is equal to 1. Distributions with CV < 1 (such as an Erlang distribution) are considered low-variance, while those with CV > 1 (such as a hyper-exponential distribution) are considered high-variance. *(Coefficient of variation, Psychology Wiki, n.d.)* The CV is also known as the relative standard deviation (RSD), which is the result of multiplying the absolute value of the CV by 100; its interpretation, however, is similar to that of the classic CV. *(Raydonal Ospina, 2019)* The prices of both export and import, during the period of 1990-91 to 2017-18 were observed to be stable.

Table 2: Export, Import Prices, and Quantity Growth rates & Instability of India's Ginger

		1991-2000	2001-2010	2010-2018	1991-2018
Price Growth Rate	Export	3.44	4.85	-3.06	3.26
	Import	3.55	10.17	6.01	4.93
Quantity Growth Rate	Export	-7.69	14.81	-5.03	1.39
	Import	12.03	6.49	-1.68	5.85
Price Elasticity	Export	1.51	0.57	0.69	0.18
	Import	0.63	0.23	-0.33	0.22
Instability	Export	0.29	0.22	0.19	0.39
	Import	0.26	0.38	0.28	0.50

Figure 2: Export and Import Price Trends of Ginger in India (1990-91 to 2017-18) (FAO, FAO Stat, 1991- 2019)
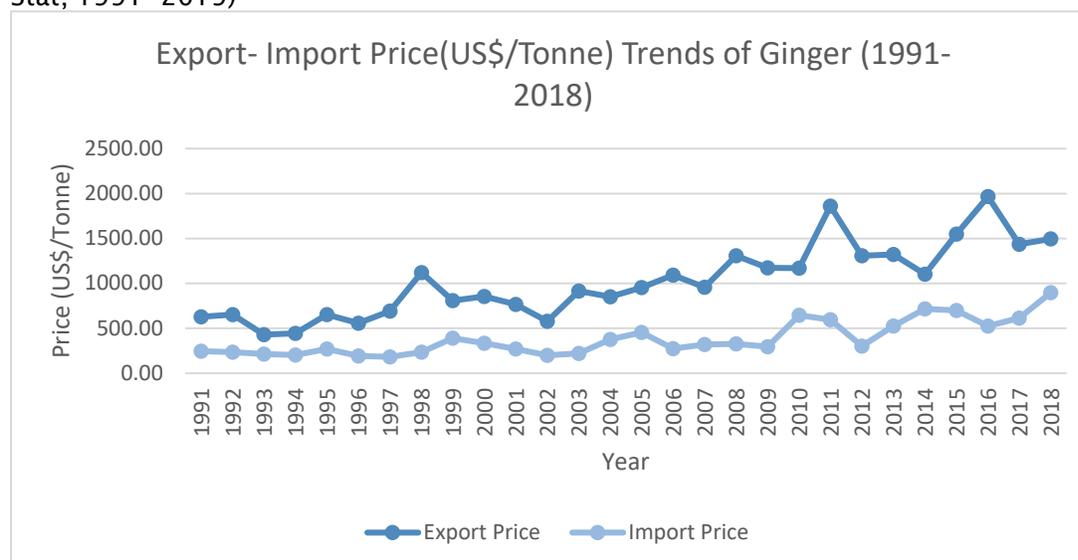
Growth rate and Elasticity of Top 10 Export and Import destinations of Ginger in the world

Table 3 shows the price growth rates and elasticity top 10 importers of ginger in the world. The price elasticity in the period of 1990-91 to 2017-18 of UAE (1.54%), Saudi Arabia (1.04%), USA (1.06%), and Pakistan (0.95%) is observed to be the highest among the top 10. While the growth rate of the USA (-0.19%), UAE (-1.32%), and Saudi Arabia (-0.11%) is observed to be negative in the same period.

In 2018, the amount of ginger imported worldwide amounted to 645K tonnes, shrinking by -8.3% against the previous year. In value terms, ginger imports totaled $823M (IndexBox estimates) in 2018. Overall, ginger imports, however, continue to indicate a strong expansion. The pace of growth appeared the most rapid in 2010, with an increase of 49% against the previous year. Over the period under review, global ginger imports attained their maximum at $987M in 2014; however, from 2015 to 2018, imports failed to regain their momentum. In 2018, the average ginger import price amounted to $1,275 per tonne, growing by 11% against the previous year. Overall, the import price indicated a remarkable growth from 2007 to 2018: its price increased at an average annual rate of +5.1% over the last eleven-year period. The trend pattern, however, indicated some noticeable fluctuations being recorded throughout the analyzed period. Based on 2018 figures, the ginger import price increased by +33.3% against 2016 indices. There were significant differences in the average import prices amongst the major importing countries. In 2018, the country with the highest import price was Germany ($2,672 per tonne), while Bangladesh ($279 per tonne) was amongst the lowest. From 2007 to 2018, the most notable rate of growth in terms of import prices was attained by Pakistan, while the other global leaders experienced more modest paces of growth. (GlobalTradeMag, 2019).

In the study, it was also observed that the major importers of ginger for India (in 2019) were Nigeria, Nepal, UAE, China, Benin, Indonesia, Burma, Singapore, Chad, and Niger.

Table 3: Growth rate and Price Elasticity of Top 10 Importers of Ginger in the World

	1991-2000		2001-2010		2011-2018		1991-2018	
	Growth Rate	Price Elasticity	Growth Rate	Price Elasticity	Growth Rate	Price Elasticity	Growth Rate	Price Elasticity
Pakistan	0.98	1.36	-3.13	1.34	2.99	0.51	0.19	0.95
United States of America	-4.05	2.19	6.53	0.43	1.25	0.01	-0.19	1.06
Bangladesh	6.03	0.53	16.12	0.22	-5.33	3.76	3.81	0.36
Netherlands	-3.94	1.80	7.21	0.53	1.11	0.87	0.20	0.94
Japan	-1.37	1.40	8.42	-1.69	-2.74	0.09	2.32	0.04
United Arab Emirates	-12.68	-1.29	9.36	0.29	-10.82	-8.28	-1.32	1.54
Malaysia	6.05	0.35	9.73	0.36	3.54	0.03	3.77	0.34
Saudi Arabia	-5.06	29.15	2.82	0.67	-0.24	-0.55	-0.11	1.04
United Kingdom	-0.55	1.17	8.84	0.25	1.99	0.58	1.04	0.69
Germany	-0.47	1.18	7.06	0.47	-3.84	1.83	1.44	0.66

(FAO, FAO Stat, 1991- 2019)

Table 4 shows the top 10 exporters of ginger in the world. It can be observed that the price elasticity of Netherlands, China, UAE, and Indonesia are highest among the top 10 during 1990-91 to 2017-18. Nepal is observed to have a negative price elasticity with a drastic difference in comparison to the other countries during the same period. The growth rate of Thailand, Peru,

Brazil, and Nigeria was observed to be the highest among the top 10 countries during 1990-91 to 2017-18. Whereas, Nepal and Indonesia are having negative growth rates during the same period.In the study, it was also observed that the major export destinations of India (in 2019) were Morocco, United States, Bangladesh, United Kingdom, UAE, Germany, Australia, Nepal, Netherlands, and South Africa.

International sales of crushed or ground ginger exports by country totaled US$82 million in 2019. That dollar figure reflects a 5.9% increase since 2015 but a slight -0.1% dip from 2018 to 2019. In comparison, exported ginger before it is crushed or ground amounted to $880.9 billion in 2019, up 31.2% over the 5 years starting in 2015 and accelerating 8.4% from 2018 to 2019. (Worldstopexports, 2020)

Table 4: Growth rate and Price Elasticity of Top 10 Exporters of Ginger in the World

	1991-2000		2001-2010		2011-2018		1991-2018	
	Growth Rate	Price Elasticity	Growth Rate	Price Elasticity	Growth Rate	Price Elasticity	Growth Rate	Price Elasticity
China	-7.89	2.37	14.71	0.15	-0.60	1.33	0.37	0.90
Thailand	4.66	0.56	7.81	0.19	1.12	0.01	3.72	0.34
Netherlands	-3.17	1.53	6.95	0.55	1.03	0.90	0.14	0.96
Nigeria	0.26	0.96	10.45	0.29	-12.54	4.37	1.39	0.68
United Arab Emirates	3.16	1.00	-4.05	1.45	-0.78	1.06	0.51	0.85
Peru	-15.88	7.73	12.35	0.35	0.13	0.99	1.49	0.67
India	3.44	1.51	4.85	0.57	-3.06	0.69	3.26	0.18
Brazil	0.06	0.99	9.17	-0.97	-0.82	1.11	1.47	0.60
Nepal	-10.84	-8.20	-4.86	2.08	7.75	1.84	-2.52	-62.38
Indonesia	-16.19	-0.56	7.46	38.55	1.47	0.85	-2.03	0.84

(FAO, FAO Stat, 1991- 2019)

VI. Conclusion

The study findings have important implications to be considered in designing policies and programs for boosting ginger exports and imports, foreign earnings, identification of destinations. There has been a regular decline in exports of Indian ginger both in value and volume terms. From 2014 to 2018, the value of exported ginger plummeted from US$ 51.1 million to US$ 31.5 million in value terms and from 46.3 thousand tons to 20.5 thousand tons in volume terms.

Whereas export and imports price growth rates of ginger were found to be positive during 1990-91 to 2017-18. The export prices growth rate was 3.2% and the import prices growth rate was 4.9%. The study found that during the period of 1990-91 to 2017-18, the export prices of ginger were higher than the import prices. The Terms of Trade in the same period have increased by 2.67% indicating that India has a comparative advantage in ginger over other countries. The import price elasticity was 0.22% and the export price elasticity was 0.18% from 1990-91 to 2017-18 which is quite moderate.

China is the largest exporter of ginger across the world, exporting over 50%, followed by Thailand, Netherlands, Peru, and India. On the other hand, the US is the world's largest importer of ginger followed by Japan, the Netherlands, Pakistan, and Germany.

The major export destinations of India are Morocco, Bangladesh, the USA, UAE, and the UK. Whereas, major importers of ginger for India are Nigeria, Nepal, UAE, China, Benin, Indonesia, Burma, Singapore, Chad, and Niger.

Russia and Middle East countries are good markets for India. Peru mainly exports organic ginger to these nations but organic ginger is available at expensive rates. Hence overseas demand is unable to pick up there. Brazil is also a global supplier but it exports seasonally, therefore cannot export all-round the year. This is not the case for India as it can supply ginger throughout the year.

The import price growth rate was highest in Japan, Bangladesh, Malaysia, UK, and Germany. Therefore, India should try to export ginger majorly in these countries. The price elasticity of UAE and Saudi Arabia were observed to be the highest. This indicates that India should increase its exports in these countries. European countries are one of the major markets for processed ginger (dried ginger). India can increase its export to those countries. (UK- Import price GR- 1.04%) The study can be used by exporters and importers of the commodity for market and price signals of the commodity. The study also has important implications to be considered in designing foreign trade agricultural policies and programs to boost trade and foreign earnings of export and import countries. The study suggests that a multilateral trade relationship with high CAGR countries would help in the smooth trade of ginger and other spices too. The findings have important implications for policy research and R&D strategies and response and re-orientation of the R&D system to the changing trade scenario to benefit from WTO.

References

BusinessLine, T. H. (2020, Feb 24). *Ginger loses flavour with low output, high price.* Retrieved from https://www.thehindubusinessline.com/economy/agri-business/ginger-loses-flavour-with-low-output-high-price/article30905340.ece

CATR. (2020, January 1). *Trade Promotion Council of India.* Retrieved from https://www.tpci.in/indiabusinesstrade/blogs/product-profile-ginger/

Coefficient of variation, Psychology Wiki. (n.d.). Retrieved from Psychology Wiki: https://psychology.wikia.org/wiki/Coefficient_of_variation#:~:text=The%20standard%20deviation%20of%20an,)%20are%20considered%20high%2Dvariance.

Deepika Joshi, H. S. (2014). Stability Analysis of Indian Spices Export –A Markov Chain Approach.

ExpertMarketResearch. (2020). *Global Ginger Market Report and Forecast 2021-2026.* Expert Market Research.

FAO. (1991- 2019). Retrieved from FAO Stat: http://www.fao.org/faostat/en/?#data

FAO. (1991-2019). Retrieved from FAO Stat: http://www.fao.org/faostat/en/?#data

GlobalTradeMag. (2019, August 9). *Global Ginger Market 2019 – U.S. Imports Increases Robustly, Turning The Country Into The Most Promising Market.* Retrieved from Global Trade Mag: https://www.globaltrademag.com/global-ginger-market-2019-u-s-imports-increases-robustly-turning-the-country-into-the-most-promising-market/

IBEF. (2021, January). *Spices Industry And Export In India, IBEF.* Retrieved from IBEF: https://www.ibef.org/exports/spice-industry-indias.aspx

Jambor, A., Toth, A., & Koroshegyi, D. (2018). Competitiveness in the trade of spices: A global evidence.

KrishiJagran. (2020, August 10). Retrieved from Krishi Jagran: https://krishijagran.com/agripedia/understanding-the-ginger-market-business-potential-remains-bright-for-india/

Raydonal Ospina, F. M.-R. (2019). Performance of Some Estimators of Relative Variability. *Frontiers in Applied Mathematics and Statistics* .

Santosh Kumar Potnuru, D. V. (2018). Growth performance of area, production and productivity of ginger in India – An economic analysis. *Journal of Pharmacognosy and Phytochemistry.*

Statista. (2020, October 22). *Production volume of ginger in India FY 2018, by state.* Retrieved from Statista: https://www.statista.com/statistics/870963/turmeric-production-by-state-india/

TheIndianBlog. (2020, October 27). *Top 10 Ginger Producing States in India [Largest Ginger Production State Wise]*. Retrieved from The Indian Blog: https://theindianblog.in/top-10-states-india/top-10-ginger-producing-states-in-india/

Thomas, L. ,. (1970). Competitiveness in spice export trade from India: A review. *Journal of Spices and Aromatic Crops*.

Trade data and export trends of Ginger. (2020). Retrieved from Connect2India: https://connect2india.com/global/export-Ginger-from-india

V. Karthick, T. A. (2015). Growth and Export Performance of Ginger in India– An Economic Analysis.

V.R. Naik, S. H. (2013). Growth and export dimensions of Indian turmeric.

Worldstopexports. (2020, May 1). *Top Ginger Exporters*. Retrieved from Worldstopexports: http://www.worldstopexports.com/ginger-exporters/

Trade, Growth and Value Chain Analysis of Indian Banana

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Abstract

Asian, Latin American and African countries are the leading producers of Banana globally. The biggest producers are India contributing around 29.19% of global production followed by China contributing 9.65%. This study was conducted to understand the current scenario of banana in India. It focuses mainly on the export growth rate of export of banana from India to various nations across the globe for the past 20 years. By analyzing the growth rate of export trend from 2000, it is found that the growth rate of export value to Iran is the highest (67.9%) among the world nations. The highest elasticity of demand is exhibited by Iran (3.1%) and the demand is inelastic in Afghanistan and Iraq (0.4%). As the global outlook is changing from food security to food safety and nutrition security, there is greater demand for organic agricultural produce. In India, the North Eastern states are the hub of organic cultivation hence the growth rate of banana in the North Eastern region was analyzed and it was found that Assam was stable in production of banana among them. It is identified that there are three models of banana value chains in Assam, but the most profitable value chain is least implemented by the farmers in the state. Assam has the advantage of having Asia's largest banana market, so the focus of farmers is in sale of raw banana instead of adopting the food processing technologies. For the development of banana cultivation and betterment of banana farmers, it is time to change the view towards increasing the yield per hectare. The study suggests strategies and policies for improving the trade of banana from India.

Keywords: Trade; value chain; growth rate; Banana; elasticity

I. Introduction

The global banana production has increased in a CAGR of 3.2 percent between 2000 and 2017, reaching a record of 114 million tonnes in 2017, up from around 67 million tonnes in 2000 (FAO, 2018). Asian, Latin American and African countries are the leading producers of Banana globally. The biggest producers are India contributing around 29.19% of global production followed by China contributing 9.65%. In India banana ranks first in production with increasing CAGR of 4.6% and third in area among fruit crops with increasing CAGR of 3.6% for the past 20 years. India is the 20th biggest exporter of banana globally and also consumes bananas in greater quantity.

Banana is the fourth largest contributor in total export of fruits from India (Mehazabeen and Srinivasan, 2020 and NHB, 2010). Largest area under banana cultivation is in Tamil Nadu state followed by Maharashtra, Gujarat, Andhra Pradesh and Karnataka states (APEDA, 2011). The global consumption pattern is changing towards organic food, in India the potential area for the cultivation of organic crops are the seven sisters (North-Eastern States). Among them, Assam is the major producer of banana and also one among the top 10 banana producing state in the country. It is the largest North Eastern state by population and second in terms of area.

Banana being a delicious and nutritious fruit, banana hearts and tender stem of certain species are popular vegetable in Assam. Banana leaves are used as eco-friendly disposable plate and food wrapping material. In all forms of social and religious functions in Assam, banana leaves are ritually used. Such extensive use of banana plant has made it ubiquitous in every homestead garden (GOA). Development of a proper value chain or ensuring better working of the existing value chains of banana in Assam can play a crucial role in increasing the return of the farmers and farmer groups in the state. The present study was conducted with following objectives:

1. To analyze the growth rate of export quantity, value and price elasticity of demand of top 10 countries importing banana from India
2. To analyze the growth rate and instability of banana in the North Eastern states of India
3. To identify the banana value chains in Assam.
4. To suggest policies and strategies for boosting production & foreign trade.

II. Methodology

The present study was conducted based on both qualitative and quantitative research. The data was collected from primary viz., value chain players and institutions associated with farmers like Institute of Co-operative management, Guwahati, Assam Agricultural University, Jorhat, and ICAR-National Rice Research Institute-Regional Rain fed Lowland Rice Research Station (RRLRRS) Gerua, Assam were interviewed and secondary sources viz., International Trade Centre trade map, National Bank of Agriculture and Rural Development, Small Farmers Agri-business Consortium, and Statistical year book. For export growth rate and elasticity analysis the data collected from 2001-2019 period and area, production and productivity growth rate analysis from 2000-2018 period. The sample size of 10 FPOs (Farmer Producer Organisations) and 10 value chain players were selected by using purposive random sampling technique. The collected data was analysed by using following statistical tools:

Growth Rate

To estimate compound growth rate by considering time as the independent variable and area harvested/production/productivity as dependent variable exponential function was used. CAGR is computed by fitting an exponential function to the variables viz., area harvested, production and productivity of banana for the period 2000 to 2018 (Krishnan et al 1991; Prajneshu and Chandran 2005; Damodar and Sangeetha 2007 and Anandu and Pushpa 2017).

$1nYt = A + Bt + \in$

where, A (= lnAo) and B (=ln(1+r)) are the parameters to be estimated by ordinary least square regression, t= time trend in year, r = exp(B) -1

Coefficient of Variation (CV)

CV is an index used to measure the instability and overall variation in the data. Thus, it desirable to use an index of instability which should adjust the data for trend and measure instability around the trend (Krishnan et al 1991 and Anandu and Pushpa 2017).

$$CV = \frac{Standard\ deviation}{Mean} \times 100$$

Price Elasticity of Exports Formulae

$$\mathbf{\Sigma}\mathrm{Pe} = \frac{\Delta \mathrm{Q}}{\Delta \mathrm{P}}$$

where, ΔQ = percentage change in quantity exports and ΔP= percentage change in price
    We calculate % ΔQ as ΔQ/Q*ave* and We Calculate % ΔP as ΔP/P*ave*. *So we calculate the price elasticity of exports as (ΔQ/ Qave)/(ΔP/Pave)*

III. Results and Discussion

International Trade Scenario of Banana in India

The growth rate of export quantity of banana from India to the world nations was 88.2% while the growth rate of export value was 80.3%. The major export destination of Indian banana are Iran, UAE, Oman and Nepal. Among the total quantity of banana exported 31% of export was to Nepal, because the geographical location of the nation favors international trade.

Table 1: Growth Rate of Banana Value Exported by India to the Top 10 Countries

Sl.No.	Country	Growth rate
1	Iran, Islamic Republic of	67.9
2	United Arab Emirates	66.0
3	Oman	63.7
4	Nepal	58.2
5	Iraq	57.0
6	Saudi Arabia	56.2
7	Kuwait	51.6
8	Qatar	50.8
9	Afghanistan	48.6
10	Bahrain	46.7

Table 2: Growth Rate of Banana Quantity Exported by India to the Top 10-Countries

Sl.No.	Country	Growth rate
1	Nepal	77.4
2	Iran, Islamic Republic of	73.3
3	Oman	70.0
4	United Arab Emirates	67.9
5	Iraq	64.3
6	Saudi Arabia	60.3
7	Afghanistan	55.6
8	Kuwait	52.2
9	Qatar	51.4
10	Bahrain	47.7

According to the value of banana exported Iran had higher growth rate of 67.9%, the country pays maximum value for banana imported from India for the past 20 years, followed by UAE with a growth rate of 66 per cent (Table 1). Iran is one of the largest importers of bananas in the world, importing around 2,500 containers of banana every month from across the globe, because the productions in the southern states of Iran is not sufficient to meet their domestic demand (APEDA).

The quantity of banana imported from India Nepal has the highest growth rate of 77.4% followed by Iran (Table 2). Nepal has the advantage of sharing border with India. Even though the maximum quantity of banana is exported to Nepal, the value realized for the quantity is comparatively les. When growth rate of quantity and value is considered, the best export destination for Indian banana was Iran and UAE. Some countries like Philippines, could easily supply the fruit in large quantities at cheaper rates, therefore exports of table bananas from India could not rise above a certain stage (APEDA).

Table 3: Elasticity of Demand in the Top 10 Export Destination of Indian Banana

Sl.No.	Country	Elasticity
1	Iran, Islamic Republic of	3.1
2	United Arab Emirates	1.8
3	Oman	1.1
4	Nepal	1.7
5	Iraq	0.4
6	Saudi Arabia	1.3
7	Kuwait	1.7
8	Qatar	1.9
9	Afghanistan	0.4
10	Bahrain	2.1

The price elasticity of demand was high for Iran (3.1%) which shows that there is huge fluctuation in the demand for Indian banana in the Iran market (Table 3). But the demand in Afghanistan and Iraq market was inelastic, there were no much change in the quantity demanded according to fluctuations in the price of banana. The global consumption of banana is still on rise, the major constrain for Indian market is the yield of banana. India still has the scope in cultivation of organic banana, the north Eastern region is most suitable for organic cultivation. In the situation where consumers are searching for guarantees about the product the organic certified banana from India can revolutionize the export market.

Production Trend of Banana in the North Eastern States of India

Table 4: Decadal Growth Rate of Banana Area (%) among the NE States of India

NE-States	2000-01 to 2009-10	2010-11 to 2017-18	2000-01 to 2017-18
Arunachal Pradesh	4.7 (54.6)	-12.0 (26.7)	-2.5 (151.9)
Assam	2.6 (8.2)	1.6 (2.8)	1.2 (31.3)
Manipur	16.7 (73.2)	3.1 (8.0)	9.3 (175.6)
Meghalaya	2.9 (53.7)	3.5 (2.5)	1.7 (135.1)
Mizoram	14.9 (81.7)	1.6 (3.3)	8.7 (166.5)
Nagaland	-0.4 (79.8)	17.5 (10.5)	6.3 (215.0)
Tripura	4.9 (58.2)	4.0 (13.3)	4.1 (110.5)

The growth rate of banana area in Manipur (9.3%) was high followed by Mizoram (8.7%) and other states (Table 4). Among the seven states only Assam has stability in area. By considering both the factor of growth rate and stability Assam is the only state exhibiting better performance in the area under banana cultivation (Hazarika et.al, 2020). The lowest growth rate is in Arunachal Pradesh because the state focus more on the cultivation of leguminous crops

Mizoram has shown highest growth rate of banana production (17.2%) followed by other states. There was no variation regarding banana production among 7 states during the study period mainly due to its fertile soil and favorable climatic conditions (Hazarika et.al, 2020).

Table 5: Decadal Growth Rate of banana Production (%) among the NE States of India

NE-States	2000-01 to 2009-10	2010-11 to 2017-18	2000-01 to 2017-18
Arunachal Pradesh	1.7 (53.0)	0.8 (32.7)	0.4 (64.8)
Assam	3.5 (15.7)	3.4 (6.2)	2.5 (38.6)
Manipur	22.6 (75.2)	3.9 (9.2)	12.3 (54.7)
Meghalaya	2.9 (53.7)	5.3 (6.0)	2.3 (44.9)
Mizoram	29.5 (149.0)	2.8 (6.8)	17.2 (89.0)
Nagaland	0.8 (132.1)	10.3 (22.3)	4.3 (87.7)
Tripura	2.0 (55.6)	-1.9 (11.6)	3.1 (55.3)

The productivity of banana was high in Mizoram, before 2010, but in the next decade the productivity has significantly decreased. Hence, there was variation in the productivity of banana. In case of Assam it's just reverse, the state exhibits higher stability in banana productivity because of the engagement of more farmers in the banana cultivation (Hazarika et.al, 2020).

Table 6: Decadal Growth Rate of Banana Productivity (%) among the NE States of India

NE-States	2000-01 to 2009-10	2010-11 to 2017-18	2000-01 to 2017-18
Arunachal Pradesh	-2.9 (53.6)	14.5 (36.7)	3.0 (179.1)
Assam	0.9 (8.8)	1.8 (4.7)	1.2 (21.3)
Manipur	5.1 (54.7)	0.7 (2.8)	2.8 (82.5)
Meghalaya	0.0 (52.9)	1.8 (3.5)	0.6 (83.6)
Mizoram	12.7 (93.6)	1.1 (4.5)	7.8 (172.8)
Nagaland	1.2 (98.1)	-6.1 (14.1)	-1.9 (125.8)
Tripura	-2.8 (54.1)	-5.7 (5.0)	-1.0 (88.1)

Value Chain Analysis of Banana in Assam

There are three existing business models. They are:

1. In the first banana value chain model, the farmers will bring the banana to the market situated at Darrangiri, Goalpara district. Framers from other North Eastern states will also bring the banana here. Traders from different part of the nation come to the market and purchases banana. The market operates in the leased land of the panchayat.

Figure 1: First Value Chain Model
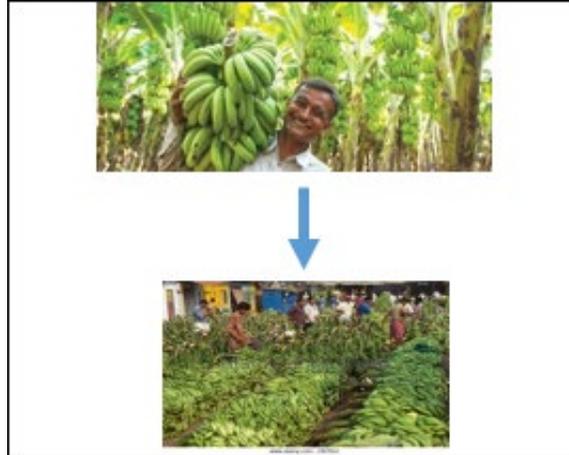
2. In the second model, traders or exporter come to the field and procure raw banana from farmers. Later it was stored in the cold storage units, packed and are exported to countries like Nepal, Bhutan and Bangladesh. Few exporters have tried exporting Malbogh banana variety to Dubai. The exporters were not able to meet the quality standards because of inadequacy in training.

Figure 2: Second Value Chain Model

3. In third business model, the traders or agri entrepreneurs procure banana from the market, and process it into value added products like chips, jam etc. The North East Mega Food Park situated in Nalbari and other food processing units across the state undertake the value addition.

Figure 3: Third Value Chain Model

The strength of the Assam banana value chain are the different indigenous varieties and the presence of Asia's largest banana market, Darrangiri, Assam. The weakness of this value chain includes inadequate training, insufficient financial assistance and unpredictable climatic conditions leading to flood and draught. Diseases like bunchy top & leaf spot and pests like Fruit scarring beetle and Pseudo-stem borer are also a weakness. The opportunity in this value chain is the export potential of the banana varieties. Assam and other North Eastern state faces the major constrain of infrastructure facilities which includes transportation and cold storage (Trienekens 2011). Due to this, the storage and marketing of perishable commodities are risky.

IV. Conclusion

India being the largest producer of banana and one of the leading exporter with Iran, UAE, Nepal and Oman as the major export destination. The Afghanistan and Iraq market are having inelastic demand to the fluctuations in the price of Indian banana. The international market has great potential for organic banana and the suitable area for the cultivation of organic crops in India is the North eastern states. Assam leads in the production of banana among the seven sisters. The state also has the benefit of the location of Asia's largest banana market the "Darrangiri banana market". Three banana value chain models are identified in the study, proper training and capacity building can help in developing the existing value chain. The untapped potential of the export market and food processing sector has to explored more to generate more income among the banana cultivators. Assam being in the North Eastern region, the state can focus more on the organic banana cultivation which has more scope in the international market. The findings of the study have important implications in designing the foreign trade agricultural policies and programs to boost trade and foreign earnings of export and import countries. The study could better guide in exporting to that countries where the export earnings are better and also help in focusing on those banana varieties which have demand in the international market.

References

Anandu B. and Pushpa M. S. (2017). Growth and Instability Analysis of Coconut Area, Production and Productivity in Karnataka state Agricultural Situation in India, Vol: (2), P. 11-17.

Damodar N.G. and Sangeetha. (2007) "Basic Econometrics". Tata McGraw Hill Publishing Company Ltd, New Delhi, 182-183.

Dastagiri, M. B., & Jainuddin, S. M. (2017). International Trading Prices Of India's Oilseed Crops: Growth Rates, Elasticities And Foreign Trade Policy. *European Scientific Journal* Vol.13(31), Pp: 185-201.

http://apeda.in/agriexchange/Market%20Profile/MOA/Product/Banana.pdf

http://mospi.nic.in/statistical-year-book-india/2019

https://agriexchange.apeda.gov.in/Weekly_eReport/Banana_Report.pdf

https://assam.gov.in/about-us/393

http://www.fao.org/economic/est/est-commodities/bananas/bananafacts/en/#.YEHVg1Uza1s

Jacques H. Trienekens (2011). Agricultural Value Chains in Developing Countries a Framework for Analysis, International Food and Agribusiness Management Review Volume 14(2),

Krishnan M., Vashit A.K and Sharma B. M. (1991) "Growth and Instability in Kerala Agriculture". Agricultural Situation in India, Vol: 45 (1), P. 21-25.

Mehazabeen A. and G. Srinivasan (2020). Export performance of banana in India – a Markov chain analysis, Plant Archives Vol. 20, Supplement 2, 2020 pp. 3836-3838

Prajneshu and K.P. Chandran (2005). Computation of Compound Growth Rates in Agriculture: Revisited, *Agricultural Economics Research Review*, Vol. 18, pp 317-324.

ICT Revolution in Sub-Saharan Africa and its Effect on the Costs of Remittance Transfers

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I. Introduction

Sub-Saharan Africa (SSA) region is one of the world's poorest and least developed regions. It is also infamous for internecine wars, corruption, political instability, religious conflicts, economic instability and weak institutions. These factors, among others, have prompted skilled and unskilled sub-Saharan Africans to migrate to other regions in search of better paying jobs and better living conditions. Studies show that in 2006, 1 out of every 5 people with a tertiary education from SSA region worked in OECD countries. By comparison, less than 10% of similar people from North Africa and Middle East have done the same. (Kemegue, and others, 2011). Kapur, (2005) adds that education and health sectors in SSA countries bear the brunt of this brain-drain.

One positive externality to the brain-drain is remittance inflows to countries of origin. Studies show that remittances to Sub-Saharan Africa have become a steady source of external finance for recipient countries, easing the foreign exchange constraint facing them. The flows are also known to directly augment the income of poor recipients and thus reduce poverty (Adam and Page ,2003, 2005; Anyanwu and Erhijakpor, 2010). Remittances finance schooling and hence lower the need for child labor (Ratha and others, 2011) and enable household members to buy more foods and better healthcare services and thus contribute to better health outcomes. (Chauvet and others, 2009; Babatunde and Martinetti, 2010); Remittance recipients in SSA countries use these funds to purchase land, construct houses, improve farms, businesses and other investments (Ratha and others, 2011), and in other countries, they enhance access to information and communication technology, among other benefits. Nevertheless, there are still huddles to be overcome in the search for providing affordable remittance to the poorest in Africa. The cost of sending remittance to SSA countries is the highest among developing countries. It ranges from 5%-15% of the amount sent. Mohapatra and Ratha (2011) postulate that the high costs are caused by underdeveloped ICT infrastructure, low level of financial development, exclusive agreements between few international money transfer firms and banks, among other factors.

However, this situation is rapidly changing. Recent studies show that most SSA countries are now expanding their international money-transfer markets by adopting mobile-money transfers and branchless-banking technologies. Mobile transfer technologies, which were introduced to serve only domestic channels in SSA region, are now being used for cross-border and international remittance transfers. Zain Zap, working in conjunction with Standard Chartered bank and Citibank, permits its customers to remit money to any account in Uganda, Tanzania and Kenya. The same services also allow their customers to receive remittances from any bank account around the globe. Furthermore, mobile operators with money transfer services are now working in partnership with international money transfer operators to facilitate transfer of international remittances to mobile accounts. For example, it is now possible for remittance senders living in the U.S. or U. K. to remit money by Western Union to a beneficiary's M-PESA account in Kenya. (Ratha, Mohapatra, Ozden, Plaza, Shaw and Shimeles, 2011).

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Other mobile operators currently offering cross-border and international money remittance services in SSA region include: (i) Zain now operating in 15 SSA countries, (ii) Safaricom in Kenya, (iii) MTN mobile in Uganda, Tanzania and Rwanda, (iv) Orange Money operating in West African countries, and (v) Wizzit in South Africa.

In this study, I intend to contribute and expand the existing literature on international remittance transfers to sub-Saharan Africa by examining whether: (i) the liberalization of ICT markets in sub-Saharan Africa and subsequent Internet and mobile diffusions have reduced the cost of remittance, and (ii) the introduction of mobile-money transfers in SSA's international money-transfer markets has had any significant impact on the cost of remittance.

II. Literature Review and Hypothesis Development

Cost of Remittance to Sub-Saharan Africa

No one can dispute the positive effects that remittances to SSA have had on its countries' economies and its people's welfare. The effects have been so significant that they have not only piqued the interest of economists and policy makers in SSA region but have also attracted the attention of Africa's development partners such as the World Bank, the International Fund for Agricultural Development (IFAD) and the International Monetary Fund (IMF). For example, in 2007 IFAD and Universal Postal Union initiated and implemented Mandat Express International, a pilot project in six West Africa countries to address issues post offices faced while providing cross-border remittance services. (Clotteau and Anson, 2011). And in 2010 European Commission (EC), World Bank, African Development Bank (ADB) and International Organization for Migration (IOM) helped Africa Union Commission to establish Africa Remittance Institutes (ARI); an entity whose purpose was to strengthen all remittance actors (Africa governments, banks, senders, recipients etc.) "to better use remittances as development tools for poverty reduction and to achieve less expensive, faster and more secure remittance flows to Africa" (Ratha and others, 2011, p.87).

Despite all the economic benefits that remittances generate for SSA countries, Sub-Saharan African governments have not done much to reduce the cost of remittance and thus increase their benefits. High remittance costs discourage the transfer of remittances via formal channels. Instead, they promote the use of informal channels such as postal mail, transportation companies and friends and relatives (Kumar and Vu, 2014).

The average cost of sending remittances to SSA region is 12% of a $200 transaction. This is over 4% higher than the average cost of remitting the same amount to other developing regions. (Ratha and others, 2011). Ratha and Reidberg (2005) and World Bank (2006) posit that high costs of sending remittances to Africa are not only a burden to the migrants but also reduce the amount sent and hence lower their impact on development. Gibson and others, (2006) and Martinez and others, (2010) found that remittance flows responded well to reduction in the cost of remittances.

Studies show that high costs of remitting money to SSA are associated with low levels of financial development (Aggarwal and others, 2006; Beck and Martinez Peria, 2009) and the small number of companies providing remittance transfer services to the region (Orozco, 2009; and IFAD, 2009). Most companies handling cross-border and international remittances in SSA region cite lack of access to clearing and settlement systems as the biggest huddle to doing remittance transfer business. (Mohapatra and Ratha, 2011). Evidence also shows that exclusive agreements between international money transfer firms (e.g. Western Union, MoneyGram and so on) with bank and nonbank remittance service providers (RSPs) in SSA countries also contribute to high costs of remittance (IFAD, 2009; Irvin, Mohapatra and Ratha, 2010). This evidence has prompted some SSA countries like Rwanda, Ethiopia and Nigeria to take steps to do away with the exclusive partnerships so as to increase competitiveness and reduce remittance costs. The cost of sending remittances also tend to be higher in SSA countries where it is mandatory to change remittances proceeds into the remittance-receiving country's local currency (Irving, Mohapatra, Ratha, 2010). Mohapatra and Ratha, (2011) associate high remittance costs with under-developed information and telecommunication infrastructure in most SSA countries. They add that modernization of ICT

infrastructure, and development and adoption of new technologies for the delivery of international remittance transfers such as cell (mobile) phone money transfers could further lower the cost of sending remittances to SSA region.

ICT Diffusion and Money-Transfer Markets in SSA Region

Economic globalization and heightened competitions in the international markets in the late 1990s and early 2000s, galvanized most sub-Saharan Africa countries to liberalize their information and communication technologies (ICTs) markets, modernize their ICT infrastructure and, develop and adopt new ICT technologies. These shifts in global economy and international markets and the need to attract direct foreign investments from developed economies made access to and use of dependable information and communication technologies a necessity. (Wilson III and Wong, 2003)

Since then, with the exception of fixed telephone, the usage of new ICT such as mobile cellular phones, computers, Internet, and satellite connections has grown exponentially. Data from the International Telecommunication Union (ITU) paint a different picture when it comes to the markets for fixed telephone in SSA region. Their growth has been erratic. (see Figure 2)

The spread of mobile phones has been spectacular. For example, in 1996 the per capita cellular telephone penetration was only 0.16 per 100 inhabitants. (Wilson III and Wong, 2003). This increased to 12.4 in 2005 and to 76.7 in 2018 (ITU, 2019). Mobile cellular phone subscriptions in Africa has steadily risen (see Figure 3) Subscriptions were 87 million in 2005 and rose steeply to 780 million in just 13 years. Furthermore, in 2015, the population of Africans covered by at least 3G mobile networks was 481 million and was projected to increase by 71.5% to 825 million by 2019 (ITU, 2019).

Figure 2: Fixed Telephone Subscriptions, 2005-2018
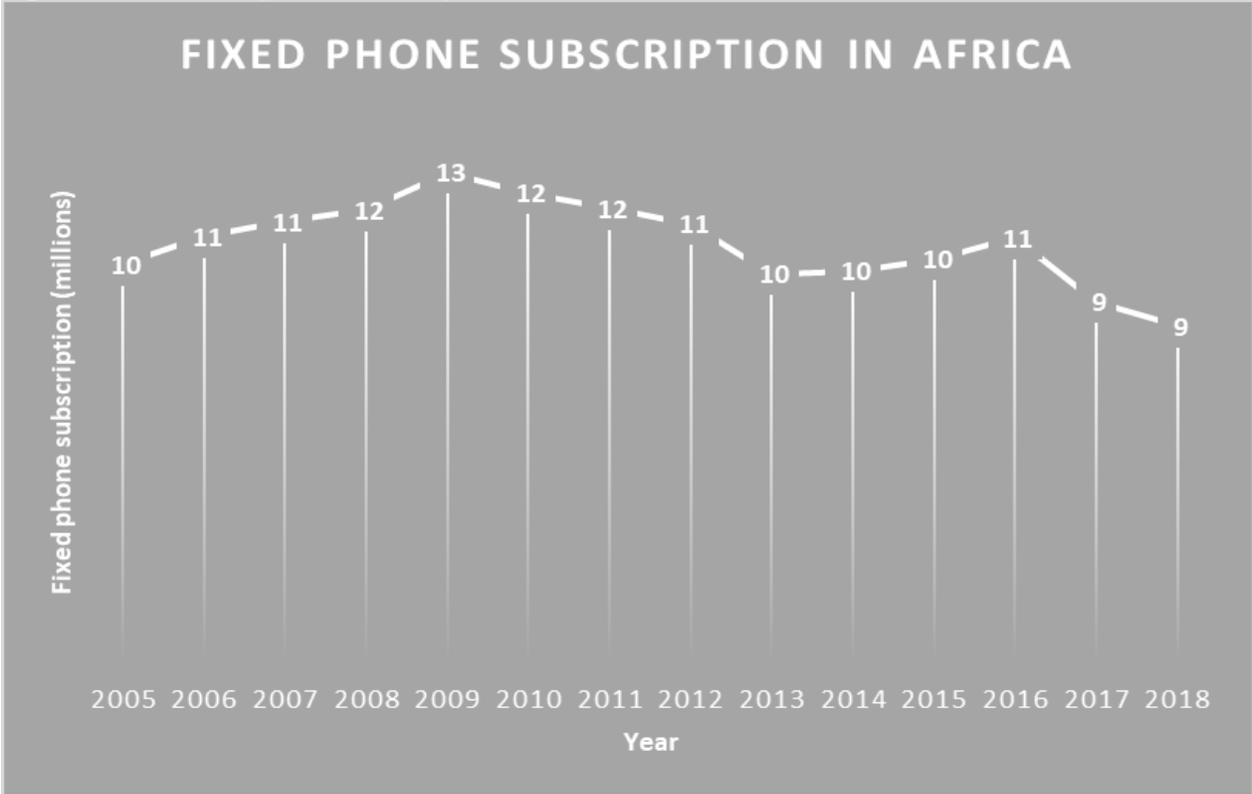
Source: ITU Data, 2019.

Most mobile operators in SSA countries offer "pre-paid" or "pay-as-you-go" payment models for their customers. For the poor, the ability to manage expenditures in a cheap, discrete manner has been key to the widespread adoption of mobile cellular telephony in developing countries (Dhawan, Dorian, Gupta and Sunkara, 2001; Hodge, 2005 and Prahalad, 2005)

Figure 3: Mobile Cellular Telephone Diffusion, 2005-2018
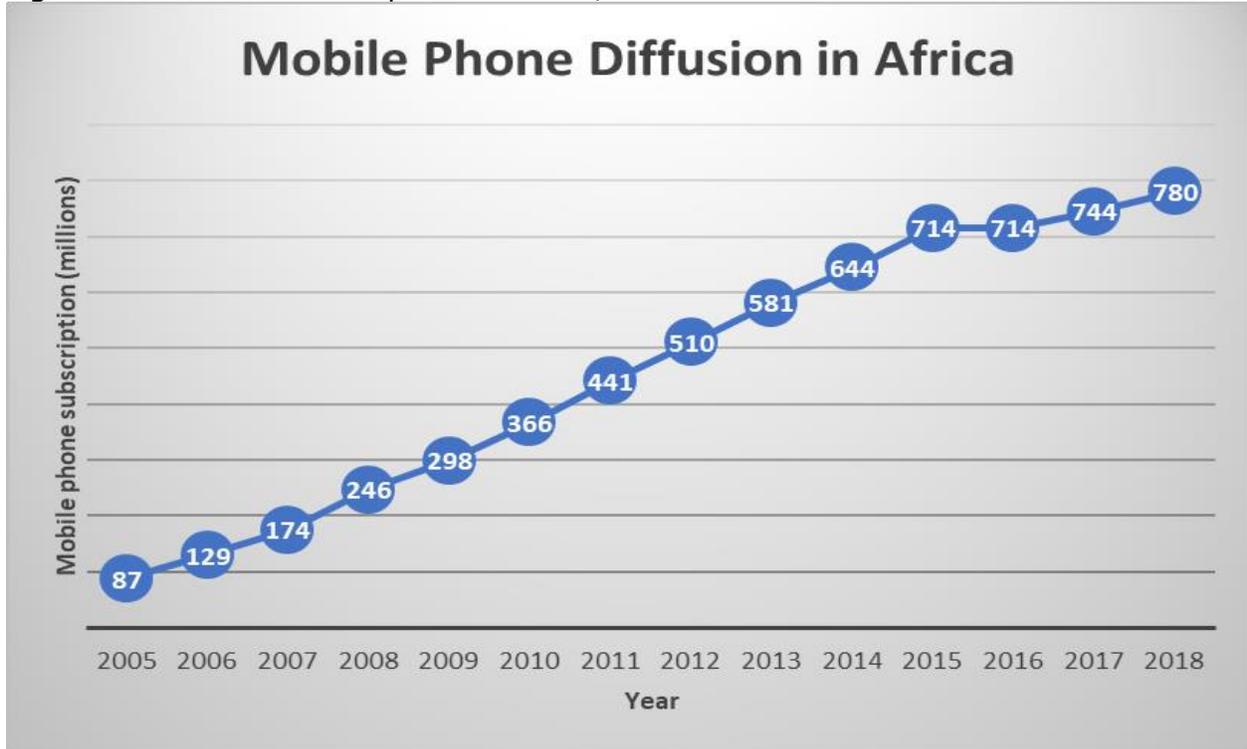
Sources: ITU Data, 2019.

Internet markets have also grown significantly. Wilson III and Wong (2003) projected that markets in Ghana, Kenya, Rwanda and Senegal would have growth rates of about 15% per month in the period of 2000-2003. Evidence shows that population of Internet users in Africa has dramatically increased since mid-2000s. For example, in 2005, the number of Internet users in the continent of Africa was only 19 million. This increased to 294 million in 2019; an increase of approximately 1450% in just 13 years (ITU, 2019).

However, access to fixed-line broadband Internet in SSA region remains minimal. Considerable percentage of African population access Internet via mobile Internet services. Donovan and Donner (2010) showed that in more than 7 out of 10 countries in Africa, "pay-as-you-go" mobile Internet services were available. Stork and others (2013) add that while the first wave of Internet adoption in Africa succeeded using personal computers at workplaces, colleges, libraries, and public Internet cafes, the second wave is riding on the back of mobile phones.

Mobile and Internet diffusions have generated numerous benefits for Sub-Saharan Africa countries. Mobile phones have become the most easily accessible and common communication tool for poor communities in rural areas. In mobile banking, usage of mobile phones can lower transport cost, and hence reduce the costs of running a business (Bhavnani and others, 2008). ICT diffusion has been found to create jobs in the ICT sector and enhance productivity in other sections of the economy. "It contributes to business expansion, to entrepreneurship, to banking the unbanked and to reduced transaction costs" (Stork and others, 2013, p.35). Countries with cheaper and more reliable ICT systems have attracted more direct foreign investments (DFI)

(Wilson III and Wong, 2003); a 10% increase in Internet usage in host country is associated with 2% increase in DFI inflows (Choi, 2003). Frehund and Weinhold (2004) found that Internet had a positive impact on bilateral trade. Clarke and Wallsten (2004, p. 17) also found that "developing countries with Internet penetration export more to high-income countries than do developing countries where penetration is lower".

Figure 4: Internet Diffusion, 2005-2019
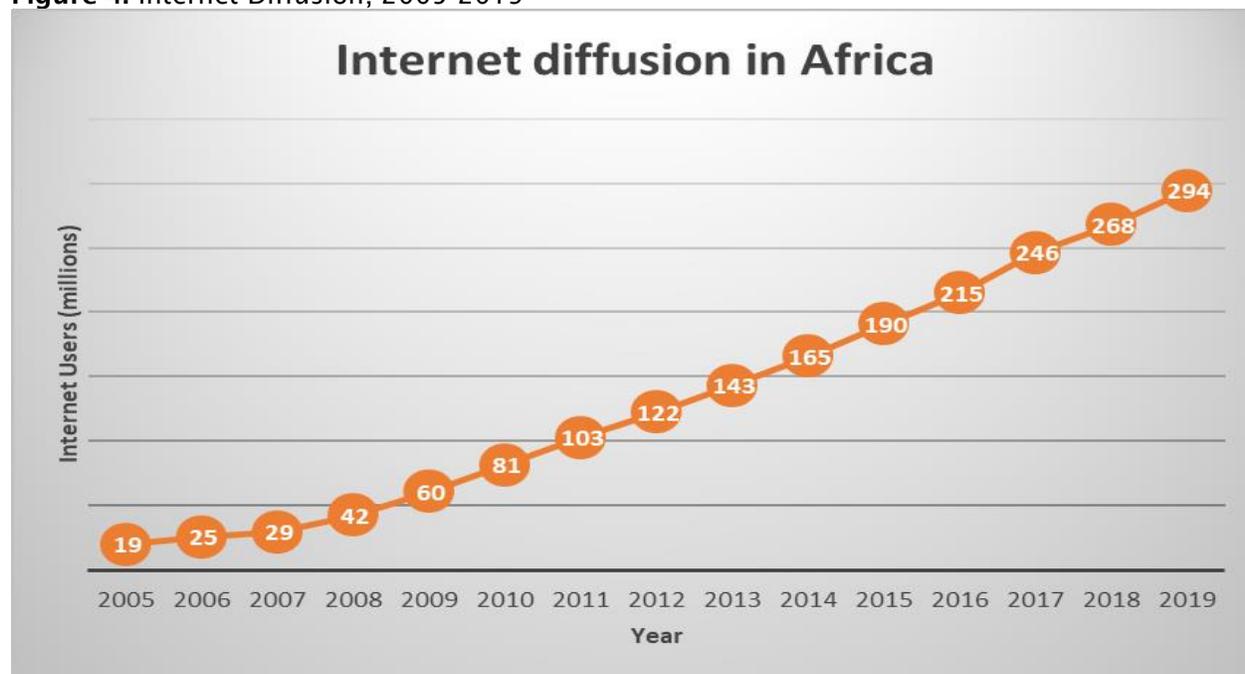
Sources: ITU Data, 2019.

Studies show that mobile and Internet diffusions are increasing competition in the money-transfer markets and easing the flow of remittances to sub-Saharan Africa. For a long time, cross-border and international money transfer markets were a preserve of international money transfer operators such Western Union, MoneyGram, Vigo etc. that were working in exclusive partnership with a few banks in recipient countries. This changed with the introduction of more technologically advanced (mobile- and Internet-based) methods of remittance transfers that are now fast changing remittance landscape. Systems such as Ikobo.com enable senders to use Internet to transfer remittances (Ratha and Riedberg, 2005). Currently a significant portion of remittance recipients in sub-Saharan Africa receive remittances through their mobile phones. Mobile transfer technologies, which were first introduced in Kenya in 2007 to serve only domestic channels in SSA, are now being used for cross-border and international remittance transfers. Zain Zap, working in conjunction with Standard Chartered bank and Citibank, permits its customers to remit money to any account in Uganda, Tanzania and Kenya and also allows them (customers) to receive remittances from any bank account in the globe. Like some commercial banks in SSA region, mobile operators with money transfer services are now working in partnership with international money transfer operators to facilitate transfer of international remittances to mobile accounts. For example, it is now possible to send remittances by Western Union from the U.S. or U. K. to a beneficiary's M-PESA account in Kenya. (Ratha, Mohapatra, Ozden, Plaza, Shaw and Shimeles, 2011). Other mobile operators currently offering cross-border and international money remittance services in SSA region include: (i) Zain now operating in 15 SSA countries, (ii) MTN mobile in Uganda, Tanzania and Rwanda, (iii) Orange Money operating in West African countries, and (iv) Wizzit in South Africa.

Secondly, as stated above, mobile phones have become the most easily accessible and common communication tool for poor communities in rural areas. Therefore, the entry of mobile money transfer services increased remittance reach with their extensive networks. For example, an M-PESA customer in Kenya can remit money to or receive money from any part of the nation 24 hours a day. (Mohapatra and Ratha, 2011) and the fact that recipients receive remittances into their mobile money accounts reduces the need to travel to the nearest bank or post office to receive cash. Studies also show that recipients can store or save money in their mobile money accounts for daily use and thus increasing financial deepening (Ratha, Mohapatra, Ozden, Plaza, Shaw and Shimeles, 2011). Mohapatra and Ratha, (2011) add that these new technologies (mobile and Internet) have the potential to greatly enhance access to remittances and other financial services at a reduced cost. In a nutshell, mobile and Internet money transfer systems have achieved three things. They have (i) increased competition, (ii) increased the remittance reach, and (iii) enhanced levels of financial development. Therefore, I hypothesize thus:

> *H1: Internet and mobile diffusions in SSA countries have reduced the cost of remittances in those countries.*

> *H2: SSA countries with international mobile money-transfer have lower costs of remittance than in those SSA countries without.*

III. Data and Methodology

Data Sources

My sample comprise 18 SSA countries that receive international remittances, and which also have all the data required for this analysis. In order to avoid introducing confounding variables, my remittance source-country data will come from OECD countries. The OECD countries whose the cost of remittance data is available include Canada, France, Germany, Italy, Netherlands, Portugal, United Kingdom and USA. I will collect the cost of remittance data from Remittance Prices Worldwide section of World Bank's website; mobile and Internet penetration data from the International Telecommunication Union (ITU) website and data for control variables from World Bank database, Global Data Source (GDS) dataset in conjunction with IMF's International Financial Statistics (IFC).

Methodology

Dependent and Independent Variables

The purpose of this study is to use panel data to test whether: (i) the liberalization of ICT markets in sub-Saharan Africa and subsequent Internet and mobile diffusions have had any effects on the cost of remittance, and (ii) the introduction of mobile-money transfers in SSA's international money-transfer markets has had any significant impact on the cost of remittance. Indexing senders' (OECD) countries with i, recipient SSA countries with j and years with t, I use the following models to perform econometric analysis:

a) **Log RC_{ijt} = α_0 + $\alpha_1 MTS_{jt}$ + α_2 log IU_{jt-2} + α_3 log MU_{jt-2} + λControl Variables$_{jt}$ + ε_{jt}**

Studies show that Africans remit an average of $200 (or its equivalent) per transaction. Therefore, the dependent variable, **RC_{ijt}**, is the average cost (in a percentage format) of sending a $200 (or its equivalent) in a single transaction from OECD country i to SSA country j.
The independent variables in the model are **MTS_{jt}** - a dummy variable = 1 if SSA country j has international mobile-money transfer services, 0 otherwise, **IU_{jt-2}** – number of Internet users in

country j as a percentage of population lagged by two periods, and **MU**$_{jt-2}$ – number of mobile phone users in country j as a percentage of population lagged by two periods.

Control Variables

In addition to independent variables, I include the following control variables that studies show may influence costs of remittances to SSA countries:

a. Aggarwal and others, 2006; Beck and Martinez Peria, 2009 show that low level of financial developments is associated with high cost of remitting money to SSA region. IFAD 2009 and Orozco, 2009 add that the number of firms handling remittance transfers from country i to country j will also have an impact on remittance cost. I measure financial development by the ratio of credit provided to private sector to GDP (Hiroyuki Ito and Masahiro Kawai, 2018; Sassi, Seifallah and Goaied, Mohamed, 2013) and use index variables to control for the number remittance service providers.

b. Studies show that ICT penetration (mobile and Internet diffusions) increase competition in the money-transfer markets and hence ease the flow of remittances to sub-Saharan Africa. Mohapatra and Ratha, (2011) associate high remittance costs with under-developed information and telecommunication infrastructure in most SSA countries. Therefore, all else equal, ICT diffusion can reduce remittance costs. However, remittances can also play a significant part in enhancing access to ICT. Mohapatra and Ratha, 2011 state that a household surveys carried out as part of Africa Migration Project show that households that received international remittances were more likely to have access to mobile phones than those that did not receive international remittances. This seems to be a case of possible reverse causation. I control for it by lagging the ICT diffusion indicators (Internet and mobile phone penetration) by two periods; like what is proposed in Freund and Weinhold (2000; 2002). I measure Internet and mobile phone penetrations by the number of Internet and mobile phone users in SSA country as a percentage of the population. These variables come from ITU website.

c. Africans migrants from richer countries are less likely to send remittances than those from poorer countries (Mohapatra and Ratha, 2011). Therefore, all else equal, a higher GDP per capita may be associated with lower remittance costs.

d. I will use a time dummy variable = 1 for the year under consideration, 0 for all other years, to control for time specific fixed effects

e. I also control for unobserved sender's and recipient's country-specific effects.

My model, therefore, will be:

Log RC$_{ijt}$ **= α + β₁MTS**$_{jt}$ **+ λ₁ log FD**$_{jt}$ **+ λ₂ log IU**$_{jt-2}$ **+ λ₃ log MU**$_{jt-2}$ **+ λ₄ log GDPC**$_{jt}$ **+ λ₅TD**$_t$ **+ v**$_i$ **+ ψ**$_j$ **+ ε**$_{jt,}$

Where,

1) **FD**$_{jt}$ – Level of financial development in country j at time t
2) **GDPC**$_{jt}$ - GDP per capita in country j at time t
3) **TD**$_t$ - time dummy variable at time t
4) **v**$_i$ - unobserved sender's country-specific effect
5) **ψ**$_j$ – unobserved recipient's country-specific effect
6) and **ε**$_{it}$ - the idiosyncratic error term

References

Adams, Richard H., and John Page. 2003. "International Migration, Remittances and Poverty in Developing Countries." World Bank Policy Research Working Paper 3179, Washington, D.C.

Adams, Richard H., and John Page. 2005. "Do International Migration and Remittances Reduce Poverty in Developing Countries?" World Development 33 (10): 1645–69.

Aggarwal, R., Demirgüç-Kunt, A., & Martínez Pería, M. S. (2006) "Do remittances promote financial development"? Journal of Development Economics, doi: 10.1016/j.jdeveco.2010.10.005

Anyanwu, John C. and Erhijakpor, Andrew E.O. 2010. "International Remittances Affect Poverty in Africa"? Africa Development Review, 22 (1) p. 51-91

Babatunde, Raphael O., and Enrica C. Martinetti. 2010. "Impact of Remittances on Food Security and Nutrition in Rural Nigeria." Centre for International Cooperation and Development, University of Pavia, Italy.

Beck, Thorsten and Martínez Pería, María Soledad, (2009). "What Explains the Cost of Remittances? An Examination across 119 Country Corridors" Policy Research Working Paper 5072, World Bank, Washington, D. C.

Bhavnani, A., Won-Wai Chiu, R., Janakiram, S. and Silarszky, P. 2008. "The Role of Mobile Phones in Sustainable Rural Poverty Reduction." ICT Policy Division, Global Information and Communications Department, World Bank, Washington, DC.

Chauvet, Lisa, Flore Gubert, and Sandrine Mesplé-Somps. 2009. "Are Remittances More Effective than Aid to Reduce Child Mortality? An Empirical Assessment Using Inter- and Intra-Country Data." Développement Institutions & Mondialisation (DIAL) Working Paper DT/2009-11, DIAL, Paris.

Clarke, George, and Scott Wallsten. 2004. "Do Remittances Protect Households in Developing Countries against Shocks? Evidence from a Natural Disaster in Jamaica." Unpublished manuscript, World Bank, Washington, DC.

Clotteau Nils, and Jose Anson. 2011. "Role of Posts in Remittances and Financial Inclusion." Background note prepared for the Africa Migration Project, Universal Postal Union, Berne, Switzerland. Migration and Development Brief 15, World Bank, Washington, DC.

Dhawan, R., Dorian, C., Gupta, R., & Sunkara, S. K. (2001). "Connecting the unconnected. The McKinsey Quarterly (4), 61-70.

Choi, C., 2003. "Does Internet stimulate foreign direct investment?" Journal of Policy Modeling 25 (4), 319-326

Donovan, Kevin., & Donner, Jonathan. (2010). "A note on the availability (and importance) of pre-paid mobile data in Africa". In J. Svensson & G. Wicander (Eds.), 2nd International Conference on Mobile Communication Technology for Development (M4D2010) (pp. 263-267). Karlstad, Sweden: Karlstad University.www.jonathandonner.com/prepaydata_M4D.pdf

Frehund, C., and Weinhold, D., 2002. "The Internet and international trade in services." American Economic Review 92, 236-240.

Frehund, C., and Weinhold, D., 2004. "The effect of the Internet on international trade." Journal of International Economics 62, 171-189

Gibson, John, McKenzie, David and Rohorua, Halahingano. 2006. "How Cost-Elastic Are Remittances? Evidence from Tongan Migrants in New Zealand." Pacific Economic Bulletin21 (1): 112–28.

Hodge, J. (2005). "Tariff structures and access substitution of mobile cellular for fixed line in South Africa." Telecommunications Policy, 29(7), 493-505.

IFAD (International Fund for Agriculture and Development). 2009. "Sending Money Home to Africa: Remittance Markets, Enabling Environment and Prospects." Study report, IFAD, Rome.

Irving, Jacqueline; Mohapatra, Sanket; Ratha, Dilip. (2010). "Migrant Remittance Flows: Findings from a Global Survey of Central Banks". World Bank Working Paper; No. 194.

Ito, Hiroyuki and Masahiro Kawai, 2018, "Quantity and Quality Measures of Financial Development: Implications for Macroeconomic Performance" Policy Research Institute, Ministry of Finance, Japan, Public Policy Review, Vol.14, No.5.

ITU (International Telecommunications Union). (2019). African telecommunication indicators.

Kemegue, Francis & Owusu-Sekyere, Emmanuel & van Eyden, Renee. (2011). "What drives Remittance Inflows to Sub-Saharan? Africa. A Dynamic Panel Approach." https://www.researchgate.net/publication/241766133

Kumar, Ronald Ravinesh and Hang Thi Thu Vu. 2014. "Exploring the Nexus Between ICT,Remittances and Economic Growth - A Study of Vietnam". Journal of Southeast Asian Economies Vol. 31, No. 1 (2014), pp. 104–20

Kapur, D. 2005. Remittances: The New Development Mantra? In Maimbo S. & Ratha, D. Eds.

Martinez, Claudia, Aycinena, Diego and Yang, Dean. 2010. "The Impact of Remittance Fees on Remittance Flows: Evidence from a Field Experiment among Salvadoran Migrants." Unpublished manuscript, University of Michigan, Ann Arbor.

Mohapatra, S. and Ratha, D., (2011). "Remittance Markets in Africa". World Bank, Washington, D. C.

Orozco, Manuel. 2009. "Emerging Markets for Rwanda: Remittance Transfers, Its Marketplace and Financial Intermediation." Report, Inter-American Dialogue, Washington, DC.

Prahalad, C. K. (2005). "The Fortune at the Bottom of the Pyramid: Eradicating Poverty Through Profits." Upper Saddle River, NJ: Wharton School Publishing.

Ratha, Dilip; Mohapatra, Sanket; Özden, Caglar; Plaza, Sonia; Shaw, William and Abebe Shimeles. 2011. "Leveraging Migration for Africa: Remittances, Skills, and Investments" World Bank Publications, The World Bank, number 2300

Ratha, Dilip, and Riedberg, Jan. 2005. "On Reducing Remittance Costs". Unpublished manuscript, Development Research Group, World Bank, Washington, DC.

Sassi, Seifallah and Goaied, Mohamed, 2013 "Financial development, ICT diffusion and economic growth: Lessons from MENA region" Telecommunications Policy Volume 37, Issues 4–5

Stork, Christoph; Calandro, Enrico and Gillwald, Alison. 2013. "Internet going mobile: internet access and use in 11 African countries." Vol. 15 No. 5, pp. 34-51, Emerald Group Publishing Limited, ISSN 1463-6697

Wilson III, Ernest J. and Wong, Kelvin. 2003. "African information revolution: a balance sheet." Telecommunications Policy 27 (2003) 155–177

World Bank. 2006. "Global Economic Prospects 2006: Economic Implications of Remittances and Migration". Washington, DC: World Bank.

Environmental Protection as a "Public Good": Issues and Experiences in a Civic Perspective

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Abstract

Scholars and fiscal policy analysts use "public good" as an economistic concept to describe those goods and services that yield public or collective benefit to society. Because of their inherently public nature, such goods and services are unprofitable and therefore unattractive in a voluntary economic transaction among individuals and organizations. But how will "public good" be construed when viewed not from an economic but a civic perspective as a tool that glues society together? The paper appropriates the concept of "public good" to analyze the management of environmental protection policy as a case study. In contrast to the command-and-control regulatory model of environmental policy, a civic lens engaging citizens and organizations in planning, negotiation, and coordinated action is applied to shine light on a shared sense of environmental well-being. In short, protecting the air, land, and water is a shared value that can foster climate adaptation capacity and enhance civic engagement. Panelists focus attention on social and cultural dimensions of environmental management using public value governance to analyze opportunities and challenges entailed in managing the environment from the ground up. Issues and experiences drawn from the Americas are compared and contrasted. The paper contributes by aligning public good to community empowerment and public participation in an era of climate change.

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Environmental Protection as a "Public Good": The Amazon Rain Forest in Civic Perspective

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Abstract
The paper examines environmental protection as a "public good" from the perspective of strategy and sustainability for saving the Amazon Rain-Forest. It discusses how the destruction of the Amazon Rain-Forest is eliminating aboriginal populations, damaging the environment, and negatively affecting the people and their generations of cultures and norms due to economic developments engaged by transnational and multinational corporations. The long-term effects are analyzed and options developed for saving the Amazon Rain Forest by adopting community-based solutions that care for and improve environmental management practices.

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Fighting COVID-19 in Civic Perspective: The Case of the United Way of Laredo

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Abstract

The goal of this paper is two-fold. First, it draws from interview data to assess the strategies adopted by the United Way of Laredo, a civic nonprofit organization, to fight COVID-19 in the community. Second, it evaluates the impact of these strategies and teases out lessons for public and nonprofit management purposes. It relies on previous research and work done to highlight what strategies and resources nonprofit organizations appropriated to be able to recover and restore their integrity when the 2008 Great Recession hit the United States. By adopting an aggressive donor outreach strategy and applying for emergency COVID-19 grant money, the United Way of Laredo built and sustained its capacity to continue to serve the community. The paper concludes by teasing out and discussing lessons for other civic nonprofit organizations in South Texas.

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Evaluating COVID-19 Response by the City of Laredo and the Webb County's Emergency Management Program

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Abstract

This research considers the current response to the COVID-19 pandemic by South Texas Municipalities: Webb County and the Cities of Laredo, Rio Bravo, and El Cenizo. The ongoing health crisis due to the COVID-19 pandemic necessitates the evaluation of emergency programs to gauge their effectiveness. The research focuses on the local government's ability to manage the pandemic, using four evaluation criteria of emergency management: preparedness, mitigation, response, and recovery. Using two sets of surveys targeting key informants, perceptions regarding the program's response were captured. Qualitative and quantitative analytical techniques are applied to analyze the data. The findings showed that COVID-19 is putting intense strain on the local governmental process. Early response measures during the first signs of infections helped to prepare and activate the public health infrastructure early on. However, when the state overruled many of the local mandates across the State of Texas, infections and hospitalizations spread rapidly. In addition, the public survey indicated that citizens are in favor of stricter enforcement measures, desire that schools remain closed, and that open communication should be maintained.

I. Introduction

The research aims to evaluate the current response to the COVID-19 pandemic by the local governments including the City of Laredo and Webb County with Webb County Emergency Management Program (WCEMP). Established in February 2005 by the Commissioners Court of Webb County, the WCEMP is the county's "comprehensive and integrated," emergency management system that is utilized to prepare and respond to all-hazards situations (Emergency Management, n.d.). Its vision is "to build a resilient community that fosters preparedness and community-wide collaboration through partnerships with local, private, and non-governmental organizations" (Emergency Management, n.d.). The primary goal for this research is to evaluate the readiness capabilities of the local government and if necessary, advocate changes to promote a constant state of readiness while keeping in mind efficiency and efficacy. A risk-based assessment will be key in identifying threats to the county and its citizens. To this end, this research will focus on three questions: (1) Do the municipalities have the ability to manage the pandemic? What do local citizens think of the local government response? (3) What challenges do the municipalities face in the implementation of their response strategies? (4) How can the responses be improved?

II. Background and Literature

The importance of this research cannot be understated. Emergency management is a crucial field of public administration that has no room for error. Lapses in judgment, inefficiency in planning frameworks, and bureaucratic red tape can lead to chaos, lives lost, and destroyed property. A notable example of a poor post-disaster recovery response resulted from Hurricane Katrina in 2005. As such, an in-depth evaluation of the local government's emergency management

response in relation to the ongoing COVID-19 health crisis is necessary to gauge readiness capabilities and key performance indicators (KPI). The identification of KPIs will allow administrators and the evaluator to measure the output of the response and in turn, its effectiveness. This is at the heart of what makes evaluation an important aspect of practical public administration research. As Daniel Henstra (2010) discovered during a case study of emergency management, communities may prioritize resources and funding to emergency recovery and very little to mitigate that emergency in the first place. A thorough evaluation can uncover these inequalities. Despite the empirical and practical nature of this evaluation, the research to be conducted is mission-specific which indicates limited applicability to other areas of public administration that is not Laredo or Webb County (McNabb, 2018). However, the findings are still sure to be useful in the general aspect of improving emergency management as it is concerned with COVID-19. As others have suggested, evaluating emergency plans and responses is somewhat challenging due to the rare nature of disasters occurring (Henstra, 2010). As such, many emergency managers and members lack the experience of activating their plans in a real-world disaster scenario. This can lead to ineffective planning and mis-coordination (Wolensky and Wolensky, 1990). Additionally, resources and plans may differ between crises as some communities are more prone to other types of disasters. For example, a community in California will experience more earthquakes than Laredo or Webb County will probably ever experience. However, COVID-19 has proven to be an equalizer across the emergency management board. Many cities were not ready for it and recent spikes in infections and the lack of a firm and steadfast response from the various levels of government indicate that governments are still not prepared.

South Texas is no different in its capabilities of experiencing the COVID-19. On March 16, Laredo had its first COVID positive citizen (Wallace, 2020). As of June 5, 594 citizens have tested positive and the number continues to rise and shows a trend of an upward spike. On June 22, the City of Laredo rolled out a new color-coded advisory system in which the city is now being placed on Level 4, the highest risk of infection, indicating that there are more than 250 active positives within the city (Coronavirus, n.d.). Some of the local government's responses have included regular press briefings, daily updates to the COVID situation on social media, free chemical disinfectant pick-ups, free COVID screening, and free meals provided to school children.

However, emergency management planning goes beyond the pandemic response. Plans must account for every single reasonable crisis that can be experienced despite how small the probability an actual occurrence of the event may be. This is where the National Incident Management System (NIMS) comes in. NIMS is a standardized approach to preparing, responding, recovering, and mitigating emergency incidents. It was first introduced in 2004 by the Federal Emergency Management Agency (FEMA) so that multiagency institutions all across the United States can work effectively managing emergencies (National Incident Management System, 2017). Over time NIMS has evolved into an all-hazards approach system and it is the very same system that the WCEMP uses. Within NIMS, the standardized chain of command is known as the Incident Command System (ICS). ICS standardizes and designates the roles and responsibilities throughout all levels of government. It is common to have multiple ICSs throughout institutions. For example, a school district may have its own ICS while the city has one too. They can also vary in the dependent emergency. An ICS of a fire emergency will rely on the subject matter expert that is the Fire Department Chief (Anonymous, 2020). As the emergency in question deals with public health, the ICS is heavily dependent on the City of Laredo Health Department and the WCEMP. However, they are joined through acts of cooperation and communication. Emergency management planning comprises four main tenets: preparedness, response, recovery, and mitigation (Henstra, 2010). Through a significant number of literature reviews and case studies on municipal emergency management, Wolenksy and Wolensky (1990) discovered that "local governments and their officials...relegate [disaster management] to a low priority, adopt responses in a manner with the 'normal'' custodial role, and yield to the pressures of powerful private interests." In other words, they failed to uphold the four main tenets mentioned above. For that reason, this research that explores the local government's response is very important.

III. Design and Methodology

Because of the challenge COVID-19 brings due to its novel coronavirus, the design of this study will take an exploratory design format. In order to complete the study, reviewing the official literature prepared by the City of Laredo and the WCEMP will allow for the evaluation and identification of the KPIs that will be measured as well as the entire structure of the program itself. The application of SMART goals will aid in the identification of the KPIs. SMART refers to goals or indicators that are specific, measurable, achievable, relevant, and time-bound. Widely attributed to Peter Drucker, the SMART process is a key tool of his "management by objective (MBO)" management philosophy (Drucker, 2007). This evaluation is very much aligned with his MBO theory as in addition to identifying KPIs, SMART objective defining will ensure that members of the WCEMP are reminded of the necessity of having clearly defined goals.

Furthermore, data collection will also be supplemented through the use of key informant interviews and survey questionnaires. McNabb (2018) denotes key informants to be individuals who have more knowledge about the problem to be studied. Therefore, the key informants in this study will be the individuals in charge of Laredo's and Webb County's official COVID-19 response network. The primary target for these surveys is the citizens of Laredo and Webb County.

IV. Data Sources and Data Collection Methods

This research will require a review and evaluation of the local government's COVID-19 response with a focus on how effective the public perceives it. Thus, the research within the study will be a critical analysis of the local government's operations and will consist of both the quantitative and qualitative nature. The mixed design for such an attempt makes it necessary to include both survey questionnaires for the quantitative and qualitative data and similar published research to compare to for the qualitative data (McNabb, 2018). The personal interviews will follow a purposive sampling approach and will be applied to the relevant members of the City of Laredo and the WCEMP. The survey questionnaire, on the other hand, will follow a random sampling approach to assess citizen satisfaction with the local response. For both data collection methods, anonymity will be preserved.

The entirety of the data will come from the official documentation from the City of Laredo and the WCEMP, the subjects to be interviewed formally, and data gathered through the surveys. Introduction to the nature of the study and the research to be conducted will begin through formal contact through emails found on social media and the official Laredo and Webb County website. Laredo, Webb County, and a number of elected officials operate very responsive social media profiles, so a quick reply is both feasible and conducive to the study as there is no cost to be made. First contact will include a quick introduction by the researcher and a summary of what the research entails, its purpose, and its design. To this end, permission to conduct in-person or virtual interviews with key informants of the City of Laredo COVID-19 response team and the WCEMP team, distribution of the survey questionnaires, and reviewing official documentation will also be initiated.

As for the official records, the City of Laredo and the Webb County's Emergency Management Plan will be the primary source of information. As there is no electronic copy of the plan available online as confirmed by several members of the WCEMP, a study of the document will occur in-person at the WCEMP office located at the Webb County Courthouse. Supplementary documentation will include the latest budget of the program as well as its existing resources and assets. Any official documentation should be and will be treated with the utmost confidentiality to maintain trust in the researcher, the university, and to promote further cooperation with university researchers.

Key informant interviews will be approached in the purposive sampling and case study method due to the specific nature of the data that is required and the expertise and authority that is needed to have access to such data. The pool of the participants of the interviews will then consist of members of the WCEMP and City of Laredo officials. The biggest challenge interviews

present at the moment is the need to exercise social distancing due to COVID-19 concerns. As such, virtual interviews will be the priority when possible and if permission is granted by the subjects. Additionally, syncing the availability between the researcher and the participants presents another challenge to be met. The questionnaire that will be utilized for the key informant interviews is located in Appendix A.

A random sampling approach will be taken with the survey questionnaire and will be extended to the citizens of Laredo and Webb County. Survey distribution will occur through social media. The survey questionnaire that will be utilized for the public is shown in Appendix B. It is designed to gather the relative sentiments and satisfaction of citizens on the effectiveness of the local government's pandemic response.

V. Questionnaire

The study will use two sets of questionnaires hosted on the website SurveyMonkey. The first set of questions will be administered to key informants during an interview either in-person, by phone call, or virtual meeting. It is shown on Appendix A. Given the need for social distancing, the latter two will be the priority. These questions in particular aim to create a timeline and evolution of the local government's response so far. This is to ensure that the key informant's time is not wasted with irrelevant questions that offer little in the way of data collection. The second set of questions will be administered to citizens of Laredo and Webb County through the use of social media. In that sense, these questionnaires are self-administered. It is shown on Appendix B. Both questions are worded and presented in a way to minimize bias. The questions are neutrally worded, not leading, and follow McNabb's (2018) suggestion of clarity, brevity, simplicity, and precision. The questions meant for the public contain a filter question to prevent non-citizens of Laredo and Webb County from answering the citizen specific questionnaire. This is done to encourage answers only from local citizens. Additionally, anonymity will also be practiced to allow survey-takers the confidence to answer truthfully. If the number of returned surveys is insufficient during the first round of surveying, other social media platforms can further bolster returns as well as looking into using TAMIU's email system to distribute the surveys to students.

The key informant questionnaire contains seven questions: [1] How has COVID-19 made it necessary to deviate the way the local government responds to a health crisis as outlined in the health crisis portion of the emergency plan? [2] To your knowledge, does the local government have performance indicators to measure the progress and efficiency of the response? If yes, what are they? [3] What are some SMART goals specific to the pandemic response that the local government aims for? SMART refers to goals that are specific, measurable, achievable, relevant and time bound. [4] What challenges have the local governments faced regarding its implementation of the response measures? [5] How is the response budget being maintained and monitored? [6] Rank your organization's resources level on a scale of low, moderate, or high. [7] If there was no interference from state or federal policy, would you adopt stricter response measures? The answers to these questions will measure how the response has evolved and generates a conversation as to how it can further evolve in the future to make it more efficient in curbing infections, spikes, and producing and enforcing good policy. Responses to these questions will be anonymous and any audio recordings made during the interview will be password protected and the subject unnamed.

Moreover, the public questionnaire contains seven questions: [1] Do you live in Laredo or Webb County? [2] How satisfied are you with the local government's response? [3] What do you think of the local government's response when compared to other cities? [4] How satisfied are you with the local government's community engagement on COVID-19? [5] What do you think of the local government's community engagement on COVID-19 compared to other cities? [6] How concerned are you with the local government's ability to combat COVID-19? [7] Do you have any suggestions for the local government regarding the COVID-19 response? Answers to these questions will gauge the public perception to the current response of the pandemic and offer feedback. Like the key informant interviews, responses will be anonymous.

VI. Analytical Techniques

After collecting data, there needs to be a deliberate method of interpreting it to find the utility within. That is where data analysis comes into play. When choosing an analytical method, it is important to keep in mind the design the research has followed thus far. Choosing a method that does not follow the existing research design can lead to a subpar analysis. The objective of the research should be the key driver throughout the entire research process and of course, analysis of the data. Thus, finding the best technique for analysis is crucial. There are a variety of techniques to choose from but since the research at hand uses a mixed design, meaning that both qualitative and quantitative designs are expressed within, both qualitative and quantitative analytical techniques are required.

The key informant questionnaire consists of open-ended questions [Q.1, Q.2, Q.3, Q.4, and Q.5] and close-ended questions [Q.6, and Q.7]. Due to the open-ended nature of the questionnaire and the interview for that matter, a rush of raw verbal data will be delivered by the key informants. It is important to remember that the key informants are subject matter experts in their field and work with varying complex concepts. It is only natural that within the course of normal speech some irrelevant data can become expressed. It is up to the researcher then to extrapolate the relevant commonalities and data within their speech and keep the informant trained on the correct focus of the questions. This is known as the process of *conceptualization*. As McNabb (2018) describes it, it is the reduction of "often-bulky amounts of raw data into workable, ordered bits of information." Suitable options for conceptualization include looking for common keywords shared between the key informants or looking at whether the responses contain positive or negative connotations. Looking for these patterns can show trends and in turn, be helpful. The information can then be utilized for the research's objective. Conceptualization will be the primary qualitative data analytical technique used in the key informant questionnaire. Because this questionnaire also contains close-ended questions, a quantitative analytical technique is required. This technique will be explained in detail in the following section regarding the public questionnaire.

Additionally, the public questionnaire contains close-ended questions [Q.1, Q.2, Q.3, Q.4, Q.5, and Q.6] and a single open-ended question [Q.7]. The close-ended questions contain a predetermined multiple-choice set that respondents can choose from. Some questions use the traditional four-point Forced Likert Scale. The Forced Likert Scale forces respondents into taking a stance on the question being asked. Choices include rating the level of satisfaction and concern respondents have regarding the local response to COVID-19. Unlike the previous questionnaire which because it primarily consisted of open-ended questions required the use of conceptualization, this questionnaire requires a different analytical technique of the quantitative nature. The researcher must convert the raw data coming from the respondents into quantifiable statistical data. A format that involves predetermined question sets allows for this data conversion relatively seamlessly. The primary task in this type of data analysis is to assign a value to each of the answer choices for each question in the questionnaire but before any value is assigned, choosing the best type of statistical measurement for the research's purposes is necessary. Due to the nominal (satisfaction and concern levels) and ordinal (citizenship information) nature of these questions, the best statistical measurement scale is the categorical one. An application of categorical measurement analysis is indicated by the assignment of a non-functional and non-purposeful number value (McNabb, 2018). In other words, the number of values has no inherent meaning and offers no extra data. It is just a way for the researcher to categorize responses. Both nominal and ordinal data, both of which the two questionnaires include, use this method.

Because of this study's mixed design, it is necessary to utilize both qualitative and quantitative analytical techniques. Conceptualization will aid in the analysis of the qualitative data which is primarily but not exclusively in the key informant interviews and subsequent questionnaire. The second analytical technique will be the interpretation of numerical values from the conversion of the quantitative raw data of the public questionnaire. The numbers themselves do not hold any value but are given value by the researcher and their research purposes. In this

case, the values will be useful in the interpretation of respondents' perception of the local COVID-19 response.

VII. Data Collection

Data was collected through a one-week period using SurveyMonkey to host the key informant and public survey questionnaires. The link to the key informant questionnaire was sent directly to the key informants while the public survey questionnaire was linked through social media. Of the five key informant questionnaires, one was returned. Thus, to supplement the key informant data, information made available to the public assisted in the tracking of the local pandemic response.

When the key informant was asked how the pandemic has changed the governmental process (Q.1) they stated that it was now policy to limit face-to-face meetings all the while maintaining social distancing and mask coverings. The performance indicators that the local government has adopted (Q.2) are expressed through charts and graphs that are available for the public to see on the City of Laredo website. However, these charts are not good at measuring daily performance as there is a lag time in testing data due to the large number of tests being submitted. At best, the charts show overall trends and are not an exact measurement. The main indicator that the government is relying on to see if the response is working if the overall infection rates are reducing within the community. Therefore, the identification of the KPIs is somewhat of a challenge and instead of them being specific, because of the novel nature of the emergency, the KPIs are kept general. Thus, the overall, obvious, and general goal that the local government aims for (Q.3) is the reduction of infection rates and deaths of its citizens. The spike that is being experienced at the moment (or any future spikes) must be quelled through social distancing, mask use, self-isolating, and contact tracing to allow local resources to catch up. In this case, the key informant could not identify a SMART goal because establishing a time for the goal to be met is extremely difficult at this time. Furthermore, the key informant did express that the major challenge the local government is experiencing (Q.4) is that "the Community, (especially individuals between 18-30 years old), are not following the protective measures," the City and County have prescribed (Anonymous, 2020). This statistic is corroborated by the official City of Laredo COVID-19 Statistical Data (Corona, 2020). Due to the rise in cases, a local Red Roof Inn establishment will be utilized to house COVID-19 patients, the hosting of which was coordinated by the City of Laredo and Webb County emergency response teams and FEMA ("Red Roof Inn," 2020). Furthermore, the response budget is being maintained and monitored (Q.5) under the existing Emergency Response Plan which holds the Directors of Purchasing, Treasury, Economic Development, and Auditor Offices in charge of tracking the local government's expenses. To that end, the key informant stated that the resources within the community are low and close to exhaustion (Q.6). This is on par with what is publicly known. Local hospitals are currently at or nearing capacity and supplies of the antiviral drug remdesivir are struggling to stay topped as infections rise ("Local hospitals," 2020). Lastly, when asked if they would be in favor of adopting stricter response measures if there was no interference from state or federal policy (Q.7), the key informant expressed that they would.

On the other hand, the public questionnaire was more engaged reaching a total of 111 respondents which according to the data from Q.1, 105 of which are usable (6 respondents answered they did not currently live in Laredo or Webb County and thus were excluded from the overall data pool and further answers were scrubbed). Statistical data will be rounded to the nearest whole and thus percentage totals will not always add up to 100%. Appendix C houses complete statistical data and graphs. As shown in *Figure 1*, when respondents were asked the levels of satisfaction with the local government's response (Q.2), 4% stated they were very satisfied, 37% were satisfied, 37% were dissatisfied, and 22% were very dissatisfied. *Figure 2* houses the data for when they were asked to compare the local government's response to other cities (Q.3), 45% held that it was better than others, 30% said it was worse than others, and 26% believed there was no difference between responses. When asked about the levels of satisfaction from the local government's community engagement (Q.4), 8% were very satisfied, 44% were

satisfied, 38% were dissatisfied, and 10% were very dissatisfied. This is shown in *Figure 3*. *Figure 4* shows the perceptions regarding a comparison of the local government's community engagement to other cities (Q.5). 48% believed it to be better than others, 28% worse than others, and 25% said there was no difference. When asked to categorize their level of concern with the local government's ability to combat the pandemic (Q.6), 46% of respondents were very concerned, 39% were concerned, 11% were unconcerned, and 4% were very unconcerned. This information can be seen in *Figure 5*.

Lastly, question 7 was the short answer question that asked respondents if they had any suggestions for the local government and the process of conceptualization was applied to categorize responses into common word groups. Answers that did not have any suggestions or were impossible to implement were scrubbed from consideration. The responses could be categorized falling within five key concepts: Better Communication, Better Testing, Citizen Involvement, Shut Down, and Stricter Enforcement. "Better Communication" refers to answers asking for more transparency in the daily updates, following up with those that tested positive, and the continuation or expansion of COVID-19 information/hygiene campaigns. 15% of respondents suggested better communication. Answers tagged with the "Better Testing" tag refers to answers that expressed dissatisfaction with the local testing of which 8% of respondents shared this opinion. "Citizen Involvement" refers to suggestions that held that the citizens themselves should become more proactive and follow proper safety guidelines which totaled 7% of the suggested answers. As it suggests, the "Shut Down" tag was generated because enough people expressed the desire to have another shutdown, shelter-in-place, or keep the schools closed. This key concept accounted for 38% of the answers. Lastly, "Stricter Enforcement" refers to the answers that focused on the increase of fines, a continuation of the mandatory curfew, and the limiting of gatherings. These suggestions were shared by 32% of respondents. Appendix C, *Figure 6*, includes the statistical breakdown of the suggestions. As shown, the outliers of the chart are the desires for a mandated local shutdown and stricter enforcement of preventive measures.

VIII. Conclusion

The three questions the study aimed to answer were: (1) What do local citizens think of the local government response? (2) What are the challenges the local government faces in the implementation of its response? (3) How can the response be strengthened? Based on the findings from both the key informant interviews and the public survey questionnaires, the small sample studied is in favor of enacting another shut down to combat the strain the virus is currently having on Laredo and Webb County. However, there is a noticeable split in the satisfaction with the local response: half believe it to be satisfactory while the other half unsatisfactory. Additionally, participants expressed favorability to keeping the schools shut down for the upcoming school semester as well as the desire to enact stricter enforcement of safety policies including fining those who do not wear a mask in public, limiting social gatherings, and those who break curfew. The greatest challenge the surveys indicate is the lack of initiative citizens are taking isolating themselves which may be accounting for the spike in recent cases. As suggested by the participants and key informants, it is recommended to enact another local community shut down to allow resources to build up once more. As it stands, the evidence strongly shows that the community is not prepared for the expected rise in cases as the Fall 2020 semester begins. Despite schools offering flex, split, or other alternative methods, as they remain open, the risk for cluster infections will increase. Local hospitals will more than likely not be prepared to handle these spikes. In summary, the surveys were able to generate a satisfactory answer to the first, second, and third questions of the study. Therefore, the study's objectives were achieved. However, as the COVID-19 pandemic continues to make its way through the community it is also recommended to continue surveying to account for changing perceptions and gather a larger sample size.

Although perhaps unintentional, the findings of this research study offer other less-than-obvious insight into the way COVID-19 has affected the Laredo and Webb County communities. This will be a lesson in public administration just as much as it is a lesson on the social impacts of COVID-19. According to Time Magazine, Laredo was reportedly the first U.S. city to issue an emergency mandate for the use of masks or risk a $1,000 fine (Carlisle, 2020). The issue went into effect on April 2nd. At the time, the official COVID-19 infection rate for the city was 85. Not long after, on April 30th, Texas Governor Greb Abbot overruled mask mandates all over the state citing their inability to "deprive someone of their liberty" (Carter, 2020). On July 2nd, with 1,703 positives in the community, Abbot reversed his stance and issued Executive Order No. GA-29 (2020), mandating masks with the risk of a $250 fine.

The issue that is presented with this anecdote and the findings of the research is that there was a politicized skirmish between the city and the state with a backdrop of COVID-19. Public administration is a field that time and time again is subject to higher political institutions. But not every decision is a good one just as not every decision is a bad one. However, there will be someone affected by every ruling and every non-decision. The role of the public administrator is a tough one as it is, but COVID-19 has made it that much harder.

References

Anonymous. (2020, June 22). Personal interview.

Anonymous. (2020, July 13). Survey interview.

Carlisle, M. (2020, April 04). Texas City Mandates People Wear Masks in Public or Face Fines. Retrieved July 25, 2020, from https://time.com/5815641/laredo-face-mask-fine/

Carter, L. (2020, April 27). Harris County face covering ordinance is in effect, but Gov. Abbott says you can't be fined. Retrieved July 25, 2020, from https://www.khou.com/article/news/health/coronavirus/gov-abbott-says-fines-for-not-we ring-a-mask-prohibited-under-executive-order/285-9f379a88-095f-43a3-a1de-c5168279 a14

Coronavirus COVID-19 Information. (n.d.). Retrieved June 24, 2020, from https://www.cityoflaredo.com/coronavirus.html

Drucker, P. F. (2007). *The Practice of Management: Vol. Rev. ed*. Routledge.

Emergency Management. (n.d.). Retrieved June 13, 2020, from http://www.webbcountytx.gov/EmergencyManagement/Vision/default.aspx

Exec. Order No. GA-29. (2020).

Henstra, D. (2010). Evaluating Local Government Emergency Management Programs: What Framework Should Public Managers Adopt? *Public Administration Review, 70*(2), 236-246. doi:10.1111/j.1540-6210.2010.02130.x

"Local hospitals running low on remdesivir once again," [Video file]. (2020, July 15). Retrieved from https://www.kgns.tv/2020/07/15/local-hospitals-running-low-on-remdesivir-once-again/

McNabb, D. E. (2018). *Research methods for public administration and nonprofit management* (Fourth ed.). New York, NY: Routledge.

Miguel, L. (2020, June 05). Laredo ties single-day high with 20 coronavirus cases, 594 total. Retrieved June 06, 2020, from https://www.lmtonline.com/local/article/Laredo-official-confirm-20-coronavirus-cases-594-15320061.php

National Incident Management System. (2017). Washington, DC: Department of Homeland Security.

"Red Roof Inn to be used as an alternative COVID-19 site," [Video file]. (2020, July 15). Retrieved from https://www.kgns.tv/2020/07/15/red-roof-inn-to-be-used-as-an-alternative-covid-19-site/?fbclid=IwAR0m2O2ZkYHyCa1LN3ysvVijyNFwVzCPI3_7ZXGMPi0bdRC8UjZ_XzbokNc

Sargeant, A., & Shang, J. (2016). Fundraising principles and practice (2nd ed.). John Wiley & Sons, Incorporated. https://public.ebookcentral.proquest.com/choice/publicfullrecord.aspx?p=4802529.

Wallace, J. (2020, March 17). First Laredoan tests positive for novel coronavirus. Retrieved June 06, 2020, from https://www.lmtonline.com/local/article/First-Laredoan-tests-positive-for-novel-15136084.php

Wolensky, R. P., & Wolensky, K. C. (1990). Local government's problem with disaster management: a literature review and structural analysis. *Policy Studies Review*, *9*(4).

Appendix

Appendix A: Key Informant Interview Survey Questionnaire

How has COVID-19 made it necessary to deviate the way the local government responds to a health crisis as outlined in the health crisis portion of the emergency plan?

_____

To your knowledge, does the local government have performance indicators to measure the progress and efficiency of the response? If yes, what are they?

o   Yes _____

o   No

What are some SMART goals specific to the pandemic response that the local government aims for? SMART refers to goals that are specific, measurable, achievable, relevant, and time-bound.

_____

What challenges have the local governments faced regarding its implementation of the response measures?

_____

How is the response budget being maintained and monitored?

_____

Rank your organization's resources level on a scale of low, moderate, or high.

_____

If there was no interference from state or federal policy, would you adopt stricter response measures?

o   Yes _____

o   No

Appendix B: Public Survey Questionnaire

Local government will refer to the governments of the City of Laredo and Webb County

Do you currently live in Laredo or Webb County?

- o   Yes

- o   No

How satisfied are you with the local government's response?

- o   Very satisfied
- o   Somewhat satisfied

- o   Somewhat dissatisfied
- o   Very dissatisfied

What do you think of the local government's response when compared to other cities?

- o   It is better than others

- o   It is worse than others

- o   No difference

How satisfied are you with the local government's community engagement on COVID-19?

- o   Very satisfied
- o   Somewhat satisfied

- o   Somewhat dissatisfied
- o   Very dissatisfied

What do you think of the local government's community engagement on COVID-19 compared to other cities?

- o   It is better than others

- o   It is worse than other counties

- o   No difference

How concerned are you with the local government's ability to combat COVID-19?

- o   Very concerned
- o   Somewhat concerned

- o   Somewhat unconcerned
- o   Very unconcerned

Do you have any suggestions for the local government regarding the COVID-19 response?

_____

Appendix C

Figure 1: Levels of Satisfaction among Citizens Regarding the Local Government Response

How satisfied are you with the local government's response?

Answered: 105   Skipped: 0

ANSWER CHOICES	RESPONSES	
Very satisfied (1)	4%	4
Satisfied (2)	37%	39
Dissatisfied (3)	37%	39
Very dissatisfied (4)	22%	23
TOTAL		105

BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	4.00	3.00	2.77	0.83
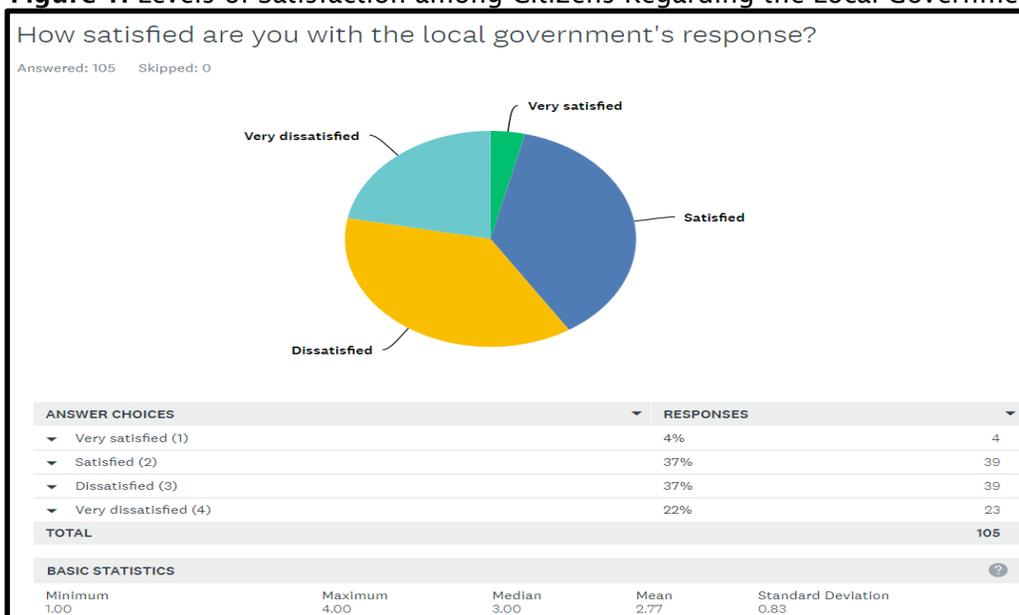
Figure 2: Comparison of the Local Government's COVID-19 Response to Other Cities

What do you think of the local government's response when compared to other cities?

Answered: 105   Skipped: 0

ANSWER CHOICES	RESPONSES	
It is better than others (1)	45%	47
It is worse than others (2)	30%	31
No difference (3)	26%	27
TOTAL		105

BASIC STATISTICS

Minimum	Maximum	Median	Mean	Standard Deviation
1.00	3.00	2.00	1.81	0.82
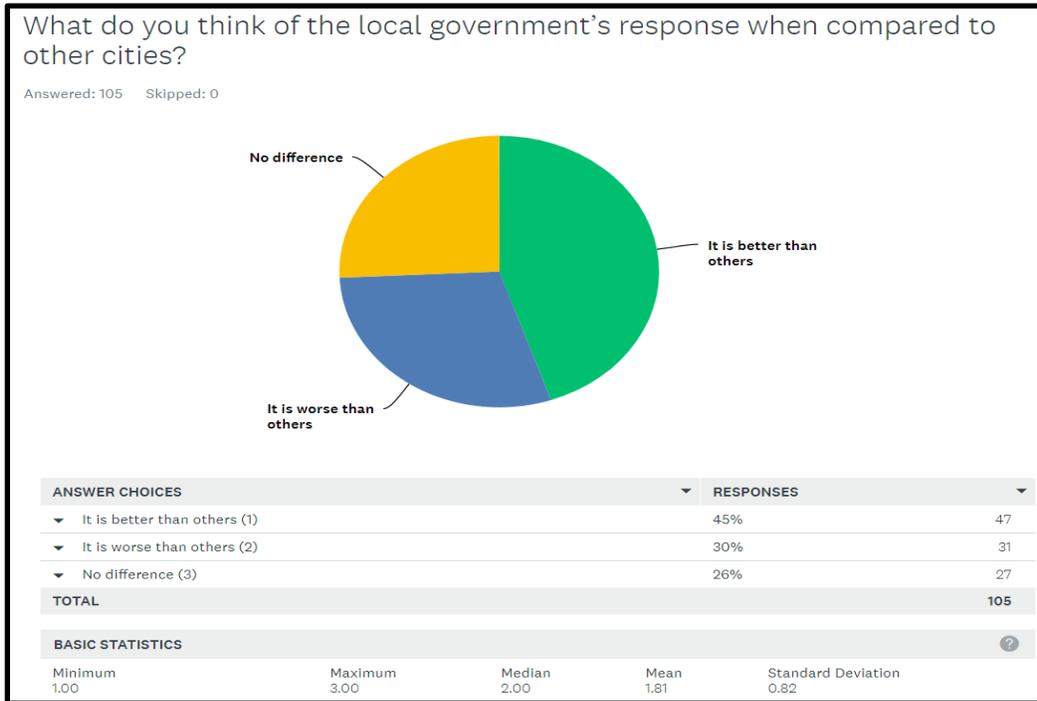
Figure 3: Levels of Satisfaction among Citizens Regarding the Local Government's Community Engagement on COVID-19

How satisfied are you with the local government's community engagement on COVID-19?

Answered: 105   Skipped: 0

ANSWER CHOICES	RESPONSES	
Very satisfied (1)	8%	8
Satisfied (2)	44%	46
Dissatisfied (3)	38%	40
Very dissatisfied (4)	10%	11
TOTAL		105

BASIC STATISTICS

Minimum	Maximum	Median	Mean	Standard Deviation
1.00	4.00	2.00	2.51	0.78
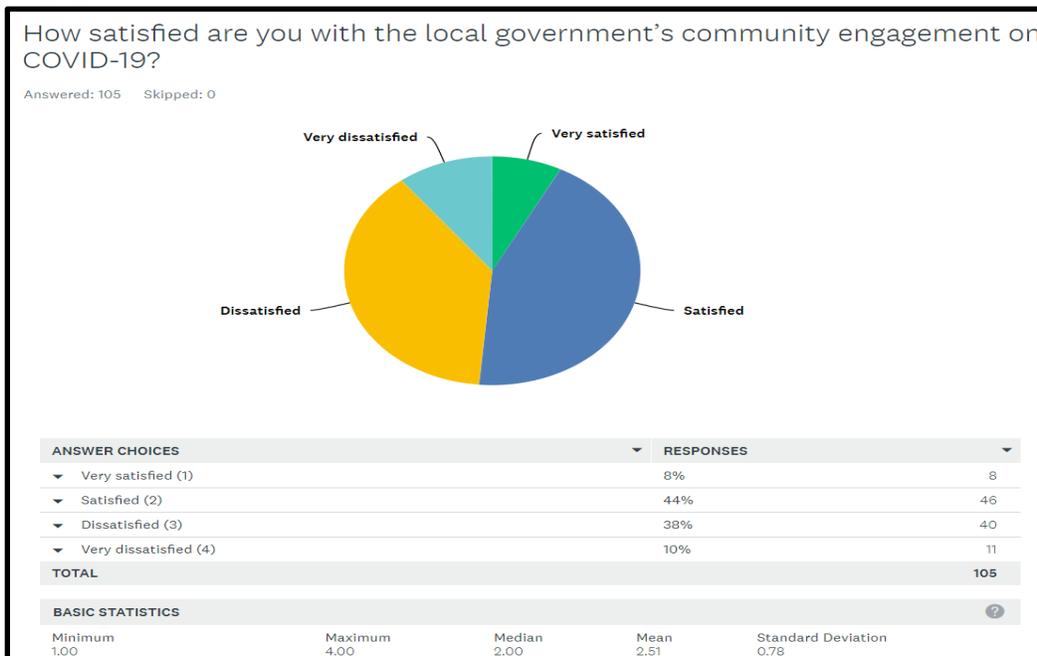
Figure 4: Comparison of Perceptions Regarding the Local Government's Community Engagement on COVID-19

What do you think of the local government's community engagement on COVID-19 compared to other cities?

Answered: 105   Skipped: 0

ANSWER CHOICES	RESPONSES	
It is better than others (1)	48%	50
It is worse than others (2)	28%	29
No difference (3)	25%	26
TOTAL		105

BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	3.00	2.00	1.77	0.82
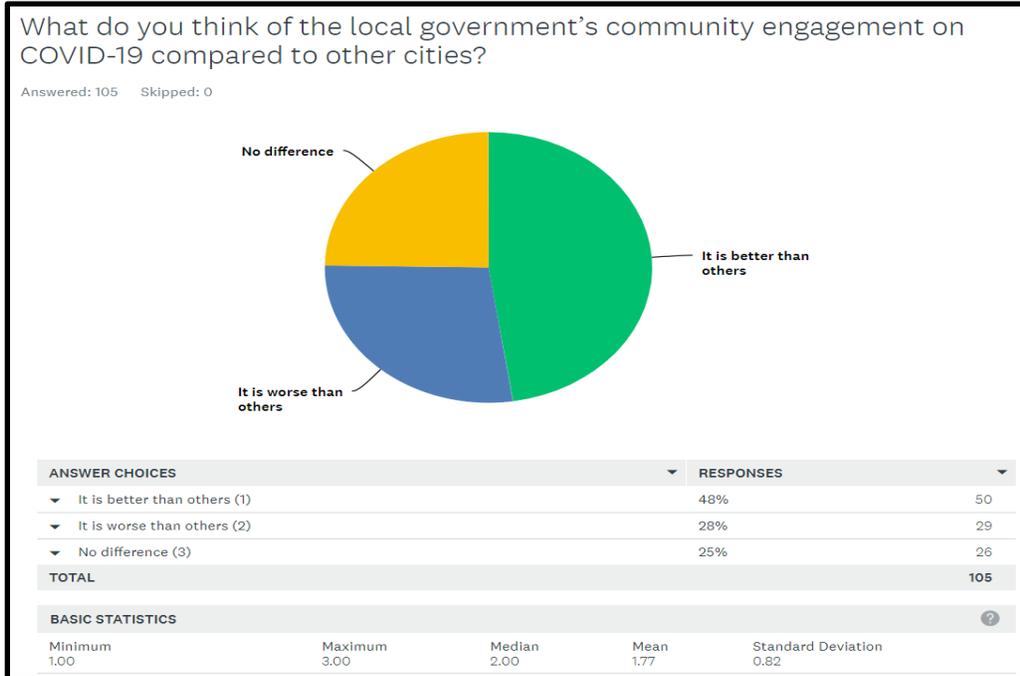
Figure 5: Levels of Concern for COVID-19

How concerned are you with the local government's ability to combat COVID-19?

Answered: 105   Skipped: 0

ANSWER CHOICES	RESPONSES	
Very concerned (1)	46%	48
Concerned (2)	39%	41
Unconcerned (3)	11%	12
Very unconcerned (4)	4%	4
TOTAL		105

BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	4.00	2.00	1.73	0.81
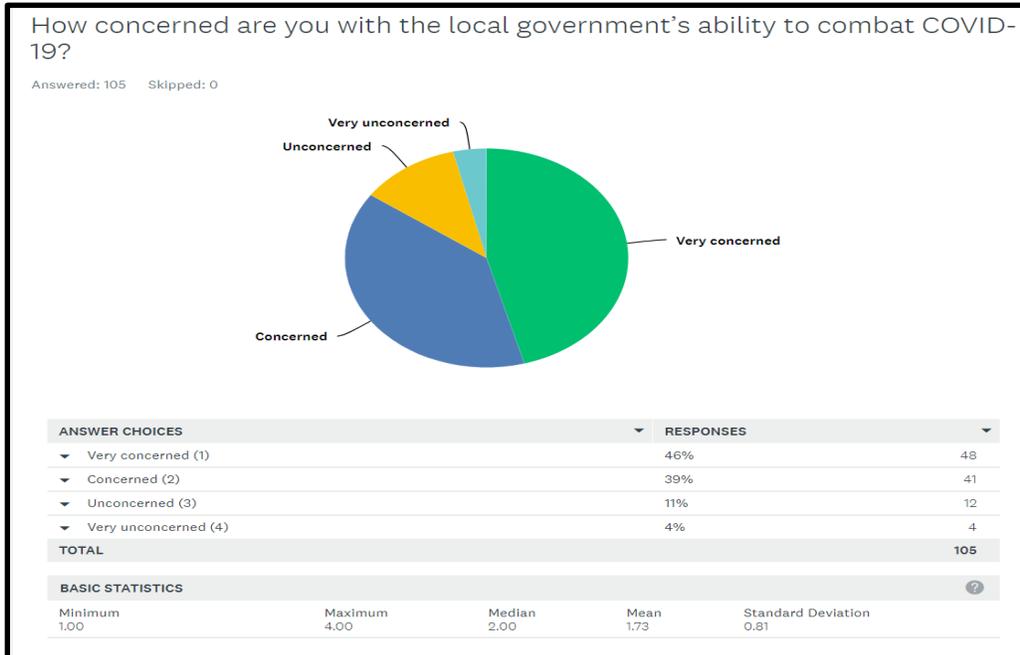
Figure 6: Word Tags Associated with the Responses to the Short Answer Question
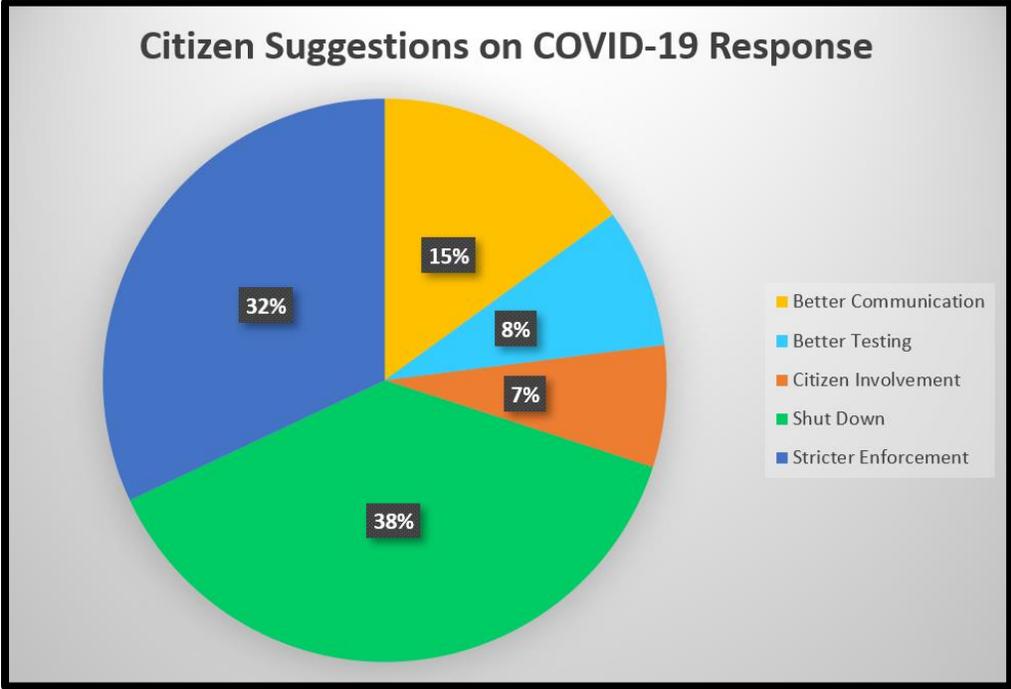
Interdependence of Property Prices and Building Vacancy Rates in Residential and Commercial Real Estate Markets: Hong Kong and Singapore

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Abstract
We investigate the relationship between vacancy rates and property prices in the residential and commercial real estate markets. We find that in Singapore's residential market, the lagged differenced vacancy rate negatively affects the future differenced house price, a relation that results from what we term the "fundamental-driven effect." As housing vacancies can be regarded as excess supply in real estate market, vacancies will result in decreased prices to reduce excess supply and achieve long-term equilibrium when supply exceeds the fundamental demand for residential housing. By considering the two types of property prices in Hong Kong, we identify a long-term relationship between residential prices and office building prices.

I. Introduction

We attempt to identify a relationship between vacancy rates and property prices in the residential and commercial real estate markets in Hong Kong and Singapore. We focus on a comparative study of Hong Kong and Singapore because the two cities share many characteristics in common (Lam, 2000). First, they are among the largest cities with open economies in the Far East region and are newly industrialized economies. Second, they are relatively independent economies, each separated from the mainland by a narrow waterway. Hong Kong is an independent special administrative region of China. Singapore is simultaneously a city and a sovereign country. Third, the information on real estate transactions in both cities is more transparent than of other large cities in the same region. For example, official administrative units periodically collect and announce data on property prices and building vacancy rates. Finally, both are majority ethnic Chinese societies: As of 2012, 92% and 74.2% of citizens are Chinese or Chinese descendants in Hong Kong and in Singapore, respectively.[3]

We construct vector autoregression (VAR) models to identify the causal relationship between residential or office vacancy rates and their respective prices in both cities. In addition to the cities being in a similar stage of development, most citizens in the two cities share the same Chinese culture heritage that believes in the traditional proverb: "having land is having real

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[3] These figures were obtained from the Census and Statistics Department of Hong Kong and Department of Statistics of Singapore, respectively.

Asset Liquidity and Trade Credit: International Evidence

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Abstract
We examine the association between asset liquidity and trade credit. We expect that firms having more asset liquidity prefer to use less trade credit. Using international data of 69 countries, we find that firms having more asset liquidity prefer to use less trade credit. Our results are robust to a wide variety of fixed effects, using change regression, propensity score matching, excluding outliers, and using alternative measures of trade credit and asset liquidity.

Keywords: Asset liquidity; trade credit; sources of finance; cost of capital; cost of debt

I. Introduction

Firms having low-cost alternative sources of financing, for the most part do not use costly trade credit finance (Coleman 2005). Access to alternative sources of financing depends on different factors such as better accounting quality (Li, Lou, Otto, and Wittenberg-Moerman 2021; Chen, Liu, Ma, and Martin 2017), firm size and credit rating (Colla, Ippolito, and Li 2013), internal control weaknesses (Li, Lou, Otto, and Wittenberg-Moerman 2014), or collateral (González, Lopez, and Saurina 2007; Safavian 2008). The liquidity of firms' assets, unexplored factor associated with trade credit, may be a reason for firms to have better access to alternative sources of financing (Morellec 2001; Sibilkov 2009). To the extent that asset liquidity is related to low-cost alternative sources of funds, a firm's use of trade credit depends on the degree of the liquidity of a firm's assets.

Trade credit is the single most important source of short-term external finance in the United States (Petersen and Rajan 1997). After the bank financing, it is the next most important source of short-term financing in a broad range of industries and economies (Fishman 2001). The use of trade credit as an alternative source of financing is also globally popular. For example, in an international setting, Levine, Lin, and Xie (2018) document that trade credit accounts for 25% of the leverage firms' total debt liabilities in their sample of more than 3,500 firms across 34 countries for the period 1990-2011 and Williams (2008) reports that almost 90% of global merchandise is purchased on trade credit. Given the prevalence of trade credit and its importance on business financing, both theoretical (Emery 1984; Petersen and Rajan 1997) and empirical (Klapper, Laeven, and Rajan 2012; Love and Zaidi 2010; Molina and Preve 2012; Petersen and Rajan 1997) studies have investigated the determinants of the use of trade credit by firms. No study has yet investigated the impact of liquidity of assets on trade credit. This is the first study to investigate the relation between trade credit and asset liquidity.

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Existing research suggests how asset liquidity could affect the corporate securities and the firm's financing decisions. For example, Morellec (2001) show that greater asset liquidity reduces credit spreads on corporate debt and increases optimal leverage. Firms having more liquid assets enjoy operating flexibility and Ortiz-Molina and Phillips (2010) find that higher asset liquidity is negatively associated with cost of capital. Higher liquidity allows firms to have better access to alternative sources of financing (Lipson and Mortal 2009; Shang 2020) and these firms choose banks and capital markets as their primary source of external financing (Gatev, Schuermann, and Strahan 2009; Ortiz-Molina, and Phillips 2014). Related studies (e.g., Smith 1987; Petersen and Rajan 1994) find that firms first use inexpensive bank loans and then expensive trade credit after bank loans become unavailable (Smith 1987; Petersen and Rajan 1994). Firms having illiquid assets are more likely to use long-term debt because less liquid assets sell at higher costs, increasing the cost of liquidation, bankruptcy, and debt. Therefore, we predict that firms having more asset liquidity are less likely to sue trade credit.

To examine the impact of asset liquidity on firm's use of trade credit, we use weighted asset liquidity score using the book value of the different assets as weights and normalize by lagged value of total assets. We test our hypothesis using 90,119 firm-year observations of 69 countries form the period of 2010-2020. The empirical results are consistent with our hypothesis that firms having more asset liquidity are less likely to use costly trade credit. Our results hold after controlling for firm and country-level variables.

Potential concerns in our analysis are the endogeneity, omitted variable bias, and impact of outliers. We address these concerns using change regressions, propensity score matching, excluding outliers, using firm and year fixed effects in the estimation, and employing alternative measures of trade credit and asset liquidity. In all the tests, we find robust results in support of our hypothesis that firms having higher asset liquidity are less likely to sue trade credit.

This paper contributes to the literature in several ways. First, this is the first study to investigate the association between asset liquidity and trade credit. This investigation is important because it shows how the liquidity of asset affects firm's decision to external finance. Second, this article contributes to the growing literature of asset liquidity. Recent studies show that asset liquidity is associated with firm's choice of debt, cost of capital, and cost of debt. No study has yet investigated the impact of asset liquidity on firm's use of trade credit. We contribute to this growing literature by showing that firms having higher asset liquidity are less likely to use trade credit. Third, this study contributes an interesting perspective to the growing body of literature of firm's debt choices. Studies (e.g., Gwatidzo and Ojah 2014 ; Boubaker, Saffar, and Sassi 2018) find that firms debt choice is affected by product market competition and institutional infrastructure. However, no study has yet investigated the impact of asset liquidity on trade credit in an international setting. International investors would be benefitted from the findings of this study.

The reminder of the paper is organized as follows: Section 2 discusses the literature and develop hypothesis; Section 3 discusses the data and the variables. In Section 4, we develop our econometric model. Section 5 presents the empirical findings, and finally, Section 6 summarizes and concludes.

II. Literature Review and Hypothesis

An extensive body of research examines numerous determinants of firm's use of trade credit (e.g., Ferris 1981; Smith 1987; Long, Malitz, and Ravid 1993; Petersen and Rajan 1997; Delannay and Weill 2004; chen, Liu, Ma, and Martin 2017; Islam 2018; Hasan and Habib 2019; Islam and Wheatley 2021). In this study, we investigate the impact of asset liquidity on the firm's use of trade credit. We predict that firms having higher asset liquidity have better access to alternative sources of external finance and are less likely to use costly trade credit.

In this study, we broadly define asset liquidity and trade credit. Following existing literature (e.g., Petersen and Rajan 1997; Chen, Liu, Ma, and Martin 2017; Hasan and Habib 2019), we use the term trade credit to refer to the firm's accounts payable as shown on the balance sheet. We

utilize the measure of asset liquidity from prior studies (Gopalan, Kadan, and Pevzner 2012; Charoenwong, Chong, and Yang 2014). While defining asset liquidity of a firm, we assign liquidity score between zero and one to all assets on its balance sheet based on their level of liquidity (Gopalan, Kadan, and Pevzner 2012). We then calculate a weighted asset liquidity score using the book value of the different assets as weights and normalize by the lagged value of total assets. Using this approach, we come up with three alternative measures of asset liquidity. Finally, we create a combined liquidity score by adding them all and dividing by three.

Prior studies use this measure to examine the impact of asset liquidity on stock liquidity (Gopalan, Kadan, and Pevzner 2012), cost of capital (Ortiz-Molina and Phillips 2014), firm innovation (Pham, Van Vo, Le, and Le 2018). However, no study has yet examined the impact of asset liquidity on firm's use of trade credit. In a concurrent study, Ortiz-Molina and Phillips (2014) find that firms with more illiquid assets have a higher cost of capital. They also find that firms having higher asset illiquidity and less access to external capital experience more cost of capital. Gopalan, Kadan, and Pevzner (2012) find that asset liquidity improves stock liquidity, and Marks and Shang (2021) document that firms with liquid stock tend to issue longer-term bonds and enjoy lower bond yield spreads. Cheung, Im, and Zhang (2018) find that stock liquidity increases a firm's propensity to raise debt capital rather than equity capital. Using sample of U.S. public companies, Sibilkov (2009) finds that leverage is positively associated with liquidity and the relation is also positive with secured debt. In contrast to these studies, our study focuses on the more short-term debt, trade credit proxied by accounts payable.

When firms have more asset liquidity, traditional financing sources become more available to them at a lower cost (Ortiz-Molina and Phillips 2014; Marks and Shang 2021) and they try not to use the costly (Chen, Ma, Wu 2019)[2] trade credit. In this context, firms are more likely to use other external sources of financing. Related studies (e.g., Schwartz 1974; Petersen and Rajan 1997) suggest that firms having better access to financial credit extend more credit to financially constraint firms and firms that having limited access to capital markets demand more trade credit. While firms' use of trade credit is considered as a single major source of external financing (Petersen and Rajan 1997), the literature remains silent on whether the liquidity of assets may have an impact on the firms' decision to use more or less trade credit. To the extent that asset liquidity is related to low-cost alternative sources of funds, a firm's use of trade credit depends on the degree of the liquidity of a firm's assets. Collectively, these arguments suggest that firms having more asset liquidity have better access to low cost external sources of financing and are less likely to use costly trade credit. This idea leads us to our hypothesis:

H: Firms with higher asset liquidity are less likely to use trade credit.

III. The Data and Variables

Our sample consists of 90,119 firm-year observations of 16,593 unique firms from 69 countries, which include developed and developing countries, and covers the period of 2010 to 2018. We start our sample from 2010 because all variables from Compustat Global are available from the year 2010. We obtain the financial data from the Compustat Global and Compustat North America databases and country level data from several sources (see Appendix A for details). In our analysis we keep all industry data so that we can investigate a clean association between our variables of interest. From the sample over the period 2010 to 2018, firms located in Israel (0.46), Jamaica (0.47), Bermuda (0.44), China (0.43), and Japan (0.43) maintain the highest asset liquidity, whereas firms Tunisia, Turkey, Portugal, Kazakhstan, Lithuania, Italy, Canada, Argentina, India, and Czech Republic use more trade credit. China (6.46%), Bangladesh (5.63%), Viet Nam (5.38%), Lithuania (5.08%), Philippines (4.59%), and Turkey (4.54%) ranked the highest in terms of GDP growth, and Bangladesh (1196), Bermuda (1202), Malta (1380), Netherlands (500), and Singapore (7662) have the highest population density.

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[2] Chen, Ma, and Wu (2019) report that the involving annual interest rate trade credit may be more than 40%.

Following prior studies (Petersen and Rajan 1997; Chen, Liu, Ma, and Martin 2017; Hasan and Habib 2019), we define trade credit, our dependent variable, as the ratio of accounts payable to total assets (*AP/AT*). As alternative measures, we calculate trade credit as accounts payable (*AP*) and notes payable (*NP*) scaled by total assets, and the sum of accounts payable, notes payable and debt in current liabilities scaled by total assets [*(AP+NP+DLC)/AP*].

The variable of interest, our independent variable, is asset liquidity. Following prior studies (Gopalan, Kadan, and Pevzner 2012; Charoenwong, Chong, and Yang 2014), we define asset liquidity using the book value of different assets weighting and normalizing by the lagged value of total assets. We calculate three alternative measures of asset liquidity and finally create a composite score by adding them together and dividing by three.

Our first measure assigns a liquidity score of one to cash and cash equivalents and score of zero to al other assets of the firms as follows:

$$WAL1_{i,t} = \frac{\text{Cash \& Equivalent}_{i,t}}{\text{Total Assets}_{i,t-1}} \times 1 + \frac{\text{Other Assets}_{i,t}}{\text{Total Assets}_{i,t-1}} \times 0$$

Clearly, this measure suffers from limitations as it assumes that all assets other than cash and cash equivalents are perfectly illiquid. However, this measure is useful to best capture the impact of liquidity on trade credit.

As non-cash current assets (CA), semi liquid assets, can be converted into cash relatively quickly and a low cost, we assign a liquidity score of one-half to them. Our second measure of asset liquidity is,

$$WAL2_{i,t} = \frac{\text{Cash \& Equivalent}_{i,t}}{\text{Total Assets}_{i,t-1}} \times 1 + \frac{\text{Non Cash CA}_{i,t}}{\text{Total Assets}_{i,t-1}} \times 0.5 + \frac{\text{Other Assets}_{i,t}}{\text{Total Assets}_{i,t-1}} \times 0$$

By dividing non-current assets into two parts—tangible and intangible, we assign a liquidity score of one for cash, three-quarters for non-cash current assets, one-half for tangible assets, and a zero for the rest. This gives the third measure of liquidity as follows:

$$WAL3 = \frac{\text{Cash \& Equivalent}_{I,t}}{\text{Total Assets}_{I,t-1}} \times 1 + \frac{\text{Non Cash CA}_{I,t}}{\text{Total Assets}_{I,t-1}} \times 0.75$$

$$+ \frac{\text{Tangible Fixed Assets}_{i,t}}{\text{Total Assets}_{i,t-1}} \times 0.5 + \frac{\text{Other Assets}_{i,t}}{\text{Total Assets}_{i,t-1}} \times 0$$

Finally, we construct a composite measure of asset liquidity to best capture influence of all the measures on our parameter, β_1.

Suggested by prior studies (Petersen and Rajan 1997; Chen, Liu, Ma, and Martin 2017; Hasan and Habib 2019), we use a battery of control variables in our regression analysis. We control for firm size (*SIZE*), level of firm leverage (*LEVERAGE*), research and development expenditure (*R&D*), market share (*MKTSHARE*), firm maturity (*REPE*), capital intensity (*CAPINT*), level of raw materials (*LIQUIDCOST*), intangible assets (*INTANG*), current liabilities excluding accounts payable (*CLXTRADE*), recoverable slack (*RECSLACK*), and potential slack (*POTSLACK*). We also control for country-level variables such as gross domestic product growth rate (*GDPGRR*) and population density (*POPDEN*). In addition, we control for industry, year, and country dummies. Variable definitions are in Appendix A.

IV. The Econometric Model

To examine the relation between asset liquidity and trade credit, we estimate the following multivariate regression model:

$$TC_{i,t}=\alpha_0+\beta_1 COMPLIQ_{i,t}+\sum_{j=2}^{14}\beta_{i,t} CONTORLS+Ind_j+Yr_t+C_c+\varepsilon_{i,t} \qquad (1)$$

where $TC_{i,t}$ is *TRADE CREDIT* of firm I, in the year t. $COMPLIQ_{i,t}$ is the composite measure of asset liquidity. We use unbalanced panel data with industry (Ind_j), year (Yr_t), and country (C_c) fixed effects to control for unobservable heterogeneity and omitted factors related to both *TRADE CREDIT* and *COMPLIQ*. Following prior studies (Jank, Roling, and Smajlbegovic 2016; Munch and Schaur 2018; Kinzius, Sandkamp, and Yalcin 2019), we use estimator developed by Correia (2016) to deal with international data with different levels of fixed effects in a computationally efficient way[3]. We also control variables suggest by prior studies as discussed in Section 3. All continuous variables are winsorized at the 1st and 99th percentile.

V. Results

Table 1: Firm Characteristics

Variable	n	Mean	S.D.	Min	0.25	Mdn	Max
TC1	90,119	0.11	0.08	0.00	0.04	0.09	0.40
TC2	90,119	0.17	0.14	0.01	0.06	0.14	0.66
TC3	90,119	0.26	0.21	0.01	0.08	0.19	0.84
COMPLIQ	90,119	0.40	0.14	0.09	0.30	0.38	0.84
SIZE	90,119	7.36	3.09	-6.91	5.26	7.43	18.11
LEVERAGE	90,119	0.10	0.12	0.00	0.00	0.05	0.51
MKTSHARE	90,119	0.02	0.10	-0.03	0.00	0.00	1.00
R&D	90,119	0.04	0.07	0.00	0.00	0.02	0.44
REPE	90,119	0.17	1.18	-5.14	0.05	0.43	2.37
CAPINT	90,119	0.23	0.17	0.00	0.08	0.20	0.77
LIQUIDCOST	90,119	-0.03	0.03	-0.09	-0.05	-0.02	0.00
INTANG	90,119	0.10	0.12	0.00	0.01	0.04	0.45
CLXTRADE	90,119	0.20	0.13	0.02	0.10	0.17	0.57
RECSLACK	90,119	0.28	0.22	0.04	0.12	0.21	1.03
POTSLACK	90,119	0.17	0.28	0.00	0.00	0.05	2.08
GDPGRR	90,119	2.92	3.45	-31.35	1.18	2.92	23.99
POPDEN	90,119	4.96	1.16	0.51	4.44	4.99	8.98
CASHHOLD	90,119	0.05	0.09	-0.16	0.01	0.06	0.17

In Table 1, we present the descriptive statistics of the variables used in our model. The mean (median) of asset liquidity (*COMPLIQ*) is 0.40 (0.38) in our sample. The mean and median of trade credit (*TC1*) are 0.11 and 0.09, respectively. The mean and median of *TC2 (TC3)* are 0.17 (0.26) and 0.14(0.19), respectively. The sample has a mean *SIZE* of 7.36, *LEVERAGE* of 0.10, *MKTSHARE* of 0.02, *R&D* of 0.04, *REPE* of 0.17, *LIQUIDCOST* of -0.03, *INTANG* of 0.10, *CLXTRADE* of 0.20, *RECSLACK* of 0.28, *POTSLACK* of 0.17, *GDPGRR* of 2.92, and log of *POPDEN* of 4.96. The percentage of cash holding is 5% of total assets, and capital intensity is 23% of total assets.

In Table 2, we present the correlation among the variables used in our analysis. The results show that the correlation between asset liquidity and *TRADE CREDIT* is negative (coefficient =-0.02 with *TC1*, -0.10 with *TC2*, and -0.15 with *TC3*) and significant at the 1% level. Consistent

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[3] We implement two dimensional fixed effects using the "reghdfe " stata command by Correia (2016)

with existing studies (e.g., Molina and Preve 2012; Chen, Liu, Ma, and Martin 2017), we find that *TRADE CREDIT* is negatively associated with *LIQUIDCOST* (coefficient =-0.17), *INTANG* (coefficient = -0.21), *RECSLACK* (coefficient = -0.14), *POTSLACK* (coefficient = -0.13) and *CASHHOLD* (coefficient = -0.10). In Addition, we find positive association between *TRADE CREDIT* and *REPE, GDPGR, POPDEN,* and *CLXTRADE.* The results indicate that firms having higher asset liquidity are less likely to use trade credit, suggesting our hypothesis.

Table 2: Pearson Correlation Coefficients

Panel A: Correlation Variables *(TCI to REPE)*

		1	2	3	4	5	6	7	8	9
1	*TC1*	1.00								
2	*TC2*	0.79	1.00							
3	*TC3*	0.61	0.94	1.00						
4	*COMLIQ*	**-0.02**	**-0.10**	**-0.15**	1.00					
5	*SIZE*	0.00	0.05	0.06	-0.17	1.00				
6	*LEVERAGE*	-0.05	-0.05	0.00	-0.37	0.11	1.00			
7	*MKTSHARE*	0.00	-0.02	-0.02	-0.06	0.14	0.09	1.00		
8	*R&D*	0.03	-0.05	-0.08	0.29	-0.40	0.02	-0.05	1.00	
9	*REPE*	0.08	0.11	0.10	-0.13	0.31	0.02	0.04	-0.28	1.00
10	*CAPINT*	-0.01	0.11	0.17	-0.34	0.31	0.22	0.05	-0.28	0.14
11	*LIQUIDCOST*	-0.17	-0.20	-0.20	0.09	-0.03	0.01	0.03	0.08	-0.07
12	*INTANG*	-0.21	-0.26	-0.25	-0.45	-0.15	0.25	0.04	0.09	-0.11
13	*CLXTRADE*	0.20	0.47	0.60	-0.05	-0.13	0.03	-0.03	0.16	0.00
14	*RECSLACK*	-0.14	-0.18	-0.18	0.27	-0.49	0.02	-0.04	0.62	-0.35
15	*POTSLACK*	-0.13	-0.11	-0.05	-0.24	0.03	0.77	0.04	0.07	-0.02
16	*GDPGR*	0.05	0.13	0.13	0.04	0.00	-0.10	-0.06	-0.03	0.02
17	*POPDEN*	0.08	0.14	0.15	0.01	0.38	-0.08	-0.01	-0.19	0.19
18	*CASHHOLD*	-0.10	-0.14	-0.15	-0.15	0.34	0.00	0.06	-0.31	0.30

Panel B: Correlation Variables *(CAPINT to CASHHOLD)*

		10	11	12	13	14	15	16	17	18
10	*CAPINT*	1.00								
11	*LIQUIDCOST*	-0.19	1.00							
12	*INTANG*	-0.33	0.19	1.00						
13	*CLXTRADE*	-0.04	-0.01	-0.06	1.00					
14	*RECSLACK*	-0.31	0.19	0.18	0.11	1.00				
15	*POTSLACK*	0.14	0.11	0.22	0.00	0.15	1.00			
16	*GDPGR*	0.08	-0.08	-0.07	0.03	-0.10	-0.05	0.07	1.00	
17	*POPDEN*	0.15	-0.10	-0.24	0.02	-0.24	-0.10	0.07	1.00	
18	*CASHHOLD*	0.21	-0.07	0.04	-0.15	-0.44	-0.13	0.03	0.14	1.00

Table 3 provides the main results from our estimated Equation (1) using *TRADE CREDIT* as the dependent variable and *COMPLIQ* as the independent variable. We use three measures of

TRADE CREDIT as defined in Appendix A. We find negative and significant coefficients (*p*-values<0.0001) for all three measures of *TRADE CREDIT*. Given the coefficient of *COMPLIQ* (-0.28), moving from the first quartile (0.30) to the third quartile (0.38) decreases the use of trade credit by 2.29%.[4] These results support our hypothesis and suggest that firms having higher asset liquidity tend to use less credit. Additionally, coefficients of all control variables included in Equation (1) have the expected sign and are significant. For example, firm *SIZE* significantly negatively associated with all the proxies of *TRADE CREDIT*.

Table 3: Baseline Regression

	Dependent variable = *TRADE CREDIT_{it}*					
	(1)		(2)		(3)	
	TC1		*TC2*		*TC3*	
	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value
COMPLIQ	-0.125***	0.000	-0.208***	0.000	-0.280***	0.000
SIZE	-0.005***	0.000	-0.008***	0.000	-0.010***	0.000
LEVERAGE	0.084***	0.000	0.048***	0.000	0.059***	0.000
R&D	0.014***	0.000	0.010**	0.025	0.005	0.360
MKTSHARE	0.195***	0.000	0.140***	0.000	0.032***	0.193
REPE	0.005***	0.000	0.006***	0.000	0.005***	0.000
CAPINT	-0.089***	0.000	-0.076***	0.000	-0.023***	0.004
LIQUIDCOST	-0.149***	0.000	-0.265***	0.000	-0.397***	0.000
INTANG	-0.168***	0.000	-0.200***	0.000	-0.201***	0.000
CLXTRADE	0.083	0.000	0.465***	0.000	0.966***	0.000
RECSLACK	-0.063***	0.000	-0.111***	0.000	-0.158***	0.000
POTSLACK	-0.042***	0.000	-0.033***	0.000	-0.016***	0.002
GDPGRR	0.000	0.820	0.000	0.330	-0.001**	0.035
PODEN	0.001***	0.002	0.003***	0.000	0.003***	0.050
CASHHOLD	-0.095***	0.000	-0.228***	0.000	-0.369***	0.000
Constant	0.180***	0.000	0.218***	0.000	0.271***	0.000
Year FE	Yes		Yes		Yes	
Industry FE	Yes		Yes		Yes	
Country FE	Yes		Yes		Yes	
Adj. R^2	0.290		0.485		0.598	
Observations	89,980		89,970		89,970	

All continuous variables are winsorized at the 1st and 99th percentile. *, **, and *** denote significance levels of 10%, 5%, and 1%, respectively. Variable definitions are in Appendix A.

Identification of Main Results

A major concern with our baseline estimation is the potential endogeneity. One could argue that endogeneity issue can arise when unobserved firm-specific factors affect both asset liquidity and trade credit, creating identification concerns. We address these concerns in several ways. We run change regression, propensity score matching sample, firm-fixed effects, components of asset liquidity, and finally, we test whether our results are driven by a few industries that use the highest or lowest amount of trade credit.

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[4] [0.38-0.30][exp(-0.25)-1]=2.29%

Change Regression

Table 4: Asset Liquidity and Trade Credit

Panel A: Change Regression

	Dependent variable = Δ TRADE CREDIT					
	(1)		(2)		(3)	
	TC1		TC2		TC3	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
ΔCOMPLIQ	-0.091***	0.000	-0.103***	0.000	-0.089***	0.000
ΔCONTROLS			Yes			
Constant	0.001***	0.000	0.001	0.660	0.009	0.596
Year Dummy	Yes		Yes		Yes	
Industry Dummy	Yes		Yes		Yes	
Country Dummy	Yes		Yes		Yes	
Adj. R²	0.103		0.218		0.441	
Observations	70,40 6		70,39 6		70,468	

Panel B: Propensity Score Matching

	Dependent variable = TRADE CREDIT$_{it}$					
	(1)		(2)		(3)	
	TC1		TC2		TC3	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
Treatment	-0.035***	0.000	-0.056***	0.000	-0.073***	0.000
CONTROLS	Yes		Yes		Yes	
Constant	0.168***	0.000	0.229***	0.000	0.304***	0.000
Year Dummy	Yes		Yes		Yes	
Industry Dummy	Yes		Yes		Yes	
Country Dummy	Yes		Yes		Yes	
Adj. R²	0.304		0.347		0.525	
Observations	61,196		61,440		61,196	

Panel C: Year and Firm Fixed Effect

	Dependent variable = TRADE CREDIT$_{it}$					
	(1)		(2)		(3)	
	TC1		TC2		TC3	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
COMPLIQ	-0.021***	0.000	-0.028***	0.000	-0.030***	0.000
CONTROLS	Yes		Yes		Yes	
Constant	0.209***	0.000	0.209***	0.000	0.137***	0.000
Firm FE	Yes		Yes		Yes	
Year FE	Yes		Yes		Yes	
Industry Dummy	Yes		Yes		Yes	
Country Dummy	Yes		Yes		Yes	
Adj. R²	0.122		0.347		0.483	
Observations	89,980		89,970		89,970	

To deal with the omitted variables bias, we regress the year-to-year change in trade credit (Δ TRADE CREDIT) onto year-to-year change in asset liquidity. We also include industry, year, and country dummies in our regression. We present the results of change regression in Panel A of Table 4. The coefficient on ΔCOMPLIQ is negative (-0.09) and significant at the 1% level (p-value = 0.0001). The results suggest that our baseline results are not driven by omitted variable bias.

Panel C: Alternative Measures of Asset Liquidity (Components of COMPLIQ)

	(1)		(2)		(3)	
	LIQ1		LIQ2		LIQ3	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
COMPLIQ	-0.222***	0.000	-0.123***	0.000	-0.177***	0.000
CONTROLS	Yes		Yes		Yes	
Constant	0.181***	0.000	0.190***	0.000	0.263***	0.000
Year Dummy	Yes		Yes		Yes	
Industry Dummy	Yes		Yes		Yes	
Country Dummy	Yes		Yes		Yes	
Adj. R^2	0.498		0.476		0.475	
Observations	89,980		89,970		89,970	

Dependent variable = $TRADE\ CREDIT_{it}$

Panel D: Excluding Industries with Highest and Lowest Trade Credit

Dependent variable = $TRADE\ CREDIT_{it}$

	(1)		(2)	
	Excluding Highest Industries		Excluding Lowest Industries	
	Coeff.	p-value	Coeff.	p-value
COMPLIQ	-0.190***	0.000	-0.212***	0.000
CONTROLS	Yes		Yes	
Constant	0.213***	0.000	0.236***	0.000
Year Dummy	Yes		Yes	
Industry Dummy	Yes		Yes	
Country Dummy	Yes		Yes	
Adj. R^2	0.532		0.485	
Observations	59,892		89,400	

All continuous variables are winsorized at the 1st and 99th percentile. *, **, and *** denote significance levels of 10%, 5%, and 1%, respectively. Variable definitions are in Appendix A.

Propensity Score Matching Sample

To further address and mitigate the endogeneity issues, we perform additional analyses using propensity score matching (PSM). For PSM, we first sort the sample by "high liquidity" and regard those firms whose liquidity is in the highest quintile as our treatment group. Then using the propensity score estimated in the first-stage logit model, for each of the treatment firms, we find a matched control firm using the nearest neighbor propensity score matching. The matching is based on observable firm characteristics used in the baseline regression analysis; therefore, the firms both in the treatment and control groups are basically identical in terms of asset liquidity. The only difference between the two groups is that our treatment group has higher liquidity than the control group. Panel B of Table 4 presents the PSM regression results. We find that the treatment effect continues to hold for all trade credit proxies. As indicated by the magnitude of coefficients, the treatment effect is higher for the third (TC3) measure of trade credit. The results provide additional supporting evidence for the hypothesis that firms having higher asset liquidity are more likely to avoid trade credit.

Firm Fixed Effects

To further deal with concerns for unknown time-invariant unobserved firm characteristics, we run the baseline regression using firm and year fixed effect. Panel B of Table 4 reports the corresponding results. Across all models of trade credit, the estimation remains negative and significant at the 1% level, suggesting that our results from baseline regression are not driven by significant omitted firm-level factors.

Alternative Measures of Asset Liquidity

To address the possibility that our combined measure of asset liquidity is driving our main results, we replicate our baseline regressions using the components of our measure instead of *COMPLIQ*. We use all three components of our liquidity measure. Panel C of Table 4 presents the results of the regressions and shows that our results continue to be robust, suggesting that our baseline results are not conditional to a specific measure of asset liquidity.

Excluding Industries with Highest and Lowest Trade Credit Users

One may argue that industries that require to use higher amount of trade credit are driving our results, creating potential omitted variables bias. To address this concerns, we identify five industries (defined by Fama and French (1993) 48 industry (FF48) classification) that use the highest amount of trade credit in our sample, namely business service (FF48=34), wholesale (FF48=41), retail (FF48=42), electronic equipment (FF48=36), and machinery (FF48=21). Even after losing more than 34% of observations from our sample, the results presented in Panel D of Table 4 remain significant (p-value=0.0001) and negative (coefficient =-0.190) for all three models of trade credit, suggesting our main findings. We also drop observations of the lowest five trade credit user industries and replicate our main regression. We find that the results are consistent with our main findings and suggest our hypothesis.

Robustness Check

To further reinforce the reliability of our results, we conduct several robustness checks. We re-estimate our baseline regression excluding outliers and US observations, adding additional control variables, excluding countries that use the highest and lowest amount of trade credit, and finally using alternative econometric methods.

Dealing with an Outlier

Table 5: Asset Liquidity and Trade Credit

Panel A: Exclusion of Outlier

	Dependent variable = *TRADE CREDIT$_{it}$*					
	(1)		(2)		(3)	
	TC1		TC2		TC3	
	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value
COMPLIQ	-0.060***	0.000	-0.029***	0.000	-0.045***	0.000
CONTROLS	Yes		Yes		Yes	
Constant	0.188***	0.000	0.157***	0.000	0.162***	0.000
Year Dummy	Yes		Yes		Yes	
Industry Dummy	Yes		Yes		Yes	
Country Dummy	Yes		Yes		Yes	
Adj. R²	0.694		0.333		0.571	
Observations	84,162		84,162		84,162	

Following prior studies (e.g., Hidekazu 1991; Diaz-Garcia, and González-Farias 2004), we compute cook's distance based on multivariate linear regression method (Wang, Liu, Hou, Rho, Gupta, Mu, and Shen 2018) and control our sample for unreasonable observations. This method led to an exclusion of 5,845 (9.6% of total observations) unreasonable observations. Panel A of Table 5 presents the results of the regression after excluding the outliers. The results are significant and consistent with our main findings and suggest that our results are not driven unreasonable observations.

Panel B: Exclusion of US Observations

	Dependent variable = *TRADE CREDIT*$_{it}$					
	(1)		(2)		(3)	
	TC1		*TC2*		*TC3*	
	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value
COMPLIQ	-0.030***	0.000	-0.054***	0.000	-0.077***	0.000
CONTROL	-0.075***	0.000	-0.210***	0.000	-0.355***	0.000
Constant	0.167***	0.000	0.205***	0.000	0.259***	0.000
Year Dummy	Yes		Yes		Yes	
Industry Dummy	Yes		Yes		Yes	
Country Dummy	Yes		Yes		Yes	
Adj. R^2	0.295		0.492		0.605	
Observations	71,130		71,130		71,130	

Panel C: Excluding Countries with Highest and Lowest Trade Credit

	Dependent variable = *TRADE CREDIT*$_{it}$			
	(1)		(2)	
	Excluding Highest 10		*Excluding Lowest 10*	
	Coeff.	*p*-value	Coeff.	*p*-value
COMPLIQ	-0.214***	0.000	-0.210***	0.000
CONTROLS	Yes		Yes	
Constant	0.227***	0.000	0.234***	0.000
Year Dummy	Yes		Yes	
Industry Dummy	Yes		Yes	
Country Dummy	Yes		Yes	
Adj. R^2	0.474		0.484	
Observations	79,461		88,547	

Panel D: Additional Control Variables

	Dependent variable = *TRADE CREDIT*$_{it}$					
	(1)		(2)		(3)	
	TC1		*TC2*		*TC3*	
	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value
COMPLIQ	-0.070***	0.000	-0.038***	0.000	-0.056***	0.000
OTHER CONTROLS	Yes		Yes		Yes	
FIRMAGE	-0.003	0.497	0.004*	0.083	0.002	0.554
DAC	-0.001***	0.008	0.000	0.240	-0.001*	0.046
FINDIST	0.024***	0.000	0.005*	0.068	0.014***	0.000
Constant	0.202***	0.000	0.183***	0.000	0.199***	0.000
Year Dummy	Yes		Yes		Yes	
Industry Dummy	Yes		Yes		Yes	
Country Dummy	Yes		Yes		Yes	
Adj. R^2	0.648		0.343		0.530	
Observations	18,151		18,151		18,151	

Excluding US Sample

A significant part of our sample observations (21.94%) is from US firms. One may argue that the US observations are driving our results. To respond to this concern, we replicate our main regressions in Equation (1), and the Table 5, Panel B, presents the results of the regressions We find that the coefficient on *COMPLIQ* in all the columns remain significant (p-value<0.001) with expected signs, suggesting that our results are not driven by US observations from US firms.

Excluding Countries that use Highest and Lowest Trade Credit

Since we use international data from 69 countries, one may argue that countries that use highest or lowest amount of trade credit may drive our results. To address this concern, we identify top 10 countries that use the highest amount trade credit, namely, ISO788=Tunisia, ISO792=Turkey, ISO620=Portugal, ISO398=Kazakhstan, ISO40=Lithuania, ISO380=Italy, ISO124=Canada, ISO32=Argentina, ISO356=India, and ISO203=Czech Republic. Excluding the observations associated with these countries, we re-estimate the Equation (1) and report the results in Panel C of Table 5. Despite a loss of 11.82% of observations, we find that the coefficient on *COMPLIQ* remains significant with expected signs. We also drop the 10 countries that use the lowest amount of trade credit and find that the results do not change. These results suggest that our estimation of Equation (1) is not driven country specific observations.

Additional Control Variables

In this section, we perform regressions to determine whether our results are robust to the inclusion of additional control variables that other studies (e.g., Chen, Liu, Ma, and Martin 2017; Hasan and Habib 2019) have found affect firm's use of trade credit. These variables include discretionary accruals (*DAC*) as a proxy for accounting quality, firm age (*FIRMAGE*), and financial distress (*FINDIST*). We do not include these variables in our main regression model because the inclusion dramatically reduces our sample size (from 90,119 observations to 18,151 observations). Panel D of Table 5 reports the results of the regressions. We find that the coefficient of *COMPLIQ* remains negative (coefficient = -0.070) and statistically significant (p-value<0.001), suggesting that our results are robust to the inclusion of additional control variables.

VI. Conclusion

In this article, we examine whether asset liquidity play a role in the firm's use of trade credit. From literature on trade credit and asset liquidity, we develop hypothesis in relation to asset liquidity and trade credit. Firms having higher asset liquidity have better access to alternative sources of low cost external financing and they try to avoid costly trade credit. Firms' access to external alternative sources financing depends on different factors such as better accounting quality, firm size and credit rating, internal control weaknesses, or collateral. A firm's asset liquidity may also be a reason for firms to have better access to alternative sources of finance. Therefore, we predicted that firms having higher asset liquidity prefer to use less trade credit.

Using a large international sample of 69 countries, we show that firms having higher asset liquidity are less likely to use trade credit. We address the concerns of omitted variable bias and the problems of endogeneity by using a change regression, excluding outliers, using firm and year fixed effects in the estimation, and using alternative measures of trade credit and asset liquidity. In all of those tests, we find robust results in support of our hypothesis finding that firms having higher asset liquidity use less trade credit.

Our findings contribute to the growing literature of asset liquidity and trade credit. This is the first study to investigate the relation between asset liquidity and trade credit. The findings are important for international investors, financial policy makers, and researchers.

References

Boubaker, S., Saffar, W., & Sassi, S. (2018). Product market competition and debt choice. *Journal of Corporate Finance*, *49*, 204-224. doi: https://doi.org/10.1016/j.jcorpfin.2018.01.00

Charoenwong, C., Chong, B. S., & Yang, Y. C. (2014). Asset liquidity and stock liquidity: international evidence. *Journal of Business Finance & Accounting*, *41*(3-4), 435-468. doi: **https://doi.org/10.1111/jbfa.12052**

Chen, S., Ma, H., & Wu, Q. (2019). Bank credit and trade credit: Evidence from natural experiments. *Journal of Banking & Finance*, *108*, 105616. doi: https://doi.org/10.1016/j.jbankfin.2019.105616

Chen, D., Liu, M., Ma, T., & Martin, X. (2017). Accounting quality and trade credit. Accounting Horizons, 31(3), 69-83. doi: https://doi.org/10.2308/acch-51711

Cheung, W. M., Im, H. J., & Zhang, B. (2018). The effect of stock liquidity on debt-equity choices. url: https://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2881170

Colla, P., F. Ippolito, and K. Li. 2013. Debt specialization. The Journal of Finance 68 (5): 2117–2141. https://doi.org/10.1111/jofi.12052

Coleman, S. (2005). Free and costly trade credit: A comparison of small firms. *The Journal of Entrepreneurial Finance*, *10*(1), 75-101. doi: https://digitalcommons.pepperdine.edu/jef/vol10/iss1/6

Delannay, A. F., & Weill, L. (2004). The determinants of trade credit in transition countries. *Economics of Planning*, *37*(3), 173-193. doi: https://doi.org/10.1007/s10644-005-5062-9

Dıaz-Garcıa, J. A., & González-Farıas, G. (2004). A note on the Cook's distance. *Journal of statistical planning and inference*, *120*(1-2), 119-136. doi : https://doi.org/10.1016/S0378-3758(02)00494-9

Ferris, J. S. (1981). A transactions theory of trade credit use. *The Quarterly Journal of Economics*, *96*(2), 243-270. doi: https://doi.org/10.2307/1882390

Fisman, R. (2001). Trade credit and productive efficiency in developing countries. *World Development*, *29*(2), 311-321. doi: https://doi.org/10.1016/S0305-750X(00)00096-6

Gatev, E., Schuermann, T., & Strahan, P. E. (2009). Managing bank liquidity risk: How deposit-loan synergies vary with market conditions. *The Review of Financial Studies*, *22*(3), 995-1020. doi: https://doi.org/10.1093/rfs/hhm060

González, R. L., Lopez, J. A., & Saurina, J. (2007). Determinants of access to external finance: evidence from Spanish firms. Federal Reserve Bank of San Francisco. url: https://core.ac.uk/download/pdf/6649034.pdf

Gopalan, R., Kadan, O., & Pevzner, M. (2012). Asset liquidity and stock liquidity. *Journal of Financial and Quantitative Analysis*, 333-364. doi: https://www.jstor.org/stable/41499473

Gwatidzo, T., & Ojah, K. (2014). Firms' debt choice in Africa: are institutional infrastructure and non-traditional determinants important?. *International Review of Financial Analysis*, *31*, 152-166. doi: https://doi.org/10.1016/j.irfa.2013.11.005

Hasan, M. M., & Habib, A. (2019). Social capital and trade credit. *International Review of Financial Analysis*, *61*, 158-174. doi: https://doi.org/10.1016/j.irfa.2018.10.002

Hidekazu, T. (1991). Detecting influential observations by using a new expression of Cook's distance. *Communications in Statistics-Theory and Methods*, *20*(1), 261-274. doi: https://doi.org/10.1080/03610929108830495

Islam, M. N. (2018). Three Essays on Financial Statement Comparability. url: https://digitalcommons.fiu.edu/etd/3760/

Islam, M. N., & Wheatley, C. M. (2021). Impact of Climate Risk on Firms' Use of Trade Credit: International Evidence. *The International Trade Journal*, *35*(1), 40-59. doi: https://doi.org/10.1080/08853908.2020.1847217

Jank, S., Roling, C., & Smajlbegovic, E. (2016). Flying under the radar: The effects of short-sale disclosure rules on investor behavior and stock prices. *Journal of Financial Economics*, *139*(1), 209-233. doi: https://doi.org/10.1016/j.jfineco.2020.07.010

Kinzius, L., Sandkamp, A., & Yalcin, E. (2019). Trade protection and the role of non-tariff barriers. *Review of World Economics*, *155*(4), 603-643. doi: https://doi.org/10.1007/s10290-019-00341-6

Levine, R., Lin, C., & Xie, W. (2018). Corporate resilience to banking crises: The roles of trust and trade credit. *Journal of Financial and Quantitative Analysis*, *53*(4), 1441-1477. doi: https://doi.org/10.1017/S0022109018000224

Li, N., Lou, Y., Otto, C. A., & Wittenberg-Moerman, R. (2021). Accounting quality and debt concentration. *The Accounting Review*, *96*(1), 377-400. doi: https://doi.org/10.2308/tar-2017-0250

Li, N., Lou, Y., Otto, C., & Moerman, R. W. (2014). Accounting quality and debt concentration: Evidence from internal control weakness disclosures (No. hal-02011410). doi: https://ideas.repec.org/p/hal/wpaper/hal-02011410.html

Lipson, M. L., & Mortal, S. (2009). Liquidity and capital structure. *Journal of financial markets*, *12*(4), 611-644. doi: https://doi.org/10.1016/j.finmar.2009.04.002

Long, M. S., Malitz, I. B., & Ravid, S. A. (1993). Trade credit, quality guarantees, and product marketability. *Financial management*, 117-127. doi: https://doi.org/10.2307/3665582

M Marks, J. M., & Shang, C. (2021). Does stock liquidity affect corporate debt maturity structure? *Quarterly Journal of Finance*, *11*(01), 2150005. doi: https://doi.org/10.1142/S2010139221500051

Morellec, E. (2001). Asset liquidity, capital structure, and secured debt. *Journal of financial economics*, *61*(2), 173-206. doi: https://doi.org/10.1016/S0304-405X(01)00059-9

Munch, J., & Schaur, G. (2018). The effect of export promotion on firm-level performance. *American Economic Journal: Economic Policy*, *10*(1), 357-87. doi: 10.1257/pol.20150410

Ortiz-Molina, H., & Phillips, G. M. (2014). Real asset illiquidity and the cost of capital. *Journal of Financial and Quantitative Analysis*, 1-32. url: https://www.jstor.org/stable/43303867

Petersen, M. A., & Rajan, R. G. (1997). Trade credit: theories and evidence. *The review of financial studies*, *10*(3), 661-691. doi: https://doi.org/10.1093/rfs/10.3.661

Pham, L. T. M., Van Vo, L., Le, H. T. T., & Le, D. V. (2018). Asset liquidity and firm innovation. *International Review of Financial Analysis*, *58*, 225-234. doi: https://doi.org/10.1016/j.irfa.2017.11.005

Safavian, S. M. (2008). Firm-level evidence on collateral and access to finance. Secured transactions reform and access to credit, 117. url: http://ndl.ethernet.edu.et/bitstream/123456789/17505/1/326.pdf#page=121

Schwartz, R. A. (1974). An economic model of trade credit. *Journal of financial and quantitative analysis*, 643-657. doi: https://doi.org/10.2307/2329765

Sibilkov, V. (2009). Asset liquidity and capital structure. *Journal of Financial and Quantitative Analysis*, 1173-1196. doi: https://www.jstor.org/stable/40505964

Smith, J. K. (1987). Trade credit and informational asymmetry. *The journal of finance*, *42*(4), 863-872. doi: https://doi.org/10.1111/j.1540-6261.1987.tb03916.x

Wang, Y., Liu, Q., Hou, H. D., Rho, S., Gupta, B., Mu, Y. X., & Shen, W. Z. (2018). Big data driven outlier detection for soybean straw near infrared spectroscopy. *Journal of computational science*, *26*, 178-189. doi: https://doi.org/10.1016/j.jocs.2017.06.008

Appendix

Appendix A

Variable	Definition	Source
Trade Credit 1	Ratio of accounts payable (*AP*) to book value of total assets (*AT*)	Compustat Global
Trade Credit 2	Ratio of sum of accounts payable (*AP*) and notes payable (*NP*) to total assets (*AT*)	Compustat Global
Trade Credit 3	Ratio of sum of accounts payable (*AP*), notes payable (*NP*), and short-term debt in current liability (*DLC*) to total assets (*AT*)	Compustat Global
COMLIQ	Weighted average asset liquidity, calculated as the sum of WAL1, WAL2, and WAL3 divided by 3.	Compustat Global
SIZE	Natural log of total assets (*AT*)	Compustat Global
LEVERAGE	Ratio of long-term debt (*DLTT*) to total assets (*AT*)	Compustat Global
MKTSHARE	Market share of sales calculated as the ratio of the firm's sales over total industry sales, where industry classification is based on Fama and French's 48 industries.	Compustat Global
R&D	Research and development expenditure (*XRD*) scaled by total assets (*AT*).	Compustat Global
REPE	Firm maturity measured by retained earnings (*RE*) scaled by total equity (*CEQ*).	Compustat Global
CASHHOLD	Cash and marketable securities (*CHE*) divided by total assets (*AT*).	Compustat Global
CAPINT	Capital intensity, measured as property, plant, and equipment (*PPENT*) scaled by total asset (*AT*).	Compustat Global
LIQUIDCOST	Liquid costs calculated as the ratio of raw materials (*INVR*) to total assets (*AT*).	Compustat Global
INTANG	Intangibility of firm calculated as the ratio of intangible assets (*INTAN*) to total assets (*AT*).	Compustat Global
CLXTRADE	Current liabilities excluding accounts payable scaled by total assets (*AT*).	Compustat Global
RECSLACK	Recoverable slack calculated as the ratio of current assets (*ACT*) minus inventories (*INVT*) divided by current liabilities (*LCT*).	Compustat Global
POTSLACK	Potential slack measured as the ratio of debt (*DLTT*) to sales (*SALE*).	Compustat Global
GDPGR	GDP growth rate of a country.	worldbank.org
POPDEN	Population density per square kilometer.	worldbank.org

Robust Forecast Combination for Elusive Return Predictability

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Abstract

We propose using the methodology of robust forecast combination to predict the equity premium out-of-sample in the presence of model instability. When averaging across models, the robust combinations alleviate the impact of over-penalizing an otherwise outperforming model for the occurrence of outliers owing to model instability, thus providing a theoretical foundation for the benefits of combining forecasts in unstable environments. Our empirical results on forecasting the US aggregate equity premium demonstrate the superior performance of the robust forecast combination relative to not only competing averaging methods such as equal weighting and time-varying adaptive weighting, but also information-pooling methods such as principal components and elastic-net.

Keywords: Equity premium; forecast combination; model instability; outlier

JEL: C53; C58; G11; G17

I. Introduction

Forecasting stock returns plays an important role in empirical finance as the equity predictions are often vital inputs into portfolio management and investment decisions. However, the predictability of the aggregate equity premium has been subject to contentious debate. Historically, a multitude of financial and macroeconomic variables such as the dividend-price ratio and various measures of interest rates have been proposed in the academic literature to forecast stock returns. Extensive evidence of in-sample predictability for a variety of variables is provided in studies such as Campbell and Shiller (1988). However, Goyal and Welch (2008) show that many predictors with previously documented evidence of in-sample predictability fail to beat the simple historical average model when forecasting the aggregate equity premium out-of-sample. In light of the weak forecasting performance, Goyal and Welch (2008) argue that the market equity premium cannot be meaningfully predicted with exogenous variables on a consistent basis.

The view expressed in Goyal and Welch (2008) has been frequently challenged since its publication. Studies such as Rapach and Wohar (2006) and Rapach et al. (2010) show that the predictive content of many variables may be negatively affected by the presence of structural breaks or parameter instability. Furthermore, Timmermann (2008) extends the concept of parameter instability to model instability, which could arguably be the cause of the elusive return predictability. In light of their empirical findings, Timmermann (2008) and Rapach et al. (2010) show that the methodology of forecast combination can be used to uncover the genuine

predictive content embedded in many predictive variables while accounting for the presence of parameter or model instability.

Our contribution to the literature consists of using the robust forecast combination method to forecast the aggregate equity premium out-of-sample. Rather than modeling the structural break process, we look for outliers in the historical forecast errors when constructing weights to combine models as they could be indicative of the occurrence of instability. Typically, the weights used in forecast combination are obtained via minimizing a quadratic risk function. As a result, an otherwise outperforming model may be over-penalized by the quadratic loss for the unusually large forecast errors it generates when assigning weights, leading to compromised performance of the combined forecast. To mitigate this issue, in our robust forecast combinations we use the risk function based on either the absolute forecast error (L1 norm) or the Huber loss to construct weights. In contrast to the simple combination considered in Rapach et al. (2010) and the adaptive combination proposed in Timmermann (2008), our robust combination methods are characterized by a solid theoretical foundation supporting the linkage between combination weights and model instability. When forecasting the US aggregate equity premium out-of-sample, we show that the robust forecast combinations not only outperform competing weighting schemes such as the simple and adaptive combinations, but also beat information-pooling methods such as principal component and elastic-net regressions, in terms of both statistical and economic gains on a consistent basis.

The remainder of this paper is structured as follows: section two describes data and outlines the econometric methods used in subsequent analysis. Section three presents and discusses our main empirical results. Section four concludes.

II. Data and Econometric Methods

We begin by providing an overview of baseline linear predictive models for the market equity premium. Next, we discuss in detail the robust forecast combination when constructing out-of-sample forecasts. Finally, common statistical and economic measures evaluating forecasts are discussed. We focus on the one-step ahead point forecast of the market equity premium.

Data, Baseline Forecasts and Predictive Model Instability

We conduct empirical analysis using updated monthly data on the aggregate U.S. equity premium along with a set of 14 predictive variables originally analyzed in Goyal and Welch (2008). Our dataset spans the period from January 1927 to December 2017.The equity premium (e.ret) is calculated from the S&P 500 index including dividends minus the 3-month Treasury bill rate. The set of predictors consists of: the dividend-price ratio (dp); the dividend-yield (dy); earnings-price ratio (ep); dividend-payout ratio (de); the stock market variance (svar); book-to-market ratio (bm); net equity expansion (ntis); Treasury bill rate (tbl); long-term yield (lty); long-term return (ltr); term spread (tms); default yield spread (dfy); default return spread (dfr); inflation (infl). For brevity, we refer the interested readers to Goyal and Welch (2008) for details regarding the identity and construction of these predictive variables.[2]

The baseline forecasts of the equity premium are obtained from the bivariate model considered in Goyal and Welch (2008):

$$y_{t+1} = \beta_0 + \beta_1 x_{j,t} + \varepsilon_t, \tag{1}$$

where y_{t+1} is the equity premium, x_{jt} is the predictor j at time t, and ε_t is the error term. This linear bivariate predictive model is simple to interpret, and is often estimated via OLS.

To shed light on the weak performance documented in Goyal and Welch (2008), in Figure 1 we present a panel of quantile-quantile (QQ) plots for all forecast errors from the bivariate models

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[2] The dataset is maintained by Amit Goyal at http://www.hec.unil.ch/agoyal.

in Eq.(1) using the 14 predictors listed above against a normal distribution. Each baseline predictive model is named after the predictor x_j it contains in Eq.(1). Outliers are clearly visible for almost all forecasts in the upper-right corner of each plot, indicating the presence of model instability. Therefore, we expect that forecast combination methods which account for the impact of the outliers owing to model instability may deliver better predictive accuracy.

Figure 1: QQ Plot for Forecasts from Bivariate Predictive Models
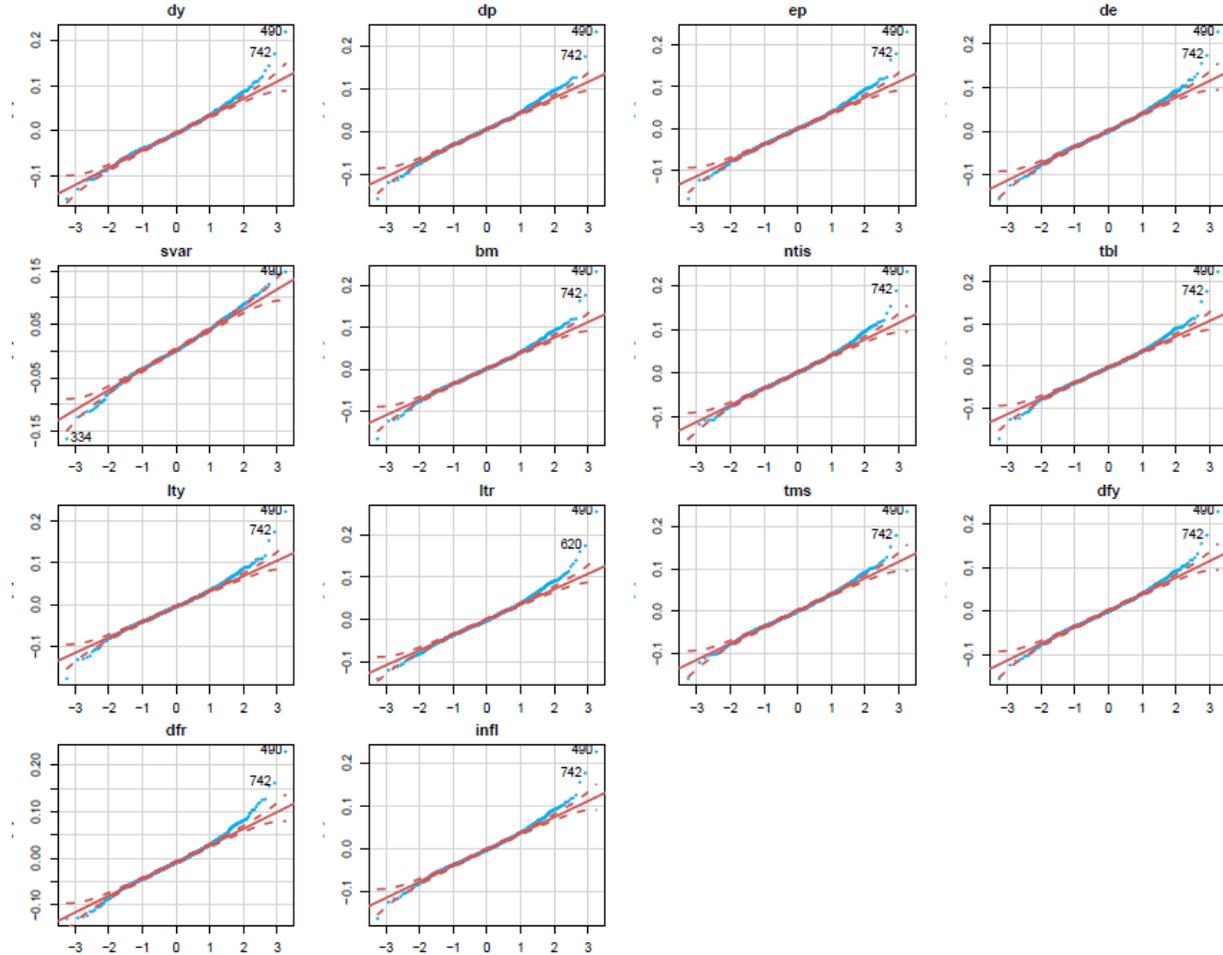
It is worth emphasizing that our study differs from many works in closely related literature in that we do not view instability as structural breaks in predictive model coefficients. Conventionally, researchers tend to interpret instability as unstable model coefficients. As a result, various tests have been utilized to detect such breaks in model parameters. However, the rejection of the null hypothesis of stability with any break test statistic does not inform us on the specific form of the breaking process. For example, the breaking process may take the form of large and rare discrete breaks, or it can take the form of small, frequent and clustered breaks. Therefore, the advantage of treating the instability as forecast outliers instead of structural changes affords us an approach which is robust to the uncertainty on the nature of the breaking process. Next, we describe the weighting strategy in robust combinations which take into account forecast outliers.

Econometric Methods

Following the theoretical results in Wei and Yang (2012), we use the absolute forecast error loss or L1 loss, and the Huber loss to construct two separate sets of combination weights. Under the L1 loss, to construct a combined forecast for period t+1, the weight assigned to forecast j is:

$$w_{j,t+1}^{L1} = \frac{\prod_{s=1}^{t} \hat{d}_{j,s}^{-1} exp(-\lambda \sum_{s=1}^{t} |y_s - \hat{y}_{j,s}|/\hat{d}_{j,s})}{\sum_{j=1}^{M} \prod_{s=1}^{t} \hat{d}_{j,s}^{-1} exp(-\lambda \sum_{s=1}^{t} |y_s - \hat{y}_{j,s}|/\hat{d}_{j,s})}, \tag{2}$$

where y_s is the realized equity premium at time s, $\hat{y}_{j,s}$ is the forecast for the time s equity premium from model j, λ is a tuning parameter, M is the number of baseline forecasts, and $\hat{d}_{j,s}$ is the estimated mean absolute forecast error of model j at time s.[3]

In addition to the L1 loss, we also use the Huber loss to construct a combined forecast for period t+1. In this case the weight assigned to forecast j is:

$$w_{j,t+1}^{Huber} = \frac{\prod_{s=1}^{t} \hat{v}_{j,s}^{-1/2} exp\left(-\lambda \sum_{s=1}^{t} \phi_k\left((y_s - \hat{y}_{j,s})/\sqrt{2\hat{v}_{j,s}}\right)\right)}{\sum_{j=1}^{M} \prod_{s=1}^{t} \hat{v}_{j,s}^{-1/2} exp\left(-\lambda \sum_{s=1}^{t} \phi_k\left((y_s - \hat{y}_{j,s})/\sqrt{2\hat{v}_{j,s}}\right)\right)}, \tag{3}$$

where y_s is the realized equity premium at time s, $\hat{y}_{j,s}$ is the forecast for the time s equity premium from model j, λ is a tuning parameter, M is the number of baseline forecasts, $\hat{v}_{j,s}$ is a variance estimate of y from model j as of time s, and $\phi_k(x)$ is the Huber loss function with:

$$\phi_k(x) = \begin{cases} x^2 & if -1 < x < k, \\ 2kx - k^2 & if \ x > k, \\ -2x - 1 & otherwise. \end{cases} \tag{4}$$

Note that the robust combination weights under Huber loss take into account the impact of asymmetry compared with the weights constructed under L1 loss. Put differently, the Huber loss function is an asymmetric loss function while the L1 loss is symmetric.

In addition to the two robust forecast combination schemes, to evaluate forecasts and compare performance in the empirical results section of this paper, we also consider the following alternative combination schemes: AFTER, weights according to the standard AFTER algorithm in Yang (2004); RSZ, simple combination based on equal weighting in Rapach et al. (2010); GAM, equal weighting applied to generalized additive models of the original bivariate regressions in Rapach et al. (2010); RSZ+CT, simple combination based on equal weighting in Rapach et al. (2010) combined with the restrictions in Campbell and Thompson (2008); GAM+CT, equal weighting applied to generalized additive models combined with the restrictions in Campbell and Thompson (2008); AFC, adaptive combination in Timmermann (2008); GR, forecast combination based on estimates of historical precision; PBest, previous best forecast.

In recent years, dimension-reduction methods in the field of economic forecasting have been receiving growing attention, especially for situations where the forecaster has access to a large number of predictive variables without clear guidance on variable selection. Methods such as lasso and ridge regressions automatically perform variable selection in the model estimation stage, with influential variables receiving greater weights while coefficients for unimportant variables shrinking towards zero. The success of shrinkage estimators in empirical finance has been shown in studies such as Li and Tsiakas (2017).

Against this backdrop, in addition to the various alternative combination schemes, we also consider the following dimension-reduction methods which pool information to generate out-of-

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[3] In the empirical results section, we set all tuning parameters in the robust combination to the values suggested in the simulations reported in Wei and Yang (2012).

sample forecasts: PCR, principal component regression; LASSO, lasso regression; RIDGE, ridge regression; ENET, the elastic-net considered in Li and Tsiakas (2017); Horseshoe, forecasts via the horseshoe estimator in Carvalho and Polson (2010); GLASSO, the grouped lasso in Yuan and Lin (2006). For brevity, we refer interested readers to the articles cited above regarding the details of alternative models and methods.

Forecast Evaluation

It is common practice in the literature of forecasting equity returns to compare the predictive accuracy of various models and methods with that of the random walk benchmark. The efficient market hypothesis inspired random walk model takes the following form:

$$y_{t+1} = \beta_0 + \varepsilon_t. \tag{5}$$

Intuitively, the random walk benchmark assumes that the expected value of the equity premium remains constant. Despite its simplicity, the random walk model proves difficult to beat in empirical studies related to forecasting stock returns and foreign exchange rates. For example, using a comprehensive dataset, Goyal and Welch (2008) show that most predictive models based on various aggregate economic and financial indicators fail to beat the random walk benchmark forecasting the equity premium in terms of statistical gains out-of-sample.

As a result, in the literature of forecasting the equity premium, researchers often use the out-of-sample R^2 statistic (OOS-R^2) proposed in Campbell and Thompson (2008), as a statistical measure for forecast evaluation. Intuitively, the OOS-R^2 measures the percentage reduction in mean squared forecast error for a predictive model under examination relative to that of the random walk benchmark. A positive value of the OOS-R^2 indicates better forecasting performance for the predictive model relative to the random walk, while a negative value suggests otherwise. The higher the OOS-R^2 value, the more predictive gains would be.

Since the OOS-R^2 is a point estimate of the relative predictive accuracy, we assess its statistical significance via the equal predictive accuracy test proposed in Diebold and Mariano (1995), which tests the null hypothesis that the predictive model under examination and the random walk benchmark forecast equally well against the one-sided alternative that the predictive model exceeds the benchmark. It is worth emphasizing that the Diebold and Mariano (1995) test is created to compare forecasts instead of predictive models, thus it can be applied broadly in empirical works. On the contrary, some forecast evaluation test statistics widely used in empirical finance are created under strong assumptions which rule out instability in the underlying data generating process. Since we allow for instability in our data, applying the Diebold and Mariano (1995) test for forecast evaluation ensures the validity of our empirical results.

Despite its convenience and ease of interpretation, the OOS-R^2 merely tells us how predictive models preform on average over the entire forecast evaluation period. To see how models perform over the entire out-of-sample path from a dynamic perspective, following Goyal and Welch (2008), we construct a time series variable called the cumulative sum of the squared forecast errors between the random walk benchmark and the predictive model under examination (CDSFE), then plot it in a graph. Over any time window in the out-of-sample, if the CDSFE curve moves up, it indicates that the predictive model under evaluation outperforms the random walk benchmark. Therefore, a predictive model which dominates the random walk would have a CDSFE curve being positively sloped everywhere over the entire out-of-sample. The closer to this ideal, the more predictive gains would be.

In addition to statistical measures evaluating forecasts, we also examine the economic value delivered to investors who use the equity premium forecasts to guide portfolio decisions. Specifically, we use the annualized certainty equivalent return (CER) and the Sharp ratio (SR) gains to gauge the economic value of equity premium forecasts.

III. Empirical Results

We use the monthly equity premium forecasts from the 14 bivariate models via Eq.(1) from January 1947 to December 2017, and a ten-year rolling window to construct the averaged forecasts for the robust combinations. Hence, our first equity premium forecast from the robust combination is made for January 1957.[4]

Forecasting Performance

Table 1: Forecasting Performance

	1957-2017	1957-1968	1969-1980	1981-1992	1993-2004	2005-2017
L1	3.10***	0.48**	5.50***	5.79***	0.25*	1.38***
AFTER	2.87***	0.72**	5.14***	5.48***	0.20*	0.90**
HUBER	3.08***	1.13**	4.87***	7.03***	-0.03	0.35**
RSZ	2.84***	0.74**	5.09***	5.45***	0.19*	0.83**
GAM	2.54***	0.74**	4.92***	4.45***	0.21*	0.71**
RSZ+CT	0.35	-0.80	1.19*	1.50*	-0.16	-0.88
GAM+CT	1.22**	0.17**	2.88**	2.49***	-0.05	-0.48
AFC	2.46***	0.00	3.94**	5.45***	0.19*	0.83**
GR	2.99***	0.64**	5.40***	5.58***	0.21*	1.13***
PBest	-7.97	-14.21	-7.76	-13.92	0.89**	-5.87
PCR	-0.93	-7.85	2.63**	5.75***	-6.13	-3.80
LASSO	-0.69	-1.01	-0.38	-0.78	-0.80	-0.63
RIDGE	2.12**	0.48**	3.58**	3.13***	-0.24	1.16***
ENET	1.66*	0.25	-1.06	4.58***	0.77**	1.19***
Horseshoe	-4.21	-6.11	-6.07	-3.44	-5.38	0.63**
GLASSO	-0.69	-1.01	-0.38	-0.78	-0.80	-0.63

Notes: This table reports the values in percentage of the OOS-R^2 statistic. A positive OOS-R^2 value indicates better performance than the random walk benchmark. The superscripts ***, ** and * denote statistical significance at 1%, 5% and 10%, respectively. All results are based on the forecast evaluation period of 1957-2017.

Our main empirical results comparing forecasting performance are reported in Table 1. All entries in the table reflect the out-of-sample OOS-R^2 statistic proposed in Campbell and Thompson (2008), with the random walk chosen as the benchmark. Higher value of OOS-R^2 indicates better forecasting performance. The names of all predictive methods are shown in the first column, while the first row reports all forecast evaluation samples considered. In addition to the full evaluation sample of 1957-2017, we consider five subsamples with 12 years of data in each subsample except for the last one which contains 13 years of monthly observations. Statistical significance of the OOS-R^2 via the Diebold and Mariano (1995) statistic at levels of 1%, 5% and 10% is denoted by ***, ** and *, respectively.

Several interesting observations can be made from an examination of Table 1. First, the L1 forecasts perform the best over the full evaluation sample and in two of the five subsamples. Second, the L1 forecasts beat the random walk benchmark regardless of subsamples. Third, while the Huber forecasts deliver the second best performance over the full sample, subsample evaluation suggests that their predictive gains are primarily obtained in the first half of the sample. Finally, while methods such as AFTER, RSZ, AFC and ENET also report statistical gains over the benchmark, confirming the results documented in studies such as Rapach et al. (2010) and Li and Tsiakas (2017), their performances are dominated by the robust forecast combinations, particularly the L1 forecasts.

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[4] Our empirical results remain qualitatively the same under the recursive window.

Figure 2: Cumulative differences in squared forecast error for monthly equity premium forecasts against the random walk
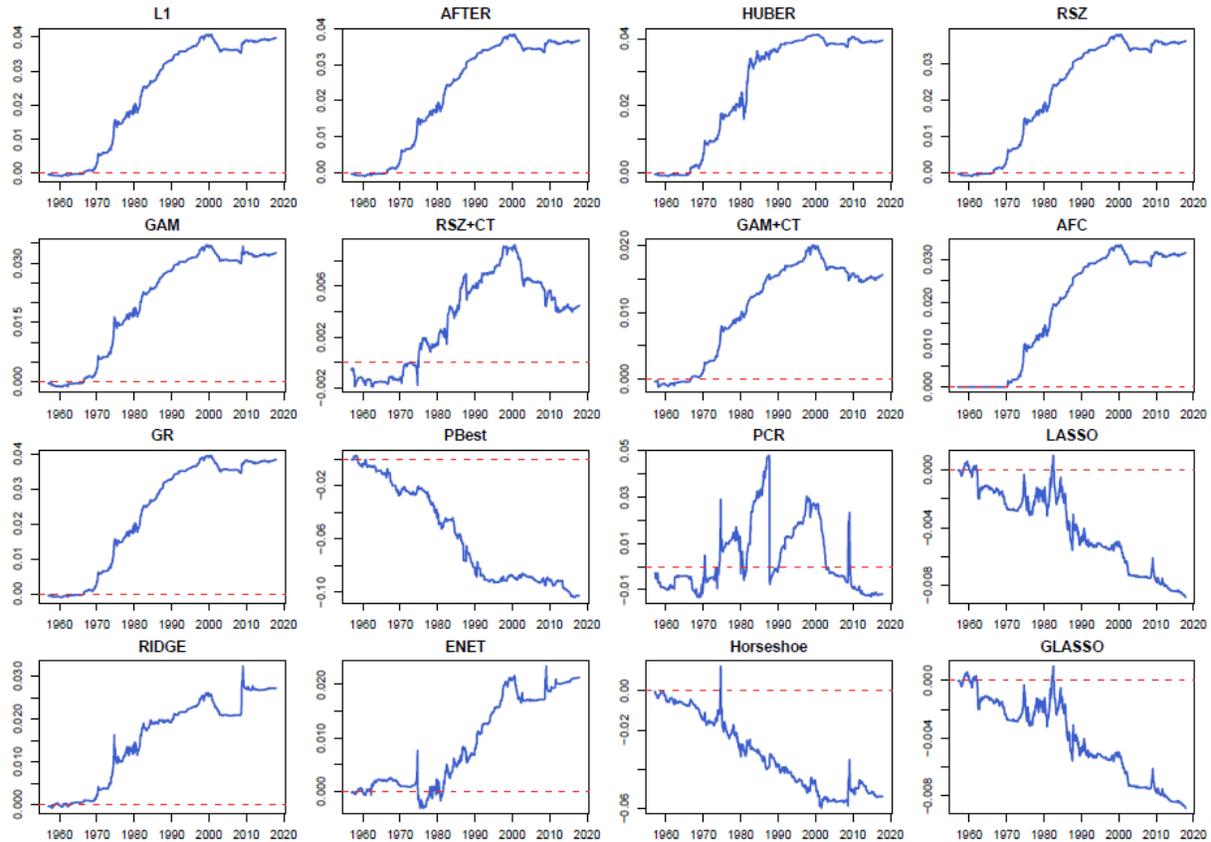
Notes: The title of each plot indicates the name of the method used generating forecasts. For any time window in each plot, a positively sloped curve indicates that the underlying method outperforms the benchmark, while the opposite holds when the curve falls.

Table 2: Forecasting Performance and the Business Cycles

	Economic Expansions	Economic Recessions
L1	2.32***	5.09***
AFTER	2.18***	4.63***
HUBER	1.44*	7.21***
RSZ	2.15***	4.57***
GAM	1.89**	4.18***
RSZ+CT	0.27	0.55
GAM+CT	1.10*	1.53**
AFC	1.82**	4.08***
GR	2.24***	4.89***
PBest	-13.39	5.71***
PCR	-5.53	1.07
LASSO	-1.04	0.20
RIDGE	1.01*	4.93***
ENET	1.92**	1.00
Horseshoe	-6.90	2.58**
GLASSO	-1.04	0.20

Notes: This table reports the values in percentage of the OOS-R^2 statistic across the business cycles of economic expansion and recession defined by the NBER. A positive OOS-R^2 value indicates better performance than the random walk benchmark. The superscripts ***, ** and * denote statistical significance at 1%, 5% and 10%, respectively. All results are based on the forecast evaluation period of 1957-2017.

Moreover, in Figure 2 we plot the time series of the cumulative differences of the squared forecast error (CDSFE) for all 16 methods over the 1957-2017 sample. For any CDSFE plot, a positive slope indicates that the forecasts from a method under examination outperforms those from the random walk benchmark, while a negative slope suggests otherwise. Overall, all CDSFE plots in Figure 2 largely support the conclusions drawn from Table 1.

Forecasts and the Business Cycles

As a robustness check, we are interested in examining how robust combinations perform during economic expansions and recessions. Following the approach in Rapach et al. (2010), we report the OOS-R^2 values separately for economic expansions and recessions designated by the NBER over the full sample in Table 2. Our results shown in Table 2 broadly support the conclusion drawn in Rapach et al. (2010) and Guidolin et al. (2013) that the evidence of return predictability is stronger during recessions. Furthermore, Table 2 reveals that robust combination forecasts dominate other methods, with the L1 leading the rest during expansions while the Huber dominates during recessions.

Economic Value of Forecasts

Table 3: Economic Value of Forecasts

	ΔCER	ΔSR
L1	3.19	1.14
AFTER	2.91	1.07
HUBER	2.28	0.97
RSZ	2.88	1.06
GAM	2.54	0.98
RSZ+CT	0.75	0.14
GAM+CT	1.40	0.43
AFC	2.54	0.92
GR	3.03	1.11
PBest	0.00	-0.06
PCR	1.50	0.58
LASSO	-0.72	-0.23
RIDGE	1.96	0.80
ENET	2.27	0.81
Horseshoe	0.79	0.14
GLASSO	-0.72	-0.23

Notes: This table reports the annualized certainty equivalent return (CER) and Sharpe ratio (SR) gains in percentage for a mean-variance investor with relative risk aversion coefficient of five who optimally allocates funds between equities and 3-month Treasury bills on the basis of equity premium forecasts. The portfolio weight on equities is constrained to fall in the interval of [-0.5, 1.5]. Results are based on the evaluation period of 1957-2017.

In addition to statistical evaluations, predictive methods are often assessed according to the economic value delivered to investors who use their forecasts to guide optimal portfolio decisions. The reason why economic evaluation matters in the literature of forecasting stock returns lies in the fact that economic measures penalize forecast errors differently compared with statistical measures. For example, statistical measures such as the OOS-R^2 evaluate forecasts according to a quadratic loss function while economic measures often take into account nonlinearity and asymmetry. Therefore, a seemingly small statistical gain could be translated into sizable economic gain to investors. As a result, following closely related literature, we report the annualized certainty equivalent return (CER) and Sharp ratio (SR) gains in percentage over the random walk benchmark for all 16 methods in Table 3. Overall, Table 3 shows that our robust

combination forecasts deliver the largest economic gains to investors among all methods considered.

Figure 3: Log Cumulative Wealth Growth
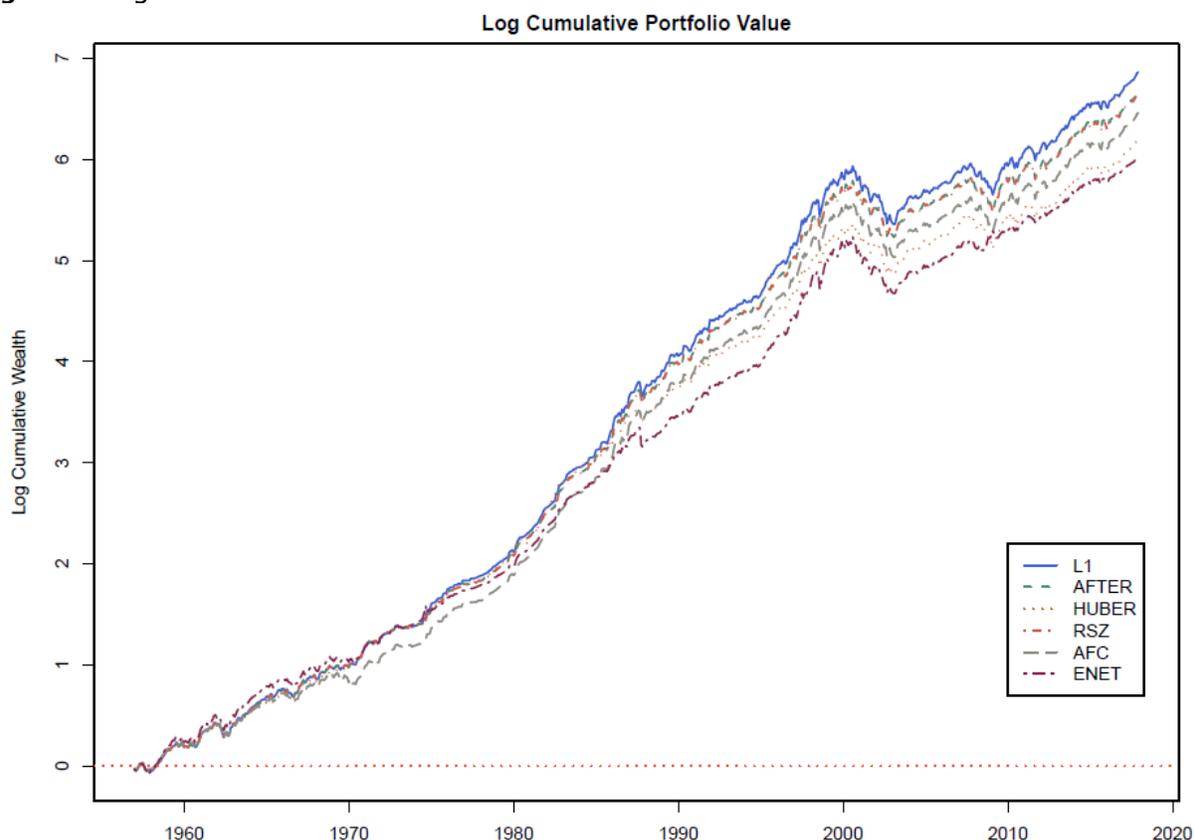
This figure delineates the log cumulative wealth for a portfolio investor assuming that he or she starts with $1 and reinvests all proceeds from 1957-2017. Each portfolio is named after the method it uses to construct forecasts.

In Figure 3 we plot the log cumulative wealth for six portfolios named by the methods used when constructing forecasts. Without loss of generality, we assume that the investor starts with $1 and reinvests all proceeds over the period from 1957 to 2017. For ease of comparison, in Figure 3 the L1 portfolio is designated in solid line while other portfolios are denoted in dashed lines in various colors. Figure 3 reveals that the superior predictive accuracy of the L1 forecasts can be translated into sizable economic gains, as the L1 portfolio clearly leads the rest in generating cumulative wealth to the investor.

Discussion

Interestingly, in all methods, significantly less predictive power is documented during the 1993-2004 timeframe, irrespective of their calibration. We attribute this general reduction to the unusually powerful bull market that occurred during the time period and related effect on investor psychology. To illustrate, from a level of 295.46 on October 11th, 1990, the S&P 500 rose 417% to peak at 1,527.46 on March 24th, 2000, or 546% on a total return basis. Concurrent with these outsized gains, investors began paying less and less attention to the fundamental factors which make up our set of predictors. In fact, this effect became so pronounced that then Fed chairman Alan Greenspan described it as "irrational exuberance".

While investors did subsequently return to fundamental analysis after the bursting of the dot.com bubble, the historically and persistently low interest rate environment which ensued from 2008 onwards once again impacted investor attention to fundamental factors, although this time not as extreme. This more muted departure was driven by the need for investors to "chase yield" in order to realize adequate portfolio returns, an activity necessitating the move into higher returning asset classes like equities. As a result, while predictive power recovered during the 2005-2017 timeframe, it did not return to pre-1993 levels.

Finally and related to the above, we attribute the general reduction in predictive power over time to the comparatively lower frequency and shorter duration of recessions in recent history. Given this dynamic coupled with the models' documented better performance during periods of recession, the out-of-sample forecasting performance at the back end of our sample is not as strong as in the front end.

IV. Conclusion

In this paper, we show that the robust forecast combinations can further improve upon methods such as equal weighting, adaptive combination and elastic-net when forecasting the equity premium out-of-sample. Since return predictability tends to be elusive as characterized in Timmermann (2008) due to model instability, using combination weights based on L1 or Huber loss might alleviate the concern of over-penalizing an otherwise outperforming model for a few outliers. Our empirical results show that robust combinations outperform many popular alternatives pooling forecasts or information in terms of both statistical and economic gains consistently.

References

J. Y. Campbell and R. J. Shiller. The dividend-price ratio and expectations of future dividends and discount factors. *Review of Financial Studies*, 1:195–228, 1988.

J. Y. Campbell and S. B. Thompson. Predicting excess stock returns out of sample: can anything beat the historical average? *Review of Financial Studies*, 21(04):1509–1531, 2008.

C. M. Carvalho and N. G. Polson. The horseshoe estimator for sparse signals. *Biometrika*, 97(02):465–480, 2010.

F. X. Diebold and R. S. Mariano. Comparing predictive accuracy. *Journal of Business and Economic Statistics*, 13(03):253–263, 1995.

A. Goyal and I. Welch. A comprehensive look at the empirical performance of equity premium prediction. *Review of Financial Studies*, 21(04):1455–1508, 2008.

M. Guidolin, D. G. McMillan, and M. E. Wohar. Time varying stock return predictability: Evidence from us sectors. *Finance Research Letters*, 10(01):34–40, 2013.

J. Li and I. Tsiakas. Equity premium prediction: the role of economic and statistical constraints. *Journal of Financial Markets*, 36:56–75, 2017.

D. Rapach, J. Strauss, and G. Zhou. Out-of-sample equity premium prediction: combination forecasts and links to the real economy. *Review of Financial Studies*, 23:821–862, 2010.

D. E. Rapach and M. E. Wohar. Structural breaks and predictive regression models of aggregate us stock returns. *Journal of Financial Econometrics*, 4:238–274, 2006.

A. Timmermann. Elusive return predictability. *International Journal of Forecasting*, 24:1–18, 2008.

X. Wei and Y. Yang. Robust forecast combinations. *Journal of Econometrics*, 166(02):224–236, 2012.

Y. Yang. Combining forecasting procedures: Some theoretical results. *Econometric Theory*, 20(01):176–222, 2004.

M. Yuan and Y. Lin. Model selection and estimation in regression with grouped variables. *Journal of the Royal Statistical Society: Series B*, 68(01):49–67, 2006.

Origination of RMBS: Escape from Crisis or Maintain Reputation?

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Abstract

In this paper, we investigate the optimized decisions made by the originators of the residential mortgage-backed security (RMBS). Conditional on default and prepayment risks, originators choose (i) the asset pool to be securitized from their entire mortgage obligations, (ii) coupon interest rates of the senior tranche, and (iii) disclosure of the condition and risks of the asset pool to achieve highest benefits from reinvestment opportunity and reputation. We find that myopic originators conceal true risks or even exaggeratedly dis- close high risks to attract investors and to ensure the current issuance. We also discover that repeated originators are concerned about the dispersion of risks and disclose true risks because reputation enlarges their total profits from facilitating their future originations.

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Foreign Investments of Japanese Life Insurance Companies

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Abstract

This paper investigates the relationship between the investment returns or volatilities of Japanese life insurance companies and their discretionary decisions on foreign portfolio investments. These decisions include the proportion of foreign investments in the entirety of the companies' proprietary investments as well as the currency risk hedge. We also consider the "carry trade" scenario, which occurs when the market favors investing in high-yield currencies by borrowing the Japanese yen. We establish three important results. First, the currency hedge relates positively to the investment returns under the carry trade scenario but relates negatively otherwise. Second, the proportion of foreign investments relates positively to the investment returns. Third, the investment returns significantly decrease under the carry trade scenario.

Impact of Foreign Capital on the Ukrainian Insurance Market Development

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Abstract

Ukrainian economy experienced a severe corruption problem and an arm conflict with Russia, which significantly slowed down its transition process as compared to other economies in Eastern Europe. Following the literate to consider the written premia, the penetration rate, and the ratio of insurance density to be measures of insurance market development in an economy; this study specifies and estimates three models to empirically investigate whether the foreign capital affects development of the Ukrainian insurance markets. The empirical results suggest that foreign capital affected the insurance market development in Ukraine with an ambiguous direction. The empirical results are quite interesting for the Ukrainian insurance industry executives and the national policy makers since insurance industry, similar to the banking sector, plays an important role in the economic wellbeing of the country. This finding is also quite important for the National Bank of Ukraine, the Central Bank, which is the new regulator for the insurance industry, to balance between domestic privatization and FDI.

Keywords: Insurance; insurance market of Ukraine; Foreign Capital; written premia; penetration rate; insurance market density

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Corporate Culture and Firm Performance: Foreign Leadership Matters in Vietnam

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Abstract

In this paper, we investigate the impact of corporate culture on firm performance by using firm-level data from Vietnamese listed companies. We use three proxies for corporate culture and several indicators for firm performance. The cross-section regression analysis yields evidence that there exist a significant and positive association between corporate culture promotion and firm productivity in Vietnam. The specification that controls for possible endogeneity and simultaneity problems also confirms this impact of corporate culture. By interacting corporate culture with foreign factor, we expose an interesting result that corporate culture does drive and improve firm performance and employees work under foreign leadership even earn more than under domestic leadership, but the foreign-invested firms do not earn more than domestic firms in Vietnam.

Keywords: Corporate culture; firm productivity; Vietnam

JEL: D22; J21; K31

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Effects of Hallyu and King Sejong Institute on International Trade and Services in Korea

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Abstract

This paper examines the effects of the worldwide popularity of Korean pop culture (Korean wave, also known as Hallyu) and the diffusion of Korean language through King Sejong Institutes. Applying the PPML (Pseudo Poisson Maximum Likelihood) to the gravity model, we find Hallyu has significantly positive impacts on tourists, exports, and imports after controlling other possible factors. Hallyu increases more female tourists than male tourists and promotes exports from Korea more than import into Korea. The KSI, however, has only a robust positive impact on tourists. Contrary to Hallyu, male tourists are influenced by KSI more than female tourists. The effects of KSI on international student flows, exports and imports are either non- existing or non-robust. Without the lagged dependent variable, KSI promotes both exports and imports with a stronger effect on exports. On the other hand, with the lagged dependent variable, KSI decreases the flows of international students.

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Selected Knowledge Management Practices and Innovation Activities in Enterprises in Republic North Macedonia

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Abstract

Using every relevant knowledge that is available makes the difference among the enterprises. Changes are constant, nothing stays the same. This puts personal motivation to respond to a change high priority. Learning is the natural response of humans in the changing environment. How the combination of human, enterprise knowledge with the environment interacts and it provides unique knowledge and innovation mix of one enterprise. Enterprise management's point of view, is to ensure the pressure and the challenges of a globally connected economy and the development and/or survival of enterprises i.e. to stay ready on change i.e. creating work environment that fosters positive motivation to pursue change. Developing enterprise knowledge management practices on continuous development both on individual knowledge and knowledge of the enterprise, are linked with obtaining result in commercialization of new product/services/process. This is shown as result of the enterprises performance in frequency and the novelty of the innovation products/services or process. To find the delicate balance of relevant knowledge and knowledge flows in/and within the enterprise, hence finding balance and unique, own new knowledge creation and integrating outside knowledge and market needs by continually adapting incrementally the products, processes and services from the its portfolio as required by users, customers, partners.

Keywords: Knowledge management practices; enterprise innovation cycle; new product introduction

Introduction

The purpose of this paper is to enlighten the elements that enable enterprises to apply appropriate knowledge management practices, as well as to enhance understanding of how these practices impact on novelty level of the new products and services resulted from the enterprise innovations.

I. Theoretical Background

In order to produce something new, there has to be relevant knowledge base within the enterprise. It is widely recognized that innovations have changed the way we live and continue to do so. Nothing stays the same, the change is the only constant. Once fully recognized by economic science, in the last four decades, innovation has become the most intensively researched field in economics (cited in Witt, 2016; Cohen, 2010) and management science (cited in Witt, 2016; Damanpour and Aravind, 2012). These studies address different aspects how innovation process works. What strategic choices are there regarding innovative activities in the

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enterprise? The motivational aspects of the knowledge management practices innovation process are then explored. Questions covered in empirical research below: How does individual knowledge emerge with organization's, how it is disseminated, used in their respective field and what results has it given? Then the economic benefits of innovation are explored. What are the consequences for an enterprise when innovation is successful, how often does it happen? How does the market react to them? Does the company fulfill their market forecasts through them?

According to Schumpeter's description, innovative competitiveness is the engine of economic development and prosperity. New products and services increase the labour productivity of innovating enterprises by changing the distribution of labour nationally and internationally (cited in Witt, 2016; Metcalfe et al. 2006). This change is constant and even more relevant when the technology change pushes the frontiers in every field, every enterprise low or high innovative.

This paper focuses on terms of knowledge flow in the enterprise, i.e. the existence / exchange / creation of knowledge in the enterprise and the relation between knowledge management and the creation and application of new knowledge, i.e. how the enterprise applies / uses knowledge in the form of radical, disruptive new or incremental, improved products / services or processes. This is shown by the results of the research performed by Marija Pendevska, 2019 and applies both to products and services from the same enterprise, made independently with internal knowledge, and to products and services that result from external knowledge collaboration in the form of collaboration with the university, the user, and other enterprises.

Employee knowledge can be captured in explicit form, easily recognizable and transmitted, both through personal contact and through other synchronic or asynchronic communication channels, such as through picture, audio and video, chart, sketch etc. text or table. It can also be tacit knowledge, unconscious knowledge. Both forms make the basis for the total knowledge (learned theoretical and experiential knowledge) that is unique to every individual, and is different, some of it not conscious (if conscious, it could be transmitted), simply obtained by working on a particular activity or pursuing particular interest.

The duration of the cognitive process is personal feature, some individuals learns faster, some need more time for creating deeper understanding. This indicates that in creating efficient knowledge exchange the personal characteristics are important for the environment, since it is the essence of their full involvement and further engagement in the work in the enterprises. This indicates that for smooth transfer of necessary knowledge within or into the enterprise is linked by the readiness of individuals and group dynamic to foster change. Therefore, a need of developing working environment that fosters different angles of knowledge exchange with individuals and groups have to be created.

Since knowledge has not a value, if it is not used, the key motivation is how and how often knowledge within enterprises is used in building new value for the enterprise.
Knowledge can enter from various sources; every effort to add value is welcomed. Self-engagement and willingness to acquire exchange and re-apply knowledge is becoming crucial capability at the individual and organizational level.

As long as the enterprise nurtures its persistence in innovation activities, new knowledge, an idea / solution, the likelihood of new product / service / process occurring, and the knowledge of how it is achieved, even if it is discarded and isolated, brings value for the enterprise, the knowledge how to get there remains in the enterprise and can be used for a new cycle of innovation.

Knowledge Management Practices

Knowledge management methods are used to enable the enterprise to utilize and capture employee knowledge combined with organisational and outside knowledge as much as possible. Knowledge management comes as a goal and does not mean only knowledge production, but as a goal-oriented use and development of knowledge and skills that improve the organization performance, in order one maintain competitive, efficient, and innovative level of operation.

Nonaka and Takeuchi (1995) emphasize the difference, departing from the traditional definition of knowledge as "justified true belief", by defining knowledge as "a dynamic process of man towards justified personal belief about "the truth ". (Nonaka and Takeuchi, 1995: 58) According to them, in order to produce new knowledge / innovation, it is necessary to enable knowledge creation beforehand. For them, organizational knowledge creation is "the ability of the company" as a whole to allow creation of new knowledge, to spread it through the organization, to incorporate it into its products, services and systems" (Nonaka and Takeuchi, 1995: 58) and explained this through their dynamic "concept of spiral of knowledge".

Customized Knowledge Management Cycle Model

By integrating the LH cycles outlined in the Heisig (2009) reviews one can make a simple, practical and comprehensive LH cycle model. Building on the Evans and Ali's (2013) Lifecycle Model The Knowledge Management Cycle (KMC) is advanced and consists of 7 phases: 1. to identify, 2. to preserve, 3. to share, 4. to use, 5. to learn, 6. improve and 7. Create new knowledge here modified into Innovate.

Below are given the results from the survey conducted by the author that included the phases: identify, share, use and create new knowledge.

Commercialization of Innovation

According to the Oslo Manual (2005), business innovation is defined as "a product, process, marketing method or organizational method that must be new (or significantly improved) for enterprises", while according to Kline and Rosenberg (1986) innovation should be considered "as a series of changes in a system …"

Above mentioned different definitions of innovation states the most important message, which is that innovation, must bring something *new* or *new* to the enterprise, national market and global market in order to be considered innovative. Simply said, innovating or being involved in innovation activities helps companies stay competitive, on the edge. The knowledge base brings them forward in their respective industries or markets.

Technological, Product and Process (TPP) innovation activities represent all the scientific, technological, organizational, financial and commercial steps that are actually taken to bring about the implementation of technologically new or improved products and processes. Some are highly innovative; others are not so new but needed for realization (Oslo Manual, 2005: 32).

The Oslo Manual (2005) defines innovative activities based on two concepts / approaches subjective and objective: an innovative enterprise and an innovative activity According to the subjective approach, an innovative enterprise is an organization that has realized at least one innovation whether it be product, technology, marketing or process and organization and their combination (Oslo Manual, 2005: 31).

According to the objective approach, the enterprise can have innovative activities without any innovation. All innovative activities can be classified into three categories:

1. "Successful with the result of realizing innovation (although this innovation may also be commercially unsuccessful).
2. In progress, work in progress that has not yet resulted in the realization of innovation.
3. Abandoned before the realization of innovation" (Oslo Manual, 2005: 10).

The survey undertaken includes innovative activities in enterprises under the previous three categories. Below are the selected samples of the research questions, which are included for measuring the innovative activities of the first category.

An innovative enterprise is defined as an entity that has successfully implemented a technologically new or significantly improved product / service / process or combination of previous ones over a period of time under investigation. This category can be divided into companies that have only "passive" innovative products / services / processes, i.e. those that

have exclusively innovated by importing embedded technology into new machinery or equipment. (OECD Oslo Manuel, 2005: 11)

II. Research Methodology

Primary Data Collection Methods

Quantitative Methods

- Survey method of the survey herewith is aimed to obtain primary data from the employees of the selected enterprises with their perception of business practices regarding Knowledge Management and Innovation activities in their respective field of work and enterprises. The primary data obtained are processed and analysed using appropriate statistical methods, such as:
- Method of descriptive analysis - in order to determine the individual demographic and contextual determinants in the enterprises;

III. Empirical Survey and Findings

The research data is collected and analysed data from enterprise employees, which in the period under study have introduced an innovative product / service / process in the period from June to December 2017 within selected enterprises (in total 38). Enterprise representatives were contacted and notified by the author via personal contact, telephone or email in addition to a written notice of the purpose of the work. An electronic link was then sent to the firms and / or respondents to the questionnaire created for this survey. Each respondent answered the questions to the best of their knowledge and experience working within the respective company.

Total number of respondents who completed the questionnaire is 176, whereas 165 responds were complete or 93.75% of the respondents.

Localization of Knowledge

Where do I look for knowledge when I need it on an individual level? This is an attempt to find an answer to when the individual needs knowledge, where the individual most often reaches for it, internally in the organization, locally in the environment where he works in the organization, whether professional knowledge is required and latest developments in knowledge, technique and technologies from universities and institutes, partner organizations or client organizations with which they have complementary knowledge for the development of new products / services?

When I need new information, where do I find it? (multiple answers possible)

Table 1: Survey Question 2 with Obtained Results

II	When I need information / knowledge, where do I find it? (What do I do to find out when I need knowledge?)	Number of respondents	%
1	I ask colleagues in my department / organization.	114	23.08
2	I am looking for internal documents / record / file / database.	93	18.83
3	I consult external experts from higher education institutions / prof. Associations	86	17.41
4	I consult external experts from partner organizations / clients	33	6.88
5	I research professional literature / books / magazines.	34	6.88
6	I search the internet through universal search engines (e.g. Google, Internet Explorer) or multimedia records (such as YouTube)	134	27.13

Source: M. Pendevska (2019)

To measure these parameters, the participant selects those activities that he / she usually does in his / her organization / work, when he / she needs new information. Multiple answers are possible, to include as accurate a statement as possible about relevant activities such as the willingness to search for knowledge both in the organization and on a personal level, here is an overview of where to usually go to find new information such as personally and at the organizational level.

Explanation

The respondents had the opportunity to complete an appropriate answer to this question using multiple choices. This shall give more detailed picture of the current practices are most often applied by the employees in the selected companies participants in the questionnaire.

Searching the internet through universal search engines (e.g. Google, Internet Explorer) or multimedia records (e.g. YouTube or similar) signifies a stand-alone approach, searching for a quick solution, or searching through known metadata for similar experiences locally and internationally. This answer was answered by 134 respondents or 27.13% of the total number of answers.

The next most common answer is "I ask colleagues in my department / organization" which signifies the openness in the way we act, an enterprise environment that allows the transfer of experiences or knowledge. This was answered by 114 respondents or 23.08% of the total number of answers.

"I am looking for internal documents / record / file / database" shows the existence of an organized database in the company, where internal documents are structured and that are used regularly. This answer was chosen by 93 respondents or 18.83% of the total number of answers. "I research professional literature / books / magazines" indicates the existence of knowledge in the organization that needs to be upgraded, expanded and independent effort to seek additional knowledge outside the organization, the latest knowledge from the professional public in the relevant field of action and this 86 respondents or 17.41% of the total number of answers chose the type of answer. This signifies operation practices own creative solutions. Such solutions are unique to each organization and the most difficult to imitate, because the results were created with their own efforts. The solution made using this way, would be most difficult to imitate and with a possible some degree of novelty. The knowledge generated by this effort remains within the company and its employees.

"I consult external experts from higher education institutions / professional associations" indicates the need new/radical knowledge for application of bespoken solutions as this additional knowledge or experience of the professional or expert comes out from the latest practices or cutting edge application of solutions. This method was chosen by 34 respondents or 6.88% of the total number of answers. This way of operation herein would bring a medium level of novelty or a new one at the national level or internationally.

"I consult external experts from partner organizations / clients" means seeking experience of already applied solutions from partners or clients to improve their operations. This answer was chosen by 33 respondents or 6.68% of the total number of answers. This way of operation would bring a low level of novelty or new at the organizational level.

Knowledge Transfer, Willingness to Share Information/Knowledge, as a Personal Characteristic

It is taken into account that the knowledge of the individual in performing his work tasks exists in some kind of record, both in explicit form and in implicit form both in the memories of the individual and in the memories of the collaborators. Personal readiness to share knowledge is actually directly related to the need to perform work tasks effectively, or readiness to implicitly impart knowledge. Nurturing a culture of knowledge sharing means that the knowledge that the individual acquires during the performance of work tasks is able to share and transfer at an appropriate level is different for each individual / or work organization. Conversely, the unwillingness to share personal knowledge / knowledge leaves a sign that there is no trust and positive willingness to share knowledge or knowledge in the group. The existence of readiness for sharing is reflected in the existence of time and space for sharing and solving work tasks both for oneself and for the members of the group. Hence, if there is no such readiness it is reflected through not having time to share knowledge and perform only its tasks.

The following methods are used to transfer your knowledge further:

Individual statements are measured by stating the practice that exists in the individual in a particular organization, at their own choice. Multiple answers are possible.

Table 2: Survey Question 11 with Obtained Results

XI	Applying knowledge, how you use the knowledge to fulfill the work tasks in the organization:	Number of respondents	%
1	I can find the knowledge relevant to me, without going a long way	58	8.49
2	I can access useful documents for me	86	12.59
3	I can ask / ask for expert opinions / questions	87	12.74
4	I talk to colleagues about professional issues and together we come to conclusions	112	16.4
5	I find and correct an error in the working procedure	57	8.35
6	We are all engaged in improving work processes	59	8.64
7	I complete my work assignment, check the information from the previous level and control what I forward to the next level	78	11.42
8	I do my tasks as fast as I can	66	9.66
9	The knowledge I gain by solving problematic situations I will use in the future	80	11.71

Source: M. Pendevska (2019)

Explanation

The respondents had the opportunity to complete an appropriate answer to this question several times. This is in order to get an answer which practices are most often applied by the employees in the selected companies.

"I regularly exchange information with colleagues in the organization" indicates that there is cooperation in the organization and it was chosen by 137 respondents or 34.00% of the total number of responses.

The question "I have time and space to solve work tasks" indicates the existence of knowledge, normal time management practices, proper planning and execution of work tasks and it was chosen by 71 respondents or 17.62% of the total number of answers.

The readiness to share knowledge is reflected in the existence of a knowledge management system used by the employees in the company, ie "My profile of knowledge / skills and visible to the whole organization" selected by 63 respondents or 15.63% of the total number of answers.

In explicit form, written, codified or in a schematic representation "My knowledge is accessible and in my absence" means regular structuring of knowledge in the form of procedures or work procedures, and is selected from 63 respondents or 15.63% of the total number of answers.

Willingness to share on a personal level, as well as the existence of an environment that supports the sharing of knowledge transfer is reflected in the question "I have time and space to share and solve work tasks of colleagues" and was chosen by 60 respondents or 14.89% of the total answers.

Unwillingness to share knowledge or lack of an environment that supports knowledge sharing, or simply cluttered planning and time management means "I do not have time for additional work tasks" which was answered by 9 respondents or 2.23% of the total number of answers.

When Solving a Problem, How the Knowledge is used to Fulfill the Work Tasks on a Personal Level

These statements are measured in order to determine personal readiness for engaged work, an environment that knows how to encourage the exchange of opinions and the application of their own and other people's solutions to solve a problem.

This reflects the availability of skills on a personal level that support high quality work, but also an environment with high exchange of knowledge and experience, which is a prerequisite for successful operation of the organization, such as skills for willingness to learn, acquire knowledge and create new knowledge.

The following abilities are taken into account here at the individual and group level:

1. problem solving ability
2. self-organization (time), appropriate level of communication, readiness for feedback
3. self-adherence, i.e. quality assignment, desire and commitment to learning, continuous improvement of oneself.

Table 3: Survey Question 16 with Obtained Results

XII	When I solve a problem:	Number of respondents	%
1	I control my work activities and notice deviations from the expected results	56	14.62
2	I use personal knowledge in deviation to come to a solution	78	20.37
3	I use personal knowledge and the knowledge of others in the company to come up with a solution	111	28.98
4	I use personal knowledge and the knowledge of others outside the company to come up with a solution	47	12.27
5	The solution I come up with is through teamwork, I will use the solution again in the future	93	23.76

Source: M. Pendevska (2019)

Explanation

The respondents had the opportunity to complete an appropriate answer to this question several times. This is in order to get an answer which practices are most often applied by the employees in the selected companies.

Existence of awareness for solving work situations, as well as openness in cooperation through knowledge and application of solutions personally or by others from the work organization, is shown by the question "I use personal knowledge and knowledge of others from the company to reach a solution" selected of 111 respondents or 28.98% of the total number of answers.

Existence of a climate for mutual cooperation, acceptance of solutions, team approach to solving work situations through the question "The solution I come to is through teamwork, I will use the solution again in the future" selected by 93 respondents or 23.76% of the total number answers.

Independent resolution of work situations, an environment that stimulates limited teamwork, unclear climate for cooperation, is indicated by the question "I use personal knowledge in deviation to reach a solution" selected by 78 respondents or 20.37% of the total number of answers.

The personal attitude for quality execution of the work tasks is shown through the question "I control my work activities and I notice deviations from the expected results" selected by 56 respondents or 14.62% of the total number of answers.

Independent search for relevant solution, also creates awareness and monitoring for proper application of solutions outside the organization is reflected in the question "I use personal knowledge and knowledge of others outside the company to reach a solution" indicates the openness of seeking solutions inside and outside the company, communication with a wide range of external and internal contacts, openness to any solutions that would bring the desired results and it was selected by 47 respondents or 12.27% of the total number of answers.

Measuring Innovative Business Activity

The respondents had the opportunity to complete an appropriate answer to this question several times. This is in order to get an answer which practices are most often applied by the employees in the selected companies.

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Measuring Innovative Business Activity

As we try to measure a particular innovation activity, an objective approach is chosen (Oslo Manuel, 2005: 49), i.e., to collect selected data on an innovative activity in an enterprise.

According to the previous definition, the selected questions should answer:

- The degree of novelty in resulted products/services
- To get initial information on enterprise innovation activities, respondents complete the following basic company information and innovative product or services.
- The degree of novelty indicates whether the product is radically new, ie it creates its own new market, or incremental adjustments are made so that it can stay longer in the already established market.

How high is the novelty in a new product / service / process:

These parameters measure the novelty of the product, ie whether there is incremental innovation in the products / services / processes or whether they are radical.

Table 4: Survey Questions 16 with Obtained Results

XVI	The degree of novelty in a new product / service / process:	Number of respondents	%
1	High grade (over 60%)	47	28.5
2	Intermediate degree (or 30-60%)	89	53.9
3	Low grade (or up to 30%)	29	17.6

Source: M. Pendevska (2019)

Explanation

The respondents had the opportunity to complete single relevant answer to this question.

The new product brings incremental novelty, ie intermediate level of novelty is indicated through the answer "medium (or 30-60%)" chosen by 89 respondents or 53.9% of the total number of answers.

The new product has radical novelties or a high degree of novelty is indicated by the question "High (over 60%)" which was chosen by 47 respondents or 28.5% of the total number of answers. The new product has a low degree of novelty indicated by the question "low (or up to 30%)" chosen by 29 respondents or 17.6% of the total number of answers.

This clearly indicates that the companies selected in the questionnaire have chosen as dominant the market segment of medium novelty or continuous incremental improvements of the product and services.

Conclusion

Knowledge management practices in enterprises are created to be used. Their purpose is to capture the knowledge within the enterprise, as well the one in and out of the enterprise environment and utilized as much as possible. The idea to create, capture as much as possible from the active knowledge base of the company creates unique and hard to imitate innovative products and services. This is because they were created by the unique mixture of internal and external knowledge, ideas, experiences, limitations. The knowledge resides in different forms (tacit/implicit/explicit) and can be extracted using different media, meaning having the point of using it for increasing the benefit of the enterprise.

The questionnaire explores various parameters for the existence of innovative activities in the enterprise, i.e. commercialization of new knowledge of the enterprise.
It actually researches the enterprises, how one is using their internal (and external) knowledge in producing innovative activity.

In the management literature, innovative activities are elaborated as the main strategy for gaining competitive advantage and generating sustainable profits. The criterion for positive evaluation of innovation and its effects is based on the innovations that pass the market test successfully, but there is also much lesson learned from unsuccessful ones. So, the persistence of doing this effort, shown in the high frequency of introducing new product/service/process is confirmation of the enterprise fit condition on using its knowledge base with relevant knowledge management practices in order to maintain sustainable level of innovation capabilities. The research results obtained from this inquiry confirm both.

The willingness of the employee to share its willingness to improve, learn new, search actively for better solution makes the team effort and every organisation unique in its endeavours. Changes happen all the time, the ability to be ready for whatever comes, lies within the ability to stay active in searching most suitable solutions following the path that enables continuous learning. Every technological change push organizational change that result in different innovative activities. The persistence on continuous raising the level of knowledge is the path on long term development. Main challenge, of course, is to maintain, sustain, and create conditions within the enterprise for long-term innovative activities.

Finally, conclusion arising from the empirical research on knowledge management practices shows fair and frequent usage, semi-open knowledge and innovation cycle and mainly medium

level novelty of the products / services / processes in enterprises in the Republic of North Macedonia. The results show that strategies to obtain and further develop knowledge base have substantial practical value to enterprises in Republic of North Macedonia in order to sustain and/or enhance their ability to perform successful innovation cycles.

References

Dalkir, Kimiz. 2005. Knowledge Management in Theory and Practice. Butterworth Heinemann. Vol. 4. https://doi.org/10.1002/asi.21613.

Evans, Max, Kimiz Dalkir, and Catalin Bidian. 2014. "A Holistic View of the Knowledge Life Cycle: The Knowledge Management Cycle (KMC) Model." Electronic Journal of Knowledge Management 12 (2): 85–97.

Heisig, Peter. 2013. "Knowledge Management – Step by Step Knowledge Management – Step by Step · Background · Concepts · Knowledge Management – Step by Step Report from Business Practice · Concepts · Summary," no. January: 1–7.

Heij C. V. 2015. Innovating beyond Technology, ERIM PhD Series in Research in Management, 370 ERIM reference number: EPS-2015-370-S&E ISBN 978-90-5892-418-6

Kok, J.A.2005, Can models for knowledge management be successfully implemented to manage the diversity of indigenous knowledge?

Nonaka, I., Takeuchi, H. (1995): The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation, Oxford University Press, May, (1995:58)

Nonaka, Ikujiro, and Noboru Konno. 1998. "The Concept of 'Ba.'" California Management Review. https://doi.org/10.1016/j.otsr.2010.03.008.

Nonaka, Ikujiro, and Ryoko Toyama. 2003. "The Knowledge-Creating Theory Revisited: Knowledge Creation as a Synthesizing Process." Knowledge Management Research & Practice 1 (1): 2–10. https://doi.org/10.1057/palgrave.kmrp.8500001.

Minbaeva, Dana B., Kristiina Mäkelä, and Larissa Rabbiosi. 2010," Explaining Intra-Organizational Knowledge Transfer at the Individual Level" Center for Strategic Management and Globalization Copenhagen Business School -Working Paper No. 1/2010. http://openarchive.cbs.dk/bitstream/handle/10398/8001/SMGWP2010_1.pdf?sequence=1.

Mcelroy, Mark W. 2001. "Second-Generation Knowledge Management."

North, K., Probst, G., Romhardt, K. (1998): Wissenmessen – Ansätze, Erfahrungen und kritische Fragen, in Zeitschrift für Führung und Organisation, Vol. 3

Michailova, Snejina, and Kate Hutchings. (2004) "Knowledge Sharing and National Culture : A Comparison Between China and Russia" Journal of Management Studies.

Oslo Manual, 2005, OECD 2005. "Oslo Manual." http://www.oecd.org/science/inno/2367580.pdf.

Pendevska Marija, (2019), "The Influence of knowledge management on the innovation in the enterprises in Republic Macedonia", doctoral thesis, defended June 2019 at Faculty of Economy, University Cyril and Methodius Skopje.

Probst, G., Raub, S., Romhardt, K. (2000): Managing Knowledge, John Wiley & Sons, Chichester

Resatsch Florian , Faisst Ulrich 2003, "Measuring the Performance of Knowledge Management Initiatives." n.d.

Wiig K.M, 1993, Knowledge Management Foundations: Thinking about Thinking : How People and Organizations Create, Represent and Use Knowledge.

Willke H, 1998. Systematisches Wissenmanagement, Stuttgart : Lucius und Lucius 1998: 39

Witt, Ulrich. 2016. "What Kind of Innovations Do We Need to Secure Our Future?" Journal of Open Innovation: Technology, Market, and Complexity 2 (1): 17. https://doi.org/10.1186/s40852-016-0043-y.

Witt, Ulrich, Tom Broekel, and Thomas Brenner. 2007. "Knowledge and Its Economic Characteristics - A Conceptual Clarification." Ssrn. https://doi.org/10.2139/ssrn.1019222.

An Assessment of the Effect of Trade and Technology on the Mexican Labor Market

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Abstract

Using data on 28 metropolitan areas in Mexico from the 3 quarter/1994 to 4 quarter/2019, this paper assess the effects of exposure to trade and technology on Mexican labor market aggregates (i.e. employment to population ratio, unemployment to population ratio, and non participation rate) across demographic groups, occupations - task groups, and sectors. The analysis considers three main shocks affecting Mexico: on one hand, the implementation of the North American Free Trade Agreement in 1994 and the emergence of China as a competitive trading nation once it joined the World Trade Organization in 2001 and, on the other hand, the extent to which metropolitan areas in Mexico have specialized in routine job tasks, since those with greater initial specialization tend to substitute computers for workers performing these tasks. The main findings show that while exposure of Mexican local labor markets to Chinese import competition reduced employment throughout the different distributions considered (and increased unemployment and non participation rate), exposure to NAFTA integration resulted in employment gains. Furthermore, exposure to technology did not have a statistically significant effect on employment. These results are robust to the implementation of different econometric techniques and are in line with the existent theoretical and empirical literature.

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Open Source Tools for Agile Project Management

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Abstract

There is denying the fact that agile methodology has taken by storm the software development projects. Research data shows that agile projects are more successful than their traditional counterparts are. Many software development companies are routinely employing agile practices in their project management activities.

This study is aimed at understanding availability and popularity of Open-Source Software (OSS) tools for Agile Project Management. This study seeks to understand the roles of various characteristics of the OSS software in influencing the popularity of the software as far as they influence the number of downloads and other user statistics. Undoubtedly, the software's efficacy and suitability for the planned usage serve as rather major influencing factors in the use and adoption of OSS. Nevertheless, other factors remaining same, the reputation built-up in the open source platforms tends to attract new prospective users to the popular OSS applications.

This study analyses the availability and accessibility of OSS Agile Project Management tools from two competing repositories viz., Source Forge and GitHub, undeniably, the two major players in the open source software domain. Limiting the search to "Agile Project Management tools" key words and eliminating the results that are not relevant for the study, details of the top 25 software from each repository are downloaded and analyzed. It is hoped that the results will help users understand the reasons for the popularity of open source Agile Project Management software beyond the intrinsic benefits of agile methodology and cost-free open source access of the tools.

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Selecting Foreign Entry-Mode for Manufacturing SMEs: The Role of Trust in Conjunction with, Transaction Cost, Resource-Based and Eclectic Theories

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Abstract

Due to globalization and the fast-changing international business environment, manufacturer SMEs have difficulties finding a well-fitting entry mode for themselves. In this study, we have used resource-based, transaction cost, and eclectic theories to explain how we can create a new entry mode by grouping Manufacturer SMEs (MSME) with the moderating effect of trust.

Trust is one of the main issues that organizations face when they try to internationalize. Every entry mode has advantages and disadvantages; however, regardless of the magnitude, they all have one common barrier that is very difficult to overcome: *Trust.* Trust and transaction cost are very much related, they have a negative significant relationship, and transaction cost also directly affects the firms' performance and the dynamic competitive advantage.

It is challenging to create an entry mode that does not require a trusting relationship; however, in this study, we proposed an entry mode that MSMEs has an interweaving relationship among the group which bonds them together, where the reliability to each other strengthens the trust while keeping the extreme flexibility of the relationship with a minimal sunken cost.

As an MSME, to achieve a dynamic competitive advantage, grouping strategy has an important role. Groups need to be heterogeneous; therefore, decomposing the resources and capabilities is essential for building a more substantial non-overlapping group. The interweaving process strengthens the group and gives flexibility to the group. Since the group is organically connected, trust among the group members increases. Having utilized resources and capabilities and a high trusting relationship inside the group leads to a dynamic competitive advantage.

Keywords: Resource-based view; transaction cost; eclectic theory; manufacturer SMEs; trust

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The Need to Invest in a Sustainable Support Structure for Educators and Students: A Preliminary Findings Report of a Participatory Action Research Inquiry

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Abstract

In 2015, the United Nations (UN) brought forth the Sustainable Development Goals (SDGs, 2030) which highlighted 17 goals for everyone in this world to address. SDG 4 urges us to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (UN, 2015, p. 21). However, these efforts were put on hold in March of 2020 when COVID-19 declared war on the US, affecting health, financial, and educational systems alike. The fatal reach of the pandemic affected humankind, crippling societies and forcing educational infrastructures to transform overnight. The devastation goes beyond our nation; this transformation of educational systems is global. According to a UN policy brief (2020), "the COVID-19 pandemic has created the largest disruption of education systems in history, affecting nearly 1.6 billion learners in more than 190 countries and all continents" (p. 2).

To address this crisis and capture teachers' voices, the International Council on Education for Teaching (ICET) and MESHGuides sent out a call for research to scholars across the globe. Members of the College of Education program *Professional Opportunities Supporting Scholarly Engagement* (POSSE) at Texas A&M International University initiated a participatory action research project to join them and learn about changes in educators' professional requirements. The research team conducted a focus group inquiry, interviewing sixteen educators, and submitted collected data to ICET/MESH. ICET/MESH gathered similar snapshots of educators' experiences in an interim report and hosted two international symposia to discuss and elaborate findings. POSSE attended and shared recommendations on how teachers and educational systems can be better prepared and supported to ensure continuity of learning in times of crisis.

At present, the research team is in the process of analyzing collected data using a constant comparative method. Both groups have been hit hard, as they have been asked to change, practically overnight, the way they teach and learn.

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Teachers were forced to adapt to pandemic-related situational changes such as teaching online and from home. These changes created a work environment for teachers that is not sustainable in the long run; teachers pay an emotional and physical toll for their commitment and efforts to keep up with the demands placed on them by educational leadership and state regulations.

A concern is that a generation of students is falling behind, academically and socially, creating a global educational deficit because of a lack of resources. In countries around the world, including the United States, children have missed out on education because of a lack of technology, resources, and health issues due to COVID-19. Schools that once taught the most vulnerable populations are now shut, educators willing to teach do not have the equipment or ability to do so, and children attending school now live in fear of tomorrow. It does not take much to see the global impact that a generation of individuals with impacted education will have in the future. The study shows a need to invest in a sustainable support structure through research and action, for both educators and students.

References

United Nations (UN) (2015). Transforming our world: The 2030 agenda for sustainable development. [PDF]. https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf

United Nations (UN). (2020, Aug.). Policy Brief: Education during COVID-19 and beyond. [PDF]. https://www.un.org/sites/un2.un.org/files/sg_policy_brief_covid19_and_education_august_2020.pdf

Demographic and Psychological Variables Explaining Secondary School Students' Mathematics Achievement in Oyo State: A Partial Least Square Path Modelling

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Abstract
The present study is a structural regression equation modelling on the inter-causal linkages between demographic variables (age, gender, school location and school type), psychological variables (interest and student academic engagement) and mathematics achievement. The study involved 4146 students from 73 schools drawn from twelve Local Government Areas (LGAs) from the three senatorial districts in Oyo State. Out of the four LGAs, one rural LGA was purposively select while three LGAs, were randomly selected from the remaining LGAs in each senatorial district. Results from the path modelling revealed that, there are causal linkages between interest and engagement, as well as school type and interest. School location, school type, interest and student academic engagement all predicted mathematics achievement but age and gender have no influence on interest, academic engagement and mathematics achievement. Mathematics teachers and counsellors in various schools should take advantage of this findings by embarking on activities that will boost the mathematics interest of male and female students.

Key words: Academic Engagement; interest; achievement; path analysis

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Consumption Society in China: Transformation from Producer Society

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Abstract

The tit-for-tat combat style in the US of the last few years has not achieved the aim of suppressing China for the world order but has caused massive damage in terms of economic development and living consumption of the people in the US. The movement of modern world civilization is not a zero-sum game among societies of different social systems but a process of influence in balancing competition and cooperation. How to influence the strategic opponents at different times is a great challenge not only for political leaders of the nation but also for scholars and researchers in academia and practitioners in the trade world. This paper has analyzed reasons why insufficient domestic demand is a prominent manifestation that China has not completed the strategic transformation from a producer society to a consumption society and why the remedies from the economic measures have not been able to solve the issue fundamentally. At a deeper level, the problem of domestic demand stems from the fact that the long-term catch-up development model in China fails to provide the necessary social support conditions for the transformation but instead accumulates some unfavorable factors. The solution to this predicament of transformation relies on the optimization of the social structure and the reconstruction of the social mechanism.

Keywords: Influence; world order; competition; producer society; consumption society; transformation; public goods supply

I. Significance of Study

The world today is such a dynamic global community that competition, cooperation, and coordination have become a daily symphony for our survival and success. The tit-for-tat combat style of the last few years has not achieved the aim of suppressing China for the world order that US politicians have in mind but has caused huge damage in terms of economic development and living consumption of people in the US. The movement of modern world civilization is not a zero-sum game among societies of different social systems but a process of influence in balancing competition and cooperation. How to influence the strategic opponents at different times is a

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great challenge not only for political leaders of the nation but also for scholars and researchers in the academic world.

Lao Tzu, the philosopher and founder of Taoism, indicated in Tao Te Ching (4th Century BC) that "Do the difficult things while they are easy and do the great things while they are small. A journey of a thousand miles must begin with a single step." The first step of exerting strategic influence lies in knowing our opponent well as to where they are in the national development before we can strategize our optimal solutions from the options available to us for synergy and maintenance of the world order. Michael Porter, the great strategist, also called it strategic positioning (Porter, 1996). In this paper, we analyzed the challenges China has in its transformation from the producer society, also called a market-driven economy, to a consumption society or consumption-driven economy. We also looked at the remedies at a deeper level. This paper first investigates the catching-up model and the transformational dilemma and then provides recommendations to solve the dilemma in the transformation.

Insufficient domestic demand is a huge challenge that cannot be ignored in the process of China's economic development. A series of measures and actions aimed at initiating domestic demand have been put into practice and indeed stimulated consumption growth in the short term. However, in the long run, consumption as a long-term mechanism for the important support of economic development has not really been established. Even though high economic growth has continued in China, there is a decrease and insufficiency of household consumption in GDP (Aziz & Cui, 2007, Zhang, Li & Xiao, 2020). Consumption has not yet become a dominant force in the economic life. China is still in the process of transition from a producer society to a consumption society. This transformation involves all aspects of social developments. The fundamental issue of insufficient domestic demand is far from being solved by simple economic restructuring because the transformation involves the social optimization and mechanism reconstruction of the whole social structure on a larger scale. Therefore, it is critical to resolving the major challenge of how to construct a suitable institutional system and policy space for a consumption society. To better understand the challenge, it is particularly necessary to clarify the root of China's current transitional dilemma and find new breakthroughs outside the economic structure to promote a smooth transformation to the consumption society. To sustain China's economic growth and adjust to changes, the Chinese government recently emphasized that it is essential to increase effective supply, lessen ineffective supply, encourage the flexibility and suppleness of the supply structure, and enhance supply structural reforms during the expansion of demands (Yi, 2017). The key point is to improve and reshape the existing public goods supply system from both macro and micro aspects and fundamentally change the tendency of the marketization of the country and the consumerization of citizens in the public merchandise supply in China. This study contributes to the field by offering a look into why the transformation of china from a producer society to a consumption society has not fully happened and offers suggestions to resolve the issues in the transformation process.

II. Construction Logic of Consumption Society and China's Catching-up Development Model

The industrial revolution in the middle of the 19th century made it possible for Western countries to step into the industrial society. The large-scale machinery production brought great abundance of products. Production dominated the arrangement of the whole social system (Womack, Jones & Roos, 1990). Capital accumulation in the manufacturing sector and expansion of overseas markets became the main objectives of the capitalist industrial society. Related social policies were also mainly focused on this goal (Mo, 2012). However, with the gradual saturation of overseas markets and the surge of world anti-colonialism, the contradiction between large production and insufficient domestic demand became more and more serious, and the cyclical economic crisis followed as a result. A series of measures adopted by the western countries to handle the economic crisis alleviated the contradiction between overcapacity and insufficient

demand, and they objectively provided favorable conditions for the transition from a producer society to a consumer society.

At the manufacturing level, the new mode of production organization made it possible to link mechanized production with mass consumption, especially with a series of reforms beginning with Fordism, thus cultivating workers from low-income producers to affordable consumers. The transformation of the product market was realized successfully from geographical expansion to social expansion (Polany, 1944).

At the social level, new social demands have led to the upgrading of industrial structure. The dominant position of traditional manufacturing has gradually been replaced by the rapidly emerging tertiary industry. The number of white-collar workers is increasing and gradually forming a middle class with strong purchasing power. A stable social class structure has begun to take shape.

At the institutional level, the continuous game between employers and employees makes the salary system more rationalized. The constantly improving social security system and the social public finance expenditure system provide the necessary social support conditions for reducing the cost of labor reproduction, hence stabilizing people's expectations and reducing anxiety and worries. In short, a series of economic and social support conditions finally achieved a new balance between production and consumption. The production society has been able to smoothly transform into a consumption society. Consumption has become the center of social life in place of production.

Unlike Western countries' development trajectory, China's economic development adopted the catch-up mode of late-developing countries. In order to build a catch-up industrialized country, China has been adopting institutional arrangements of high accumulation, low consumption, heavy manufacturing, and ignoring life for a long time to achieve leaps and bounds in the economy by suppressing consumption, expanding production, and lowering labor costs. When the economy develops to a certain stage, the contradiction between production and consumption shortage is beginning to emerge, and the sluggish domestic demand has become an obstacle to the sustainable development of the economy. However, the economic and social structures formed under this catch-up development model have made economic development strongly dependent on low-cost strategies. It can be said that the consumption suppression strategy and the low-cost strategy together constitute the catch-up logic of China's economic development. This logic makes it difficult for China to transform into a consumption society in the state of a production-oriented society for a long time. Since 2008, the Chinese government has employed consumption as an important means of promoting economic development.

Consumption Inhibition Strategies under Development Discourse

From the early stage of the founding of the People's Republic of China to the reform and opening up, the catch-up development has been running through the entire economic construction strategic system. During the First Five-Year Plan period, the proportion of investment in heavy industry, light industry, and agriculture in China was 6:1:1. In the field of production, in order to invest limited resources in the development of heavy industry, the state had to cut investments in the light industry sector dominated by consumer goods, and at the same time increase the export of agricultural and sideline products in exchange for the rapid development of the industry. In addition to special restrictions on food, oil, and other materials, other materials will be exported to the domestic market for a long period of time, and the sales in the domestic market were subject to export needs in exchange for industrial equipment necessary for national construction (Chen, 1949 – 1956). By suppressing domestic demand, limited resources were ensured to be quickly concentrated in the construction of heavy industry, which promoted the rapid development of the economy in the short term, but at the same time, directly causes a serious shortage of consumer goods. The state could only balance demand through the rationing system.

In the field of life, to cooperate with the catch-up strategy in this period, the state advocated hard work and thrift as the mainstream discourse of social life in public opinion promotion,

constantly suppressing material desires and promoting feudalism. The shortage in the consumer goods market, low purchasing power, and the guiding role of public opinion have severely restricted the growth of per capita consumption and the improvement of household consumption levels. The desire for mass consumption and consumption power was suppressed for a long time. Although this kind of consumption restraint strategy began to loosen, it was eventually abandoned after the reform and opening up. However, the mindset of more attention to manufacturing and negligence to consumption formed by the state and the public psychologically for a long time imperceptibly affected the release of the entire social consumption potential and the improvement of consumption power.

Low-cost Development Strategy under Path Dependence

To reduce the cost of industrial development and restrain the consumption level of residents, the cost of labor was controlled at a low level for a long time. Cheap labor became an important supporting force for the rapid development of China's economy. The development ideas of low cost, high attention to accumulation, and negligence to consumption enabled China to quickly achieve the goal of industrialization in the short term. However, this low-cost development strategy constituted the path for China's economic development after the reform and opening up from 1978. During this period, more and more western developed countries shifted the labor-intensive manufacturing sectors to the low-cost markets overseas. The huge and cheap labor market formed with the low-cost development strategy became the most significant advantage for China's participation in the globalization division of labor. The low-cost labor force not only attracted more investments at home and abroad, which pulled the fast economic development, but also effectively solve the employment problem of the rural surplus labor with the employment opportunities generated by such investments.

   Although the urgency of the era no longer existed for the low-cost development strategies after the reform and opening up, the state and local governments continued to implement low-wage policies for the consideration of stable employment and sustained fast economic development.

   From the perspective of consumption, the low-cost strategy obviously resulted in the decline of the overall consumption power of society. The price in cheap labor ended up with the slow income growth of residents, thus causing insufficient domestic consumption demand. Economic growth could only rely on exports. The increase in exports promoted the increase of manufacturing investment. The expansion further squeezed domestic consumer demand, thus forming a vicious circle: insufficient domestic demand → dependence on exports → low-price competition → low profit → slow wage growth → insufficient domestic demand (Sun, 2005).

   It is undeniable that the consumption suppression strategy and the low-cost development strategy promoted the rapid recovery of China's economy in the short term with great success. However, it is precisely the derivative problems brought about by this series of strategic arrangements. As the economic development reached this stage, the issues became a constraint force that seriously hindered the smooth transition of China from a manufacturing society to a consumption society. As a result, China is inevitably a major driving force for economic development. At a time when China urgently needed to change its economic development model, consumption could never become the main driving force for economic development.

III. Transformational Dilemma under the Catch-up Development Model

According to the general law of the transition from a producer society to a consumption society in the West, consumption meets the conditions as a dominant force in social life: 1. Migration of more and more farmers to cities to become industrial workers; 2. olive-shaped hierarchical structure supported by a large middle class; and 3. sound social welfare security system and credit consuming system. In China, the development model of high accumulation and low consumption did not provide the necessary support conditions for the transformation of a

production-oriented society into a consumption society. Instead, this model turned into obstacles that affected China's transition to a consumption society. If these problems could not be completely solved, it would be difficult for China to enter a consumption society.

Incomplete Urbanization

Urbanization is an inevitable trend of social development, and a consumption society is based on an urban lifestyle. To develop the manufacturing sector rapidly at the initial stage of economic development, China advanced the city priority with a low-cost development strategy. On the one hand, the state continuously absorbed rural surplus value in the form of industrial and agricultural price scissors to support urban development. On the other hand, to facilitate the implementation of the unified purchase and marketing policy and reduce the population burden brought by farmers to the city, the dual household registration system between urban and rural areas has blocked the normal flow of people between urban and rural areas, and the farmers are strictly restricted to urban development.

China's current urbanization rate has exceeded 50%, but the farmers entering the city still cannot become true citizens. The incomplete urbanization makes it impossible for the newly added urban populations to enjoy all the benefits as ordinary city citizens except participating in the construction and manufacturing in cities as producers. They lack the ability and opportunity to consume the products they made as consumers. Obviously, the incomplete urbanization is difficult to cultivate a large number of consumers with purchasing power. Therefore, it is difficult to build a consumption society based on an urban lifestyle.

Social Stratification under the Influence of Dual Binary Structure

The city priority development strategy makes rural and urban areas seriously imbalanced in cost-sharing and benefit-sharing. Under the ban of the household registration system, this imbalance between urban and rural development not only seriously impedes the development of rural areas and the farmers' income but also indirectly contributes to the formation and solidification of the urban-rural dual structure.

A direct consequence of the urban-rural dual structure is that the majority of the farmers are at the bottom of the entire society for a long time, with low income and a lack of opportunities and capabilities for upward mobility. Moreover, while this dual structure dominated by administrative forces has not yet been broken, along with the rapid infiltration of market forces, a new dual structure dominated by the market is added.

On the one hand, the elite social layer monopolizes various political and economic resources and rapidly accumulates wealth by means of market forces. On the other hand, laid-off workers who have been eliminated in the market-oriented reforms, together with the farmers, have constituted a huge social bottom. Under the influence of this dual binary structure, the gap between the rich and the poor in the urban and rural areas and within cities and villages is expanding. Social wealth is gradually concentrated in the hands of a few people. A stable middle class with strong spending power is difficult to form. In a society without a large middle class as a supportive force, consumption is hard to become the main driving force for economic development, and a mature consumer society is even more difficult. Consumption trends arise in the development of social stratification irrespective of the consumption demands of different social classes (Yi, 2017). The ability to distinguish consumption tendencies by social classes carries theoretical and practical implications for supply and demand reforms (Yi, 2017).

Excessive Marketization in the Field of Collective Consumption

In the process of transition from a planned economy to a market economy, large-scale reform of state-owned enterprises broke the iron rice bowl of workers. At the same time, the state also eliminated a series of welfare protection systems that were compatible with low-wage policies and began to try market-oriented reforms in the fields of education, medical care, housing, and

pensions. Obviously, these market-oriented reforms pursued by the government were intended to reduce the cost of development by reducing the state's investment in social security and welfare, decrease public finance expenditures to increase investment accumulation, and stimulate people to increase consumption in education, health care, and housing through the market-oriented reforms in the field of collective consumption to stimulate domestic demand. However, the end result was that workers had to face the market-oriented supply model of public services such as education, medical care, and old-age care without a substantial increase in income. The old welfare system was broken, and the new corresponding security system was not ready in place. The excessive marketization in the field of collective consumption not only broke the people's expectation of stability in the future but also increased the cost of labor reproduction. This caused the crowding-out effect of education, medical care, and pensions and seriously affected other consumption expenditure of residents. It also prompted people to cope with future uncertainty by compressing immediate consumption and increasing savings. In this context, many consumer stimulus policies became difficult to achieve results.

Positioning of Government Functions with GDP as Core

Both low-cost development strategy and consumption suppression strategy rely on manufacturing to drive economic development. For the government, investment is the fastest way to promote GDP growth, especially for the stimulus of the performance appraisal system centered on GDP and fiscal revenue. Governments at all levels tend to rely on investment-driven economic growth to drive the region economic development.

In this context, the government is more concerned about taxation projects that directly lead to economic growth. Many projects related to people's livelihood were often neglected due to large investment, slow results, and difficulty in revenue measure. In this process, the government economic functions became increasingly prominent, and its service functions got shrunk gradually. Because of the bias of functional orientation, the government had no time to pay attention to the investment and construction of the public service sector. Instead, it deliberately restricted the growth rate of workers' income in the region to enhance competitiveness in the process of attracting investment. Some of the regional governments invited some high-energy and high-pollution industrial projects at the expense of the long-term benefits of regional development. The deviation in the positioning of government functions was not conducive both to the improvement of residents' income and to the improvement of the consumption environment. On the whole, all these inevitably affected the improvement of regional consumption power and the release of consumption potential.

Obviously, the problems mentioned above were largely due to the fact that the development ideas were long entangled in the inherent mode of production-oriented society, and excessive attention was paid to manufacturing and accumulation. As a result, the improvement of household consumption levels fell far behind the speed of economic development, and consumption could not really become the driving force of economic development. Only when these problems were solved from the root cause could the transition be truly completed from a producer society to a consumption society. In fact, unlike the producer society, the consumption pattern of the consumption society was mainly supported by a series of social systems and structural factors.

After the basic needs of life are met, how people consume and what they consume are closely related to the entire social structure and the avenue of resource allocation. In a consumption society, the expansion of consumer demand is fundamentally based on a series of related systems such as compensation systems, social security systems, medical and health systems, education systems, and credit systems.

Many of these systems are related to the consumption and organization patterns of public goods. Therefore, to promote the smooth transition of a productive society to a consumer society and eliminate many problems caused by China's consumption suppression strategy and low-cost development strategy, it seems more realistic to break the problems from the perspective of public-goods supply.

IV. Supply of Public Goods and Solution to the Dilemma of Transformation

The concept of public goods was first associated with the study of state functions. Samuelson (1947) classified goods into private consumer goods and collective consumer goods. Collective consumer goods are goods that everyone consumed, but such consumption did not reduce that from other people and was non-exclusive and non-competitive. This has become the classic definition of public goods in economics. In short, public goods are the general term for those products and services that meet the needs of the common public. In a broad sense, public goods are mainly defined from the perspective of government functions such as macro-management, national defense, foreign affairs, and social security. Narrow public goods refer to compulsory education, public health and social welfare programs directly provided to all citizens.

The effective supply of public goods plays a very important role in narrowing the gap between the rich and the poor, balancing the public interest, easing social structural contradictions, and promoting stable economic growth. These problems and contradictions are the drawbacks brought by China's catch-up development model. The cracking of the transitional dilemma depends largely on whether these problems can be solved entirely.

According to Amartya Sen (1982), the poverty of the poor is not because of low income, but because the rights of the poor are deprived, resulting in the loss of income and opportunities for income. Moreover, the ability to obtain income and the inequality of opportunities will further accumulate institutional path dependence (Hu, 2012). In other words, inequality creates poverty, and the consequences of poverty exacerbate this inequality and eventually solidify into a certain type of social structure. This is the case with the dual structure we are currently facing. It is difficult for the low-income class to change their situation by their own ability due to the lack of corresponding resources, let alone to fight for social rights for themselves.

The balanced and effective supply of public goods is one of the effective ways to dissolve this solidified structure. The effective supply of public goods can influence the production function through changes in production factors such as physical capital, human capital, and technology, thereby narrowing the gap between rich and poor. Increasing the supply of public goods and reducing the labor reproduction cost and development cost of the low-income class will help obtain more resources and development space, and then get upward mobility opportunities and capabilities.

From the perspective of society as a whole, this change also contributes to the formation of a rational olive-shaped hierarchical structure. An important condition for promoting the formation of a consumer society is to have a stable and large-scale middle class.

The basic factor affecting the consumption level for both urban and rural residents is still disposable income. Therefore, only when the disposable income of residents has increased or when there is a stable expectation of the increase in disposable income, can consumer demand be released. As far as China's current situation is concerned, it is difficult for residents' income to increase substantially in the short term, especially for middle-lower class residents. The excessive marketization of collective consumption in the reform process has aggravated the burden of expenditure on the middle and lower groups.

A fundamental role of government is to supply public goods that markets cannot efficiently deliver or neglect to deliver (Anomaly, 2015). The abundant supply of public goods can offset the partial expenditure burden of the middle and low-income groups through secondary distribution. The disposable income can be used efficiently under the condition of limited short-term income growth.

For example, the government increased public spending on social insurance, which could have a crowding-out effect on residents in two aspects. One is that individuals reduce the savings that were originally intended for pensions, thereby increasing the current disposable income. Another is that those who would have to pay higher fees to support the elderly gain an increase in their disposable income because the government's pension insurance expenditures replace theirs.

Existing research shows that if the government pays more than 1% of medical expenses for urban and rural residents, the savings that can be squeezed out could reach to 1.6% to 1.7% of

per capita income, and the increased consumption accounts for 2% of per capita consumption expenditure (Li & Hu, 2009). The government's expanded investment in public goods can increase the purchasing power of residents through the increase in household income.

From the macro view, investment, production, operation, and management related to public goods will bring new economic growth, increase in new jobs, and promote the growth of residents' income and the release of consumption potential. In the current situation, better employment is more conducive to residents for a stable life expectation, thus transforming potential consumer demand into actual consumption. According to the multiplier effect formula of public expenditure, every 1 yuan (unit of Chinese RMB) of public expenditure can generate 5 yuan of social demand. Moreover, according to the calculation of the Human Development Report China 2007/08 (United Nations Development Program, 2008), for every 1 yuan of education investment in the rural areas, the output value of agriculture and animal husbandry will increase by 8.43 yuan. For every 1 yuan increase in the rural public infrastructure investment, the output value of agriculture and animal husbandry will increase by 6.75 yuan (Chi, 2008). The driving role of public goods in promoting consumption and economic growth is clearly evident.

Expanding the input of public goods and promoting the equalization of public services cannot only promote the stable growth of residents' income through employment but also the improvement of the consumption environment through the improvement of infrastructure, thereby stimulating the release of consumer consumption potential and the growth of consumption. The formation of new consumption will inevitably lead to economic growth. The expansion of domestic demand and economic development will enter a virtuous cycle and thus, create favorable economic conditions for the transition from a producer society to a consumption society.

V. Improvement and Reshaping of Public Goods Supply System

As far as the current situation is concerned, China has recognized the positive contribution of the abundance of supply of public goods to consumption and is also working hard to promote the transformation of a producer society into a consumption society with a focus on guiding the people from producers to consumers. However, it is clear that in this process, the positioning of the public as consumers has been so intentionally or unintentionally generalized that the marketization of the state and the consumerization of citizens have been formed in the supply of public goods (Chen, 2006). The so-called marketization of the state refers to some public goods and services that should be provided by the state and enjoyed by the citizens are commercialized and marketized due to the absent participation of the state.

The concept of user pays gradually replaced the concept of taxpayer enjoyment and entered the state behavior. The state even started to balance the profit and cost in the provision of certain public goods or simply stayed out of the way and transferred the ownership and management rights of some public services directly to the enterprises. Making citizens pay their own bills creates the customization of citizens. Some public services should be freely available as citizens or taxpayers. The consumerization of citizens and the marketization of the state have made the supply of public goods not only fail to promote equality but also intensify social stratification. Therefore, to promote the smooth transition of a production-oriented society to a consumption society, it is necessary to shift the positioning of the public from producers to consumers, and more importantly, to highlight the citizen positioning of the public. This ensured that the supply of goods is fair, sufficient, and efficient. To achieve this goal, it is necessary to reconstruct the current public goods supply mechanism in both macro and micro aspects.

At the macro level, the state needs to achieve the goal of improving the supply system of public goods by building a service-oriented government and avoiding the marketization of the state. The supply of public goods involves how the government responds to the needs of the public. This requires changes in government functions, strengthening the government's public service functions, and building a service-oriented government. The following steps are needed to achieve the goal.

The first is to strengthen the government's main responsibility for the supply of public goods and to build an organizational structure and operational mechanism that is suitable for the construction of a service-oriented government. Establishing and improving the powers and operational mechanisms of decision-making, executive and supervisory powers are mutually constrained and coordinated. Through streamlining and integrating institutions, a relatively complete sequence of government agencies with government departments, executive agencies, and supervisory agencies is gradually formed (Research Group of National Administrative College, 2008).

The second is to establish an incentive mechanism for the government, especially the grassroots local government, to provide public goods. Actions that should be taken are to change the performance evaluation mechanism of cadres oriented to GDP growth, increase the weight of public goods supply in the performance evaluation system of cadres, and regard the supply of public goods as an important part of performance evaluation and administrative accountability, especially to prevent all kinds of flashy image project.

The third is to strengthen the support of the public finance system for the supply of public goods and to balance the relationship between executive power and financial power. Studies have shown that many cities and counties in China provide nearly 100% of unemployment insurance and social security benefits, 70% of education budget expenditures, and 55% to 60% of health expenditures (Hu, 2011). However, issues are still very challenging. Local governments are not getting enough financial resources while taking on obligations. The mismatch between the power of public goods and financial power makes the local government unwilling and unable to improve the supply of existing public goods.

Finally, the state needs to increase fiscal input to public goods, reform and improve the payment system for financial transfers, and reverse the urban bias of public-goods supply. The state must ensure to strengthen the central government's management of local special transfer payments and that the central financial resources center to rural areas, underdeveloped areas, and vulnerable groups for promoting the equalization of public-goods supply.

On the micro-level, the state must ensure the equalization and effectiveness of the supply of public goods by improving the expression and participation mechanism of citizens' interests and avoid the consumerization of citizens. Although the main body of public goods supply is the government, its ultimate service target is the public. The supply structure and quantity of public products should reflect the public's wishes as much as possible, and try to achieve Pareto Optimality (Campbell, 1986) through certain democratic procedures. This requires a smooth and effective interest expression mechanism and participatory mechanism for the public goods needs. As far as the current situation is concerned, this aspect is obviously lagging at both the channel level and the system level. The public often appears to be very passive and powerless in the face of public goods appeals related to their own interests. Fully reflecting this problem are privatization and unreasonable charges of some public goods and the random rise in prices of water, electricity, gas, and transportation. To improve the citizens' interest expression and participation mechanism, the state should first actively cultivate and expand various types of non-governmental organizations representing different interest groups, and timely and accurately express their own interests through the power of the group to avoid the public's demands being concealed and ignored in the game process with large interest groups.

In the process of participation, the decision-making mechanism for promoting the supply of public goods is changed from "top-down" to "down-top" to ensure the public interest is maximized. Secondly, it is necessary to strengthen the system construction and to fix the methods and procedures for public participation in the selection of public goods in the form of institutional norms and legal provisions so that public expression and participation can be programmed, institutionalized and standardized, and the fairness and efficiency of public goods supply are promoted. Once again, through various means to enhance the public's awareness of rights and participation, through the improvement of public opinion consultation platform and price hearings, the public can obtain more channels to participate in the process of provision, distribution, and supervision of public goods.

References

Anomaly, J. (2015). Public goods and government action. *Politics, Philosophy & Economics*, 14(2), 109–128. https://doi.org/10.1177/1470594X13505414

Attanasio, O. P., & Pistaferri, L. (2016). Consumption inequality. *Journal of Economic Perspectives*, 30(2), 3–28.

Campbell, Stuart L. (1986). The Four Paretos of Raymond Aron. 47 (2)

Chunwen Chen: (2006). Citizen, consumer state and market, Reprint from Qing Liu: Publicity and Public View. *Jiangsu People Publishing House* 2006.

Fulin Chi. (2008). The unit output of rural education investment is higher than that of infrastructure investment. http://money.163.com/08/1023/14/4OUQNKQ900252G50.html.

Huizhong Li & Zhiping Hu (2009). Construct the mechanism of resident's consumption Growth. Reform of Economic System, 5.

Lao Tzu (4th Century BC). Tao Te Ching, The Classic of the Way and Virtue. English Translation entitled The Speculations on Metaphysics, Polity, and Morality of the "Old Philosopher" Lau-tsze" by John Chalmers in 1868.

Liping Sun. (2005). Labor price: Breaks the key point of vicious circle. Economic Observer.

Polanyi, Karl. (1944). The great transformation. *Boston: Beacon Press*, 1985.

Porter, M. (1996) What Is Strategy? Harvard Business Review; Nov/Dec96, Vol. 74 Issue 6, p61-78.

Research Group of National Administrative College. (2008). Several problems about public service-oriented government construction. *Journal of the National School of Administration*, 5.

Samuelson, Paul A. (1947), Enlarged ed. 1983. Foundations of Economic Analysis, *Harvard University Press*.

Sen, Amartya (1982). Poverty and Famines: An Essay on Entitlement and Deprivation. *Oxford New York: Clarendon Press Oxford University Press*. ISBN 9780198284635.

Shaoqun Mo. (2012) How to Build a Consumer Society. Social Sciences in Nanjing, (12).

Summers, T. I. M. (2015). Society and politics in china today. *International Affairs*, 91(5), 1151–1160. https://doi.org/10.1111/1468-2346.12403

United Nations Development Program. *Beijing Translation and Publishing Corporation*, November 2008. ISBN 978-7-5001-1988-3.

Womack, James P., Daniel T Jones, and Daniel Roos. (1990). The Machine that Changed the World. New York: Rawson Associates.

Yi, Z. (2017). Social class differences in consumption propensity in contemporary china - from survival-oriented consumption to development-oriented consumption. *The Journal of Chinese Sociology*, 4(1), 1–23. https://doi.org/10.1186/s40711-017-0066-1

Yun Chen: "Strengthen Market Management and Transform Private Business", "Selected Works of Yun Chen" (1949-1956), P252.

Zhang, S., Li, F., & Xiao, J. J. (2020). Internet penetration and consumption inequality in china. *International Journal of Consumer Studies*, 44(5), 407–422.

Zhiping Hu. (2011). The macro and micro political interpretation of achieving equitable supply of rural public services in China. Theory and Reform, 2.

Zhiping Hu. (2012). Power reconstruction: The accumulation and elimination of income gap between urban and rural residents. Exploration 6.

Zhu, Di. (2012). Methodology, research strategies, and the application of triangulation—a case study of consumption modes. *Sociological Studies* 4: 146–166.

Economic Boycotts and WTO Law: A Time for Renewed Debate

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Abstract
The paper evaluates whether the motivation of national security is a reasonable excuse to restrict free trade and furthermore – assuming *arguendo* a good faith *bona fide* threat exists – whether boycotts even constitute effective tools to advance national security. Countries have their legal arguments that they can use to justify the boycott or to invalidate it. The use of the national security exception in international economic law must be evaluated on the bottom-line question of effectiveness. The boycott has always proven ineffective and is now increasingly counter-productive due to transformative regional and global developments. Free trade and efficient markets combined with the ability of talented individuals to work without discrimination and restriction are the hallmarks of vibrant economies and stability – true national security. While the establishment of the boycott may at one time serve a perceived national security goal, there is no longer such a need. Economic boycotts undermine the WTO's commitment to free trade and prosperity which ultimately harms all parties and their national security and harms the greater global interest in international stability for all parties.

I. Introduction

Free trade is a core component of the global governance architecture and recent decades have witnessed the legalization of international economic law. (Bhala, 2011) The institutions that govern international economic relations today such as the World Trade Organization (WTO) grew out of an understanding that peace cannot flourish in a world with trade barriers. (Malkawi, 2007) Thousands of bilateral investment agreements and free trade agreements have been executed all intending to depoliticize economic relations and WTO rules preclude discriminatory trade conduct. However, international economic law recognizes the right of states to invoke policies and trade barriers such as boycotts (Chaisse, 2015) on the basis of (Bahla, 1998) national security and the inter-connection between trade and national security is not new. [2]

The underlying motivation of boycotts is national security. However, national security concepts have changed and consist of concerns like funding terrorism, developing and threatening nations with weapons of mass destructions, and cyber-security – none of which point to any national security concerns. Moreover, and significantly, national security is not only military preparedness; national security encompasses a wide range of important bulwarks in defense of the good of the nation such as peace, prosperity, stability and freedom. [3] Thus, ironically, maintaining the boycott may in fact harm the national security of all parties involved.

Given the sweeping regional and international changes and the importance of trade as a pillar of the global governance architecture, the timing of this issue is particularly germane. The interaction between national security and free trade has become an increasingly significant global issue in our internationalized world since invoking the national security exception inherently involves both law and politics. (Chen, 2017) Indeed some have argued that since trade is so

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[2] National security and international trade law are closely linked, and this link has existed ever since the birth of modern international trade law in 1947. *Id.* at 265.
[3] See Bashar H. Malkawi, *supra* note 8, at 315.

important to global security, the domestic concerns of each nation should no longer automatically and overwhelmingly trump trade obligations in unfettered fashion (Yoo and Ahn 2015).

The use of the national security exception must be evaluated on the bottom-line question of effectiveness.[4] Moreover, continuing the boycott undermines the WTO's commitment to free trade and prosperity[5] which ultimately harms the boycotters and *their* national security.[6] Furthermore, the boycott also harms the greater global interest in international stability which is a major positive outcome of free trade.

II. Reasons to Rescind Economic Boycotts

A. *The Benefits of Stopping Boycotts*

Parallel to the lack of effectiveness, are the likely rewards of formally eliminating the boycott. International economic law and in particular trade law are based upon economic benefits accruing to the trading partners. (Hoekman, Matto, and English, 2002) Moreover, as specific to public sector contracting, international trade law focuses on the promise of ensuring the best value for the world's citizens. The notion of efficient and productive market forces is central to the international trade architecture. (Bhagwati, 1991; Adhikari and Athukorala, 2002) Therefore, measures undertaken to undercut trade such as boycotts inherently conflict with efficient and productive markets. Moreover, principles of non-discrimination and transparency are vested into international agreements and form central norms of international law. (Blum, 2016) The boycott is incongruent with these principles.

Free and efficient markets combined with the ability of talented individuals to work and trade without restrictions is the hallmark of the U.S. economy. (Scheiber, 1981; Zeiler, 1999) One of the proximate causes of the unrivalled economic strength enjoyed by the U.S. is the mantra of open markets and employers' acceptance of the best employees no matter what their religious, ethnic or racial affiliation. Indeed, discrimination in employment and government contracting is specifically illegal under U.S. federal law. (Suk, 2007)

Moreover, U.S. businesses and educational institutions hire the best individuals for the position regardless of ethnicity, racial background or religious affiliation. This cross-cultural diversity brings substantial benefits and greatly enhances U.S. businesses and wealth creation. The U.S. Supreme Court has acknowledged the link noting that diversity is an increasingly important component to effective business by bringing new talent and ideas into the economy. In ruling on diversity in education, the Court noted diversity in education strengthens these institutions and by extension - the state as well business – thereby bringing inter-connected competitive advantages to the national economy. 7 The virtues of opening up sectors to diverse applicants are an increasingly important advantage in a world without borders.

Therefore, the boycott – which by definition is the antithesis of diversity – is harmful to the economic development and diversification of all countries involved. In line with the failure of the boycott to achieve the goal of economic isolation, the rescinding of the boycott may in fact bring great benefit to the entire region by injecting new thinking, capital, technology transfer and employing talented individuals. Additionally, by allowing cross-cultural exchanges, the ability to foster stable relations is enhanced.

But at a minimum, the boycott dramatically reduces trade contravening the primary purpose of encouraging free trade – fostering overall economic gain. Enhanced trade brings substantial benefits. A positive correlation exists between trade and FDI which benefits developing nations. Trade is an important catalyst of economic growth. Trade promotes more efficient and effective

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[4] See Raj Bahla, *supra* note 12, at 313.
[5] See Raj Bhala, *supra* note 7, at 9 (citing to preamble of General Agreement on Tariffs and Trade).
[6] See Bashar H. Malkawi, *supra* note 8, at 325.
[7] See Grutter V. Bollinger (02-241) 539 U.S. 306, 328 (2003) 288 F.3d 732.

production of goods and services and higher standards of living.8 For instance, free trade leads to greater national wealth and was a key factor fueling China's meteoric rise. (Slawotsky, 2017) Accordingly, the boycotters own economic performance and thus the prosperity of their citizenry may be adversely impacted by restricting trade.

In contrast, embracing free trade and rescinding boycotts does bring real economic benefits to all states involved.

B. Economic boycotts in the Context of International Economic Law

Boycotts are the most malicious trade barriers damaging efficient trade.[9] Moreover, boycotts are the antithesis the objectives of GATT – the promotion of cooperative and peaceful relationships. Peace and prosperity through trade was the basic objective of the GATT. (Chaisse, 2015) Countries must build a world in which they use cooperation to pursue their mutual interests. Countries should recognize that they do better as trade partners, not rivals, which would create both peace and prosperity.

The issue economic boycotts have been intertwined with the GATT/WTO since its inception. The national security exception is found in the WTO agreements which preclude nations from taking actions counter to free and open trade unless the conduct's motivation is to protect national security interests.

> [n]othing in this Agreement shall be construed (a) to require any contracting party to furnish any information the disclosure of which it considers contrary to its essential security interests; or (b) to prevent any contracting party from taking any action which it considers necessary for the protection of its essential security interests (i) relating to fissionable materials or the materials from which they are derived; (ii) relating to the traffic in arms, ammunition and implements of war and to such traffic in other goods and materials as is carried on directly or indirectly for the purpose of supplying a military establishment; (iii) taken in time of war or other emergency in international relations; or to prevent any contracting party from taking any action in pursuance of its obligations under the United Nations Charter for the maintenance of international peace and security. (World Trade Organization, 2018)

This inherent sovereign right to the imposition of economic measures such as bans or boycotts to protect national security is the raison d'etre of the boycott. However, what is "national security" and is it applicable in this context?

> National security is the idea that a state must keep its property safe in order to protect its citizens. This is a concept that a government, along with its law-making bodies (e.g., parliament(s), should protect the state and its citizens against all kinds of 'national' crises through a variety of power projections. Projections of power may manifest itself in such ways as political power, diplomacy, economic power, military might, and so on. (Chaisse, 2015)

The national security exception has rarely been invoked or interpreted and the meaning of national security in the context of trade obligations is unclear. (Kithardis, 2014) The invocation of the national security exception is the subject of broad questioning particularly the subjective self-judging aspect (Schill and Briese, 2009; Lindsay, 2003) but also to the substantive extent and

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8 See Preamble of General Agreement on Tariffs and Trade, pmbl., Oct. 30, 1947, 61 Stat. A-11, 55 U.N.T.S. 194 [hereinafter GATT]).

9 See Roger Alford, *supra* note 14, at 701.

contours of the exception as well. 10 Since the national security provision is exceptional inasmuch as the invocation is subjective (unlike other exceptions) and is amorphous,11 some have noted that the exception is subject to abuse. (Hsu, 2010)

Some have argued that the national security exception needs to be revised to reflect a globalized world. 12 One approach is to presume that the national security exception is subject to certain norms as are other provisions requiring the nation invoking the exception to adhere to concepts of reasonableness.

> At the same time, however, implicit in clauses (i), (ii), and (iii), and in the words "necessary," "protection," and "essential security interests," *must be the concept of a credible threat from these dangers.* Simply "crying wolf" will not do, because Article XXI could not have been designed to protect a hyper-sensitive government any more than many standards of care in tort law do not protect the hyper-sensitive plaintiff. Rather, the test should be an objective one, namely, whether a "reasonable" government faced with the same circumstances would invoke Article XXI. *In sum, it is the implicit concept of a credible threat judged from the objective standpoint of a reasonable, similarly-situated government, coupled with the articulation of specific types of dangers that track one or more of the three clauses*, and not []'s unduly restrictive self-defense argument, that can be a restraint on "cowboy behavior." [13]

Drawing on investment treaty law, one could comparatively note that arbitration tribunals have consistently interpreted national security concepts such as "exigent circumstances" or "national emergency" as enabling a host state to override a treaty guarantee only if an security essential interest was in severe danger and the state's action was vital to defending the interest.14

It also seems reasonable to require that in evaluating boycotts:

> that the principle of good faith under Article 31 of the Vienna Convention on the Law of Treaties, a customary international law often read in line with the WTO Agreements, is an appropriate standard applicable to Security Exceptions as well.[15]

Indeed, good faith has been suggested as an important factor in determining whether national security is a reasonable cause for a boycott. (Schloemann and Ohlhoff, 1999; Akande and Williams, 2003) Furthermore, the good faith argument is also embodied in the international law concept of abus de droit. 16

Accordingly, in evaluating a draconian restriction such as a boycott, the key is balancing the legitimate need of defending national security with the global interest in encouraging free trade and preventing the harassment of another nation. This would militate in favor of evaluating boycotts from the perspective of whether the need is compelling (a good faith objectively) and whether the conduct is reasonable in proportion to the threat to national security.

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[10] See Julien Chaisse, *supra* note 77, at 601 ([T]the WTO has not clarified the scope of the national security exception. [And], there is inadequate case law to illustrate the correct use of the exception, to what extent, and to which service sectors the exception is applicable).

[11] Most authors agree that the phrase 'essential security interest' creates a degree of uncertainty regarding reliance on the exception. The causes of the uncertainty are that the WTO has not provided any clear definition in clarifying the scope of the term "essential security" and also because different states hold different notions regarding the phrase. *Id.*

[12] Security exceptions have been one of the core elements of international trade law since the genesis of the GATT, but without much needed modification addressing changed economic and political circumstances. See Ji Yeong Yoo and Dukgeun Ahn, *supra* note 15, at 434.

[13] See Raj Bahla, *supra* note 12, at 275.

[14] See Joel Slawotsky, *supra* note 9, at 355.

[15] See Ji Yeong Yoo and Dukgeun Ahn, *supra* note 15, at 435.

[16] The *abus de droit* concept "refers to a State exercising a right either in a way which impedes the enjoyment by other States of their own rights or for an end different from that for which the right was created, to the injury of another State.

Several precedents relating to trade boycotts exist.17 The most notable trade boycotts include for instance the Falklands conflict between Argentina and the United Kingdom. The European Economic Community (EEC) imposed trade sanctions on Argentina. (Hudec, 1993) The matter was brought before the GATT Council- not a GATT dispute panel- which was unable to make a decision on the merits of the trade sanctions.

In another instance, in the U.S.- Nicaragua case, the GATT panel decided that trade boycotts ran counter to basic aims of the GATT, namely to foster non- discriminatory and open trade policies, to further the development of the less developed contracting parties and to reduce uncertainty in trade relations.18 Thus, there must a balancing act between the security interests of countries and the wider goal of open trade.

In another instance, the U.S. enacted the Helm-Burton Act which prohibited the importation of Cuban goods into the U.S. Section 110.a of Helms-Burton Act prohibits the entry into the U.S., not only of Cuban sugar or rum, but also of goods of other countries which are made in part of Cuban sugar or rum. (Spanogle, 1998) The EC filed a complaint with the WTO challenging the secondary boycott provisions of Helms-Burton Act. The U.S. maintained that the boycott passed on national security grounds.19 After trade skirmishes between the U.S. and the EC, the matter was settled before the first submissions were due with the panel. (WTO, 1998) It seems that the U.S. and EC were not keen to deal with the boycott in question as a WTO issue.

While the establishment of economic boycotts may at one time have served a perceived national security goal, there is no longer such a need – let alone a compelling one. At a minimum, the boycotters should examine whether the motivation of national security is relevant in 2019 to protect their national security. Moreover, inasmuch as international economic law does not view "trade itself" as the sole benefit of free trade but rather views the beneficial effects of trade on employment and income as proximate causes of stability and peace, the boycott may constitute a contravention of these core principles.

C. Promotion of Stability and Global Peace and Security

Separate from wealth creation, free trade brings the significant benefits of regional peace and stability and diplomatic resolution of disagreements. (Polachek and Seiglie, 2007; Spolaore and Wacziarg, 2009) Peace is the dividend that develops when free trade reins because free trade makes nations busy, more prosperous with financial interests at risk should conflict arise. (Hotze 2017; Griswold, 2017; VanGrasstek, 2013)

The importance of trade in promoting peace is well-recognized and therefore actions which counter trading are prohibited. Trade regulation is an important component of foreign policy. To bring about peaceful and prosperous relations is an end in itself. Peace and security was absolutely central at the time that the General Agreement on Tariffs and Trade (GATT) was founded. It was not a peripheral issue at all. (Hahn, 1991; Gerhart, 2004; Jentleson, 2000) The compelling benefit of the promotion of nonbelligerent interactions among trading partners constitutes a primary motivation of the WTO. (Chen, 2000)

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17 In 1961, Ghana justified its boycott of Portuguese goods on the basis of the provisions of Article XXI, noting that each contracting party was the sole judge of what was necessary in its essential security interests and, accordingly, there could be no objection to the boycott. In 1975, to justify a global import quota system it had introduced for certain footwear, Sweden stated that this measure was in conformity with the spirit of Article XXI - that a decrease in domestic production of footwear had allegedly become a critical threat to the emergency planning of its economic defense, which was an integral part of the country's security policy. https://docs.wto.org/gattdocs/q/UR/GNGNG07/W16.PDF> (last visited Jan. 9, 2018)..

18 The U.S. argued successfully that the terms of reference of the GATT Panel that examined the dispute precluded it from examining the validity of the U.S. invocation of Article XXI. See Panel Report, United States - Trade Measures Affecting Nicaragua, 5.1–5.17, L/6053 (Oct. 13, 1986).

19 The U.S. Government's right to make decisions about our own foreign policy and our national security is absolute and cannot be abrogated or interfered with by any foreign entity...He [EC] who lives in a glass house should not throw stones [at the U.S.]". *Interfering with U.S. National Security Interests: The World Trade Organization and The European Union Challenge to the Helms-Burton Law*: Hearing before the House Subcomm. on International Economic Policy and Trade of the Comm. on International Relations, 105th Cong. 1st Sess. 2-3 (1997) (statement of Ileana Ros-Lehtinen, Chair, Subcomm. on International Economic Policy and Trade).

> T]he WTO also has other purposes that are directly frustrated by the use of boycotts as instruments of foreign relations. Free trade has always been understood to be an important method of discouraging war and promoting more amicable relations among nations. John Stuart Mill argued that "the economical advantages of [international] commerce are surpassed in importance" by its effects on international political relations. According to Mill, trade is "the principal guarantee of the peace in the world." Leading contemporary scholars echo this view. Indeed, fostering the conditions for international peace was as much in the minds of GATT's architects as was reaping the benefits of comparative advantage.[20]

A growing literature has confirmed the positive correlations between free trade and the advancement of stability in international relations. (Puig and Chan, 2016; McDonald, 2004) Rescinding the boycott would allow for an exchange of tourism, academic exchanges, and substantially expanded availability of goods and services. Without the opportunities to interact, people do not get to know neighbors and remain ensconced in a perception that may not reflect reality. Ironically, therefore, upholding the 70 year old boycott may impede full and peaceful relations and in fact run counter to the boycotting nations' own national security.

III. Conclusion

Countries should examine whether in 2019 national security is a reasonable excuse to restrict free trade with other countries, and furthermore, whether – assuming *arguendo* a good faith bona fide threat exists – whether the boycott even constitutes an effective tool to advance national security. Countries should also evaluate whether the primary boycott is reasonable and effective or whether the boycott is in fact contrary to their own national security interests (and the greater global interest) in promoting free trade. International trade law has always been about economic development – but also in the context of building a better world. Nations must build a world in which they use cooperation to pursue their mutual interests which would create both peace and prosperity - recognizing that they do better as trade partners, not rivals.

While the establishment of economic boycotts many decades ago may have served a perceived national security goal, there is no longer such a need. There are no military confrontations worldwide. To the contrary, there is a somewhat collaborative relationship including trade, tourism, joint military training and budding diplomatic coordination, between countries. Therefore, with minor exceptions, the primary boycott cannot be justified on national security grounds.

Economic boycotts have never been adjudicated under the WTO. Both sides of the spectrum have their legal arguments that they can use to justify boycott or to invalidate it. WTO jurisprudence does not help advance the argument of either party. The few available GATT precedents are incomplete precedents in this regard and provide no details as to the meaning of the words used and conditions of article XXI. Additionally, it would be a worrisome precedent if the WTO, a trade institution, addressed sensitive issues with political ramifications.

Countries do not benefit from a stagnant economic relationship. The alternative to formally rescinding any boycott is for parties to adopt a pragmatic and business like approach. Parties would continue their relationships on an informal basis and conduct business through third countries or parties. Businesses will continue to transact deals regardless of the political climate in the region, and help industries countries complement each other albeit secretly or some other indirect ways. There will be progress but following this path is a long journey and substantially limits the potential economic gains and peace dividends that formally rescinding the boycott would produce. Ultimately, however, the boycott will end. This development will ultimately lead

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[20] See Eugene Kontorovich, *supra* note 29, at, 300.

to tourism, economic development, and educational and technological cooperation. Irrespective of whether the current policy of informal relations is maintained or whether the process is expedited through ending the boycott, this inextricable destiny will happen.

References

Adhikari, Ramesh, and Prema-Chandra Athukorala. (2002). "Developing Countries in the World trading System: The Uruguay Round and Beyond" 185-190.

Akande, Dapo, and Sope Williams. (2003). "International Adjudication on National Security Issues: What Role for the WTO?" *43 Va. J. Int'L L.* 365, 390–91.

Bahla, Raj. (1998). "National Security and International Trade Law: What the GATT Says, and What the United States Does." *19 U. Pa. J. Int'L Econ. L.* 263, 316.

Bhagwati, Jagdish. (1991) "Political Economy and International Economics." 3-34 (Douglas A. Irwin ed.)

Bhala, Raj. (2011). "Poverty, Islamist Extremism, and the Debacle of Doha Round Counter-Terrorism: Part One of a Trilogy - Agricultural Tariffs and Subsidies." *9 U. St. Thomas L.J.* 5, 15-21.

Blum, Yehuda Z. (2016). "Economic Boycotts in International Law in Will "Justice" Bring Peace?" 182-184.

Chaisse, Julien. (2015). "Assessing the relevance of multilateral trade law to sovereign investments: Sovereign Wealth Funds as 'investors' under the General Agreement on Trade in Services.'" *2015 International Review of Law* 1, 8.

Chaisse, Julien. (2015). "Demystifying Public Security Exception and Limitations on Capital Movement: Hard Law, Soft Law and Sovereign Investments in the EU Internal Market." *37 U. Pa. J. Int'l L.*583, 596.

Chaisse, Julien. (2015). "Demystifying Public Security Exception and Limitations on Capital Movement: Hard Law, Soft Law and Sovereign Investments in the EU Internal Market." *37 U. Pa. J. Int'l L.* 583, 599.

Chen, Jim. (2000). "Pax Mercatoria: Globalization as a Second Chance at 'Peace in Our Time.'" *24 Fordham Intl L J* 217, 225.

Chen, Tsai-fang. (2017). "To Judge the 'Self-Juding' Security Exception under the GATT 1994–A Systematic Approach." *12.2 Asian Journal of WTO & International Health Law and Policy,* 311, 315.

Gerhart, Peter M. (2004) "The World Trade Organization and Participatory Democracy: The Historical Evidence." *37.4 Vand. J. Transnat'l L.* 897, 908-910, 926.

Griswold, Daniel. (2007). "Trade, Democracy and Peace, The Virtuous Cycle" doi: https://www.cato.org/publications/speeches/trade-democracy-peace-virtuous-cycle

Hahn, Michael J. (1991). "Vital Interests and the Law of GATT: An Analysis of GATT's Security Exception." *12 Mich. J. Int'l L.* 558, 581.

Hoekman, Bernard, Aaditya Matto, and Philip English. (2002). "Development, Trade, and the WTO." 11-16.

Hotze, Timothy. (2017) "Laboring for Peace and Development: Evaluating the United States-Jordan Free Trade Agreement's Effects." *College of Liberal Arts & Social Sciences Theses and Dissertations, DePaul University* 34-38.

Hsu, Locknie. (2010) "A Decade of Security-Related Developments." *11 Journal of World Investment and Trade* 697, 721.

Hudec, Roberts E. (1993). "Enforcing International Trade Law: The Evolution of the Modern GATT Legal System" 502-504

Jentleson, Bruce W. (2000). "Economic Sanctions and Post-cold war Conflicts: Challenges for Theory and Practice, in National Research Council." *International Conflict Resolution after the Cold War* 123-126

Kithardis, Sophocles. (2014). "The unknown territories of the national security exception: The importance and interpretation of art XXI of the GATT." *21 Australian International Law Journal,* 79, 83.

Lindsay, Peter. (2003)."The Ambiguity of GATT Article XXI: Subtle Success or Rampant Failure?" *52 Duke L.J.* 1277, 1282

Malkawi, Bashar H. (2007). "The WTO, Security and Peace: Are they Compatible, and if so, What is the Framework?" *8 The Journal of World Investment and Trade* 303, 305.

McDonald, Patrick J. (2004) "Peace through Trade or Free Trade?" 48.4 *The Journal of Conflict Resolution* 547, 458.

Multilateral Trade Negotiations, Negotiating Group on GATT. (1987). "Articles, Article XXI, MTN.GNG/NG7/W16." 5-8 doi: https://docs.wto.org/gattdocs/q/UR/GNGNG07/W16.PDF

Panizzon, Marion. (2006). "Good Faith in the Jurisprudence of the WTO: The Protection of Legitimate Expectations, Good Faith Interpretation and Fair Dispute Settlement" 33-34.

Polachek, Soloman and Carlos Seiglie. (2007). "Trade, Peace and Democracy: An Analysis of Dyadic Dispute." *Handbook of Defence Economics*, Volume 2. 1017, 1025-1028 in Todd Sandler and Keith Hartley (eds).

Scheiber, Harry N. (1981). "Regulation, Property Rights, and Definition of 'The Market': Law and the American Economy." *41.1 The Journal of Economic History* 103, 105.

Schill, Stephan, and Robyn Briese. (2009) "If the State Considers": Self-Judging Clauses in International Dispute Settlement." *13.1 Max Planck Yearbook of United Nations Law* 61, 64-65.

Schloemann, Hannes L., and Stefan Ohlhoff. (1999). "'Constitutionalization' and Dispute Settlement in the WTO: National Security as an Issue of Competence." *93 Am. J. Int'L L.* 424, 447-448.

Slawotsky, Joel (2017). "The Clash of Architects: Impending Developments and Transformations in International Law." *3 Chinese Journal of Global Governance* 104-107.

Spanogle, Jr., John A. (1998). "Can Helms-Burton be Challenged under WTO?" *27 Stetson L. Rev.* 1313, 1320, 1323.

Spolaore, Enrico and Romain Wacziarg. (2009) "War and Relatedness." *National Bureau of Economic Research Working Paper* No.15095, 4-5.

Suk, Julie C. (2007). "Discrimination at Will: Job Security Protections and Equal Employment Opportunity in Conflict." *60.73 Stan. L. Rev* 73, 77-78.

VanGrasstek, Craig. (2013). "The History and Future of the World Trade Organization." 7-8, 42, doi: https://www.wto.org/english/res_e/booksp_e/historywto_e.pdf

Villalta Puig, Gonzalo, and Vinci Chan. (2016). "Free Trade as a Force of Political Stability? The Case of Mainland China and Hong Kong." 49.3 *The International* Lawyer 299, 332.

World Trade Organization. (2018). "GATT Analytical Index, Article XXI 'Security Exceptions'", p. 600 doi: http://www.wto.org/english/res_e/booksp_e/gatt_ai_e/art21_e. pdf

WTO. (1998) "United States — The Cuban Liberty and Democratic Solidarity Act, Lapse of the Authority for Establishment of the Panel." *WTO Doc.* DS38 (Apr. 22, 1998).

Yoo, Ji Yeong, and Ahn, Dukgeun. (2015). "Security Exceptions in the WTO System: Bridge or Bottle-Neck for Trade and Security?" *Journal of International Economic Law 417-444*.

Zeiler, Thomas W. (1999). "Free Trade, Free World: The Advent of GATT." 3-5.

Global Farmers Welfare and Neoliberal Agricultural Trade during WTO Regime: Global Trade Analysis

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Abstract

Global trade has increased the growth proportionally in many sectors during WTO regime. Neoliberal Agriculture has become competitive. Farmers welfare, Food security, Farm income, Poverty and trade are a key international issues debatable. The present paper focuses Global farmer's welfare and agricultural trade developments among the continents and across the world. The study period is from 1990-91 to 2018-19. CAGR, coefficient of variation, moving average method, terms of trade and elasticity were used to achieve objectives. The results show that Asia occupied more agricultural land in the world followed by Oceania, Africa, America and Europe continents during 2018. The Per capita agricultural land was 0.63 ha in the world. China, United States, and Australia shared the largest percentage of agricultural land that accounted to be 11.01%, 8.45% and 7.49% to the world. But, Mongolia (35.78), Australia (14.41), and Kazakhstan (11.79) have shown the highest per capita agriculture land. Poverty rates in many nations are the highest in the world. Sub-Saharan Africa, South Asia, and, Middle East and North Africa are the regions mostly facing the poverty in the global population. 40.2% of population in the Sub-Saharan Africa has been facing poverty since 2018. While 15.2% of South Asian population has been suffering from poverty in 2014. All countries in the world have shown the positive growth rate of total agricultural exports during the study period. Brazil, Spain and China were shown the highest significant growth potential of agricultural exports, whereas China, Canada and USA has shown the highest growth rate of agricultural imports in the world during the study period. America was exporting more quantity of cotton, rubber & opium while importing tobacco. Asia was exporting more quantity of sugar crops while importing the cotton, opium, rubber & tobacco. Africa was exporting more quantity of cotton, rubber while importing the sugar crops, cocoa, tobacco. Europe was exporting more quantity of rubber, opium, tobacco while importing the cocoa. More quantity of opium by America and Europe; sugar crops by Asia were exported with the highest price in the world. Terms of trade was favored for sugar crops, opium &coffee in the Africa; cocoa, opium, rubber, in the Europe; and rubber in the America. Export price elasticity of sugar crops, cotton, opium, rubber in the America; cotton, rubber, tobacco in the Africa; and sugar crops, opium, rubber, tobacco in the Europe was marginally greater than their imports. Government must give prominence in framing price policies for the cash crops. Government should take action against the unfair competition existing in the international markets of cash crops especially for opium and tobacco. The study found that even During WTO modern period also developing countries and continents; Africa, Latin America and South America trade economies more depend on agriculture. It is necessary to address the challenges of societal, demographic, and political drivers of poverty. Developing countries welfare is possible only through Farmers' Welfare through modern agriculture. Multilateral trade relationship with high CAGR countries would help in smooth trade of agricultural crops.

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I. Introduction

Neoliberal Agriculture trade has become competitive. Food security, Farm income, Poverty and trade are a key international issues debatable. Developing countries welfare is possible only through Farmers' Welfare. According to FAO, the welfare of food producers and that of food are interdependent in the long run. Reorientation of agriculture to meet nutrition needs and to supply needed foods to all elements of the population is an essential part of the steps to be taken in promoting the welfare of food producers [Agriculture, FAO. http://www.fao.org/3/x5584e/x5584e07.htm]. Some developing countries have opened their own economies to take full advantage of the opportunities for economic development through trade, but many have not. Remaining trade barriers in industrial countries are concentrated in the agricultural products and labor-intensive manufactures in which developing countries have a comparative advantage. Further trade liberalization in these areas particularly, by both industrial and developing countries, would help the poorest escape from extreme poverty while also benefiting the industrial countries themselves [IMF 2001].

An income redistribution policy requires the reallocation of a large portion of resources from the small, better-off share of the population to the much larger and much worse off share of the population [FAO, 2009]. Farmland distribution would seem quite unequal at the global level, but it is less so in low- and lower-middle-income countries as well as in some regional groups [Lowder et al 2014]. Farmers' welfare has been slightly deteriorated mainly due to the end of institutional reform bonus, suppressed food prices, relative high inflation, and instable political situation [Allo et al, 2018]. Severe negative welfare implications of rising food prices found among the poorest population groups in food importing developing countries. [Aksoy, A., and A. Isik-Dikmelik 2008].

Rising food prices are more likely to favorably affect households in poorer geographic areas. Rising food prices may boost welfare in contexts where the poor (especially women) are among the largest net food producers and may generate new employment where rising prices stimulate expanded food production. Because urban residents are the most affected by rising food prices, creating productive job opportunities in urban areas should be a policy priority [Dimova, R. 2015]. Ministry of Home Affairs stated that India's welfare only through Farmers' Welfare; when Farmers are Empowered, Country would become Self-reliant. India's welfare lies in the welfare of its farmers [Shri Amit Shah, 2020]. PIB, (2020). *Ministry of Agriculture & Farmers Welfare*. India's agriculture sector presently contributes around 15.9% of the country's GDP and 49% of the total employment (2018-19). Time demands that our agriculture sector becomes modern and there should be value addition, there should be food processing, food packaging. And it needs better infrastructure. There is a need to strengthen rural industries. Special economic zones will be created in the rural areas. A web of agriculture and non-agriculture industries will be created. Encouraging states to implement agricultural marketing reforms is not enough. Politicians and commission agents continue to practice restricted and corrupt trade activities in APMC. In all, the Indian agriculture sector needs more action-oriented plans or it would remain at the mercy of corrupt officials with no chance of doubling farmers' income [Gurneel Kaur, 2020].

In Sri Lanka, where rice is both the staple food and the primary crop grown by farmers, reductions in water availability for rice cultivation has serious impacts on farmers' welfare and national food security. A key policy thrust of the agricultural policy framework is to address emerging climate change impacts by supporting the adoption of suitable agricultural strategies and practices by farmers. Understanding how potential climate adaptation practices affect farm systems and farmers' welfare is an important first step in translating this policy objective into effective actions [FAO, 2020].

The income approach focuses on achieving high productivity, reduced cost of cultivation and remunerative price on the produce, with a view to earning higher profits from farming. [Indian Co-operative Staff Reporter, 2018]. Government carried out protective policies for agriculture and started to heavily subsidize agriculture (Yu, 2018). The welfare enhancement for farmers mainly results from deepened market-oriented reform, protective policies for agriculture, and prevalent off-farm employment [Yu, X. 2018]. Price stabilization policies by the government are necessary

especially for importing rice, red onions and garlic in Indonesia because of higher demand for those items by consumers [Allo *et al*, 2018].

Impacts of higher and more volatile prices on welfare heavily depend on the domestic structure of the economy in the Sub-Saharan Africa. Farmers are likely to benefit more from policy interventions preventing or limiting cereal price increases than (untargeted and extremely expensive) price stabilization policies. Some targeted policy interventions aimed at reducing the exposure to cereal price volatility of the poorest quintile of the population is still required to protect them from substantial welfare losses [Balie, J., Magrini, E., & Morales Opazo, C. 2016]. The negative impacts of a cereal price increase substantially outweigh the effects of price volatility on household welfare across the entire income distribution [Magrini et al, 2017]. Impact on the farmer's welfare depends on the trade-off between optimal farm return and farm income variability reflected in the farmer's risk aversion [Anton & Giner, 2005].

Poverty is a multidimensional concept not only rely on income and per capita consumption expenditure [Bourguignon & Chakravarty, 2019]. Poverty rates in many countries are the highest in the world. Poverty casts its shadow upon majority of citizens during their life period. Poverty in America is not oxymoron but a reality. The biggest deliberation of poverty has shifted from South Asia to Africa from a global assessment [Beegle & Christiaensen, 2019].

Global trade has increased the growth proportionally over the last two centuries. Now, trade is a fundamental part of economic activity everywhere [Esteban and Diana, 2018]. Trade is an important factor to increase revenues, decrease competition and made easier cash flow management. It helps in encouraging specialized products, disposal of surplus goods and also benefit from currency exchange [Bruna M, 2018]. Hence, trade increases the prosperity of nation, fueling economic growth, rising employment opportunites, reducing poverty, and raising the living standards of the people. Access to international markets plays an important role in an economy's development [World Bank https://www.doingbusiness.org/en/data/exploretopics/trading-across-borders/why-matters]. Germany, United States, China and Russia were the major countries, that gave more importance to the foreign trade in their economies [Makhmutova & Mustafin, 2017]. USA ($143.28 B), Netherlands ($100.16 B) and Brazil ($82.86 B) were the largest exporting countries of agricultural commodities in the world. While, USA ($138.55B), China ($123.28B) and Germany ($95.13B) were the top three importing countries of agricultural commodities in the world [FAO, www.fao.org].

Trade has so much prominence due to division of labor and specialization of products. Knowing the trade phenomenon is very important for the nations to maintain good relationships among them. There are no studies on the Global farmer's welfare and agricultural trade developments among the continents across the world. So, the current study focuses on Global Farmers welfare, Growth and Developments in Area, Production/income, Poverty, and Trade. And also focused on the growth rates, terms of trade and elasticities of global cash crops continentally and globally.

The specific objectives of the study are:
1. To analyze global farmer's arable land, income, poverty and welfare among the continents and countries in the world.
2. To analyze global agricultural trade trends, growth rates and performance in the world across the continents and countries.
3. To estimate the trends, growth rates, terms of trade and elasticities of global cash crops in the world across the continents and countries.
4. To suggest strategies & policy measures for improving Global farmer's welfare and agricultural trade in the world.

II. Data & Methodology

This is basically Farmers welfare & foreign trade research. Agricultural trade means the exports and imports of agricultural commodities in a global market. Global Farmers welfare and continent

wise and country wise agriculture trade development analyzed. Sugar crops, cocoa, cotton, opium, rubber, tobacco were the global cash crops selected for the study purpose. Selected continents were Africa, America, Asia, Europe and Australia & New Zealand. The study period is from 1990-91 to 2018-19. The entire study is based on the secondary data sources such as FAOSTAT, International Cocoa Organization, International Sugar Organization, World Health Organization, and United States Department of Agriculture. Compound Annual growth rate, coefficient of variation, moving average method, terms of trade and elasticity of agricultural exports and imports were used to achieve objectives. The present paper estimated Global farmer's welfare and agricultural trade developments among the continents across the world. And also focused on the growth rates, terms of trade and elasticities of global cash crops continentally and top 10 countries in the globe.

CAGR, elasticities, instability, moving average method and terms of trade of exports and import prices analysis were computed using the following formulae.

Growth rate formulae [Damodar NG & Sangeeta, 2007]

The compound growth rate (r) will be calculated by fitting exponential function to the variables of interest viz., export and import value of total merchandise and agricultural trade from the period 1990-91 to 2018-19.

$Y_t - Y_0 (1+r) t$ ---------1

Assuming multiplicative error term in the equation (1), model may be linearized by logarithmic transformation

$\ln Y_t = A + Bt + €$ ----------2

Where, A (=lnAo) and B (=ln (1+r)) are the parameters to be estimated by OLS regression, t= time trends in year, r = exp (B) -1.

Instability Index

Instability of total merchandise and agricultural trade export and import prices can be calculated using the formulae:

Coefficient of Variation = (Standard Deviation / Mean) *100

Moving Average Method

It is a technique extremely used to forecast long term trends for any time period.

Price Elasticity of Exports and Imports

The price elasticity of exports and imports of commercial crops were computed based on the formulae:

ΣP_e = % change in exports quantity/ % change in exports price

The percentage change in quantity exports is % ΔQ, and the percentage change in price is % ΔP. We calculate % ΔQ as $\Delta Q/Q_{ave}$ and We Calculate % ΔP as $\Delta P/P_{ave}$. So we calculate the price elasticity of exports as $(\Delta Q/ Q_{ave})/(\Delta P/P_{ave})$.

Similarly, the price elasticity of imports of commercial crops in the continents were calculated.

Terms of Trade calculation

Terms of Trade = Average Price of Exports/ Average Price of Imports

$$= P_X/P_M$$

↑ Price M or ↓ Price X → Deterioration of ToT

↓ Price M or ↑ Price X → Improvement of ToT

III. Results & Discussions

Continent and Country Wise Arable Land in the World

Figure 1 represented the agricultural land area by continent and country wise in the world. Asia occupied more agricultural land in the world followed by Oceania, Africa, America and Europe continents during 2018. India, United States, Russia, China and Brazil shared the highest arable land area in the world. Expansion of arable land will become an important factor to enhance the growth of crop production in many countries of sub-Saharan Africa and Latin America and Europe.

Fig 1: Arable Land Area by Country and Continent Wise
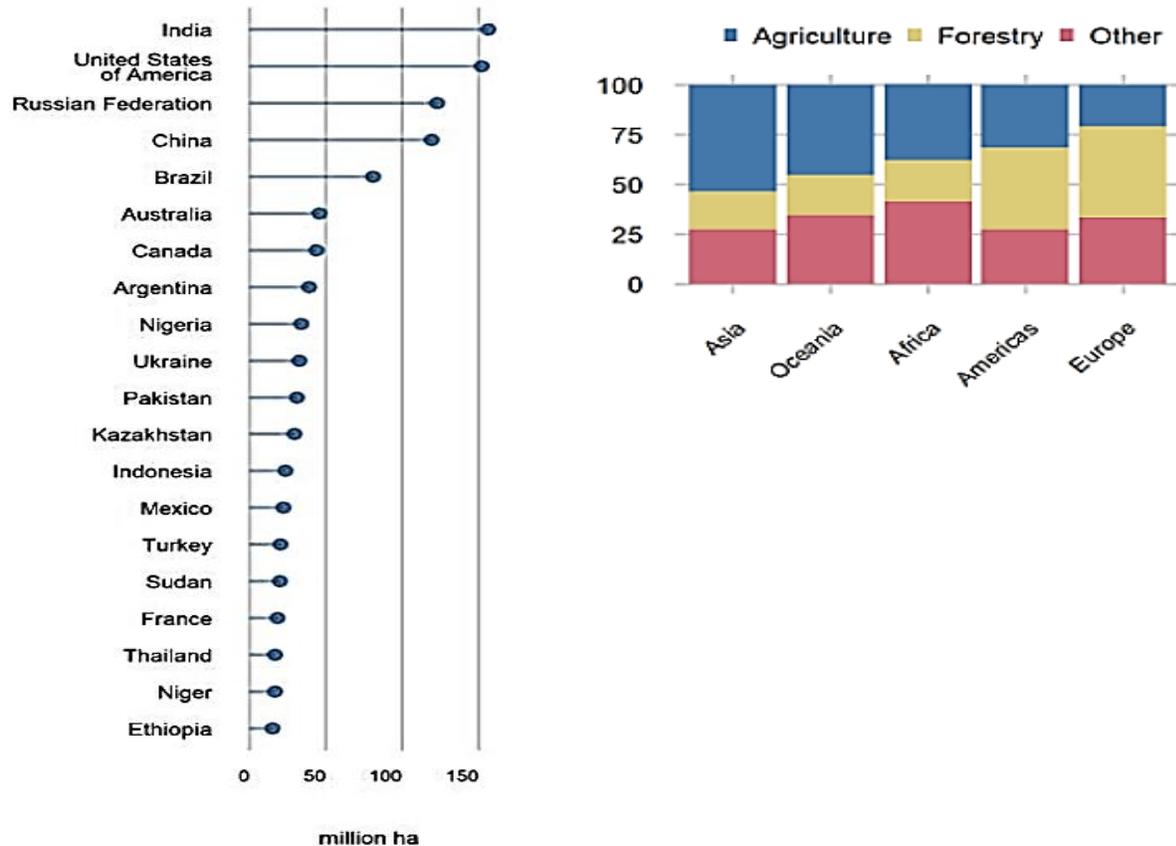
Total and Per Capita Agricultural Land of Countries in the World

Expansion of agricultural land and intensification as a crucial element to help ensure food security (Hinz et al, 2020). Safeguarding the agricultural land is necessary to meet future food production (Slatmo, 2017).

Top 10 country wise total and per capita agricultural land of the world have presented in the Table 1. Per capita agricultural land was 0.63 ha in the world. China, United States, and Australia shared the largest percentage of agricultural land that accounted to be 11.01%, 8.45% and 7.49% to the world. But, Mongolia (35.78), Australia (14.41), and Kazakhstan (11.79) have shown the highest per capita agriculture land.

Table 1: Top 10 Country Wise Total and Per Capita Agricultural Land of India to the World

S. No.	Countries	Agricultural Land ('000 Ha)	Share of Agricultural Land to World (%)	Per Capita Agricultural Land
1	China	528528.70	11.01	0.36
2	United States	405810.35	8.45	1.24
3	Australia	358895	7.47	14.41
4	Brazil	236878.80	4.93	1.13
5	Kazakhstan	216036.50	4.50	11.79
6	Russian Federation	215494	4.49	1.48
7	India	179674	3.74	0.13
8	Saudi Arabia	173629	3.62	5.15
9	Argentina	148768	3.10	3.35
10	Mongolia	113433	2.36	35.78
	World	4801370.28	100	0.63

Source: FAOSTAT

Region or Income Wise Classification of Poverty in the World

Poverty is an issue of vital national concern. Poverty rates in many nations are the highest in the world. Region Wise or Income Wise Classification of Poverty in the World have represented in the Table 2. Sub-Saharan Africa, South Asia, and, Middle East and North Africa are the regions mostly facing the poverty in the global population. 40.2% of population in the Sub-Saharan Africa has been facing poverty since 2018. While 15.2% of South Asian population has been suffering from poverty in 2014. Similarly, 7.2%, 3.8%, 1.2% and 1.1% of Middle East & North Africa, Latin America & Caribbean, East Asia & Pacific, and, Europe & Central Asia had been facing poverty, respectively since 2018. Number of poor in Africa has been rising from several years mainly due to increase in the growth of population (Beegle & Christiaensen, 2019).

Table 2: Region Wise or Income Wise Classification of Poverty in the World

S.No.	Region/Income	Year	Poverty (% of population)
Region			
1	East Asia & Pacific	2018	1.2
2	Europe & Central Asia	2018	1.1
3	Latin America & Caribbean	2018	3.8
4	Middle East & North Africa	2018	7.2
5	South Asia	2014	15.2
6	Sub- Saharan Africa	2018	40.2
High Income			
1	High Income	2018	0.6
2	Low and Middle Income	2017	10.9
3	Low Income	2017	45.5
4	Lower Middle Income	2014	16.9
5	Upper Middle Income	2018	1.6
World		**2017**	**9.2**

Source: World Bank. https://data.worldbank.org/indicator/SI.POV.DDAY

Suggestions

It is necessary to address the challenges of societal, demographic, and political drivers of poverty.
    Policy makers must concentrate on income earning opportunities of the poor to speed up the poverty reduction and increase the earnings of the farmers.

Global and Continental Wise Agricultural Trade

Agricultural trade means the exports and imports of agricultural commodities in a global market. Global total agricultural trade scenario has depicted in the Figure 2. Continent wise comparison of agricultural trade in 2018-19 have depicted in the Figure 3. Agricultural exports in North America ($189.51B), South America ($157.84B), Europe ($631.23B), and Australia and New Zealand ($58.73B) were higher than imports ($173.38B, $41.42B, $607.46B & $19.02B, respectively). But in case of Africa and Asia, there was a reverse trend found that the imports were higher than exports. Imports were higher in the Asian continent due to robust domestic demand by increasing the growth of population.

Fig.2: Total agricultural trade in the world (2018-19)
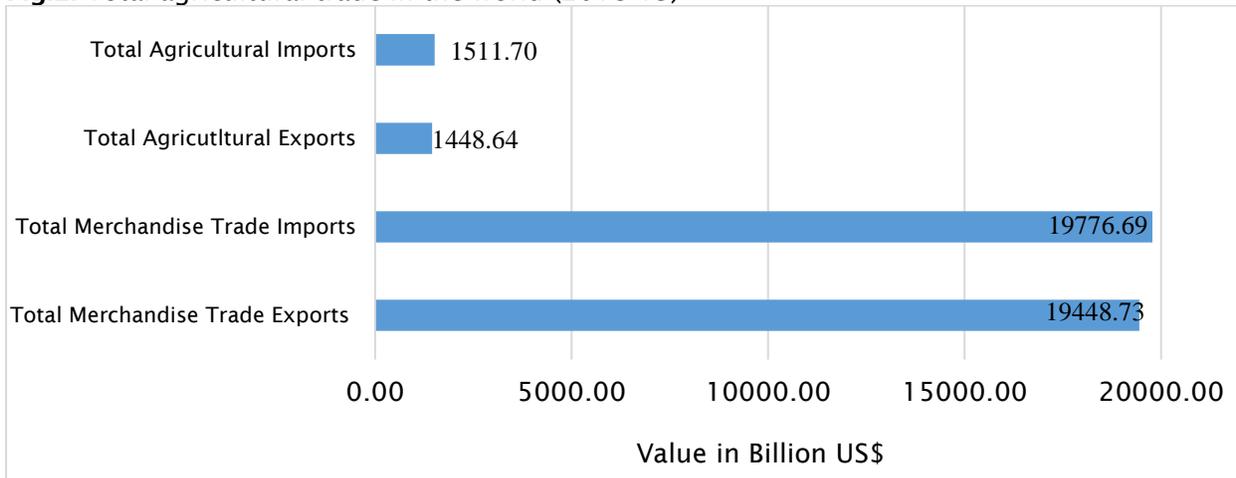
Fig. 3: Comparison of total agricultural trade among the continents (2018-19)
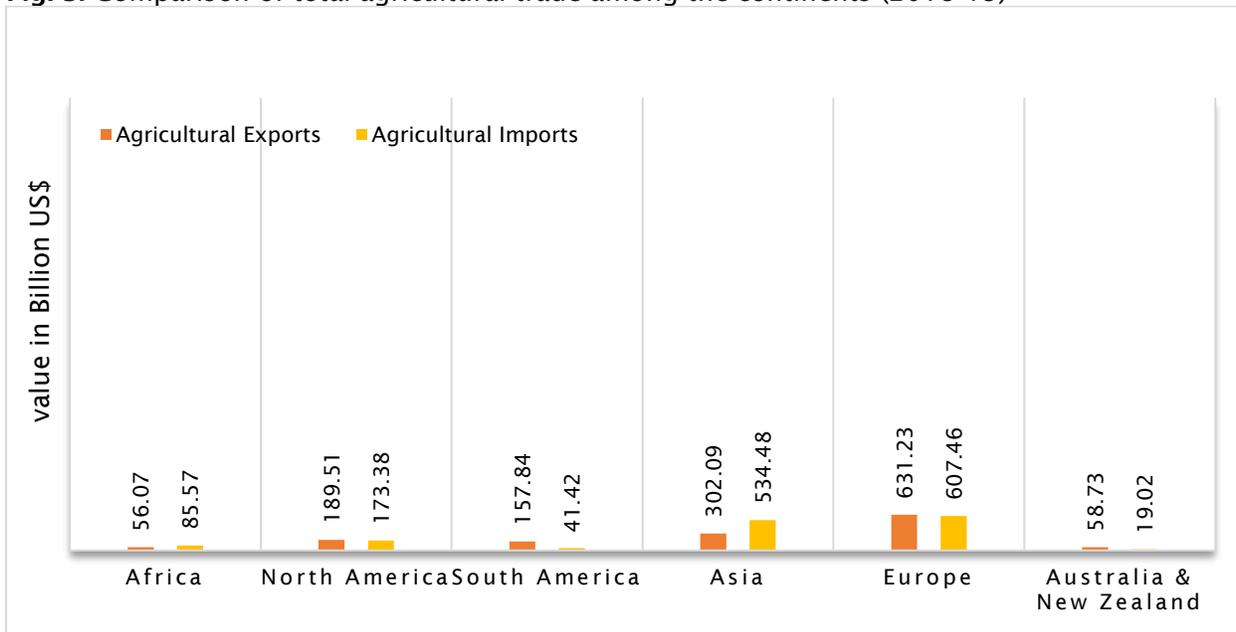
Exports and Imports of World Trade Groups

World trade groups and their export and import data in 2018-19 among the continents have presented in the Table 3. Agricultural exports and imports were dominated by Europe (43.57% & 40.18%) followed by Asia (20.85% & 35.36%) and North America (13.08% & 11.47%). However, the agricultural commodities traded in the Europe ($1238.69B) was higher than the Asia ($836.57B).

Table 3: World Agricultural trade groups and their export and import data 2018-19

S. No.	Continents	Agricultural Exports (Billion US$)	Agricultural Imports (Billion US$)	Total Agricultural Trade (Billion US$)
1	Africa	56.07 (3.87)	85.57 (5.66)	141.64 (4.78)
2	North America	189.51 (13.08)	173.38 (11.47)	362.89 (12.26)
3	South America	157.84 (10.90)	41.42 (2.74)	199.26 (6.73)
4	Asia	302.09 (20.85)	534.48 (35.36)	836.57 (28.26)
5	Europe	631.23 (43.57)	607.46 (40.18)	1238.69 (41.84)
6	Australia & New Zealand	58.73 (4.05)	19.02 (1.26)	77.75 (2.63)
7	World	1448.64 (100.00)	1511.70 (100.00)	2960.34 (100.00)

Source: FAOSTAT; Figures in parenthesis indicate the percentage to the world total

The findings revealed that Agricultural trade shared very less percentage. Poor developed countries, South America and South Africa have shown the highest percentage of agricultural commodities traded. Richest continents such as Europe, North America and Asia shared very less percentage of agricultural commodities traded. Trade on agricultural commodities expanded in Europe followed by Asia and North America during 2018-19. Europe uses more precision and advanced agricultural technologies and also more land users for agriculture.

Top 10 Country Wise Trends in Exports and Imports of Agricultural Trade:

Top 10 nations has been selected from all over the world based on the highest exports and imports values agricultural commodities. The trend graphs from Figure 4 to Figure 5 reveal the performance of agricultural exports and imports in the world among the countries from 1990-91 to 2018-19.

China, USA and Germany were highly expanded their trade during the study period. Over the past years, USA dominated the trade when compared to other nations. However, at present China highly dominated in the expansion of trade when compared to USA. These two countries are rich economic and highly developed countries, which have the highest GDP among all nations. China dominated USA in expansion of trade as it has fastest-growing consumer market, high purchasing power parity, largest manufacturing economy of goods and market oriented economy [World Bank, 2019].

Fig. 4: Trends in top 10 country wise agricultural exports (Billion US$) in the world
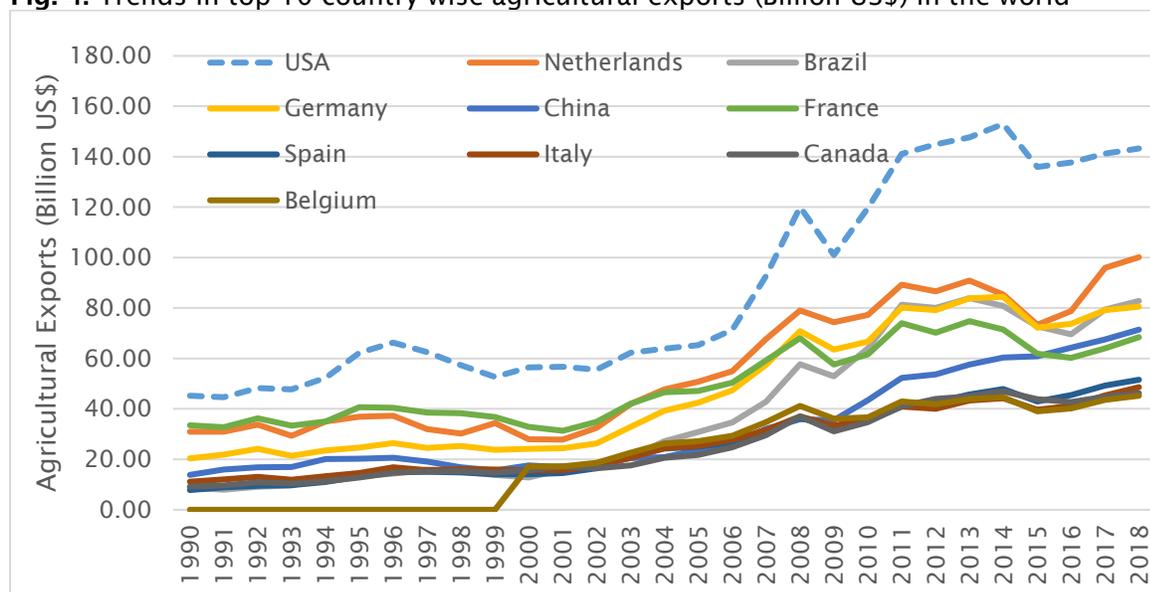
Fig. 5: Trends in top 10 country wise agricultural imports (Billion US$) in the world
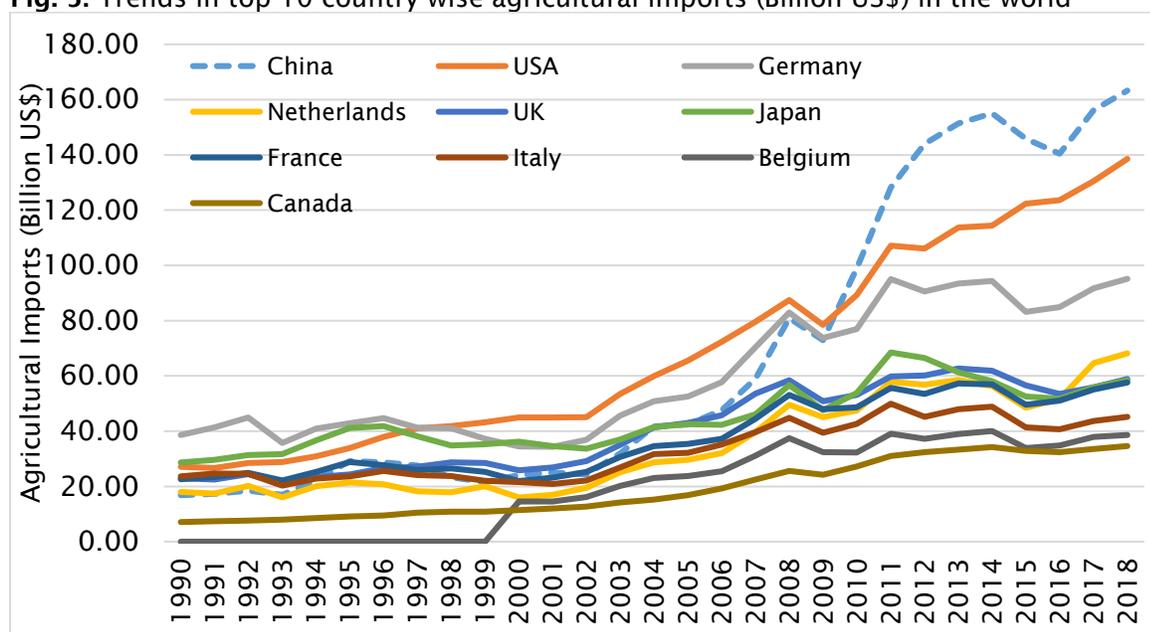
Top 10 Country Wise Growth Rate of Agricultural Trade

Top 10 country wise Growth rate and instability of exports of agricultural products in the world from 1990-91 to 2018-19 have presented in the Table 4. All countries in the world have shown the positive growth rate of total agricultural exports during the study period. Brazil, Spain and China were shown the highest significant growth potential of agricultural exports in the world. Brazil increased the agricultural exports by encouraging foreign investment, increasing infrastructure improvements and processing facilities in the agricultural sector. China is the major

exporter of labor and capital intensive products such as fruits, vegetables, fisheries and processed foods [Jikum Huang et al]. Spain has highly comparative advantage of fruits and vegetables, increase in number of stable export relationships and increased the openness of economy [Juan de Lucio et al 2017]. There is no variation found in the agricultural exports of top 10 countries in the world.

Table 4: Growth rate (%) and instability of top 10 country wise exports of agricultural products in the world

Countries	1990-91 to 2000-01	2001-02 to 2011-12	2012-13 to 2018-19	1990-91 to 2018-19
United States	2.25 (13.68)	9.55 (34.90)	-0.19 (4.08)	4.20 (45.07)
Netherlands	-1.03 (9.46)	12.37 (34.77)	2.46 (10.72)	4.29 (45.19)
Brazil	3.83 (23.01)	17.60 (52.55)	0.57 (6.79)	8.35 (74.71)
Germany	1.71 (7.58)	12.65 (37.62)	0.31 (5.87)	5.03 (52.36)
China	2.42 (2.29)	12.02 (38.43)	4.87 (9.68)	6.04 (58.19)
France	-0.16 (8.19)	8.97 (25.68)	-0.44 (8.00)	2.59 (30.11)
Spain	5.99 (22.72)	10.92 (30.23)	3.27 (7.05)	6.97 (55.31)
Italy	3.43 (14.07)	10.08 (29.52)	3.26 (7.36)	5.40 (47.53)
Canada	5.48 (19.68)	9.05 (32.53)	0.83 (3.28)	5.94 (53.24)
Belgium	- (0.00)	9.57 (28.88)	1.33 (5.48)	- (28.93)
Other Countries	2.01 (16.10)	13.67 (41.12)	1.37 (5.15)	5.84 (58.01)
World	2.36 (13.21)	12.29 (37.38)	1.34 (5.12)	5.48 (53.90)

Source: FAOSTAT; Note: Figures in parenthesis indicate the coefficient of variation.

Top 10 country wise Growth rate and instability of imports of agricultural products in the world from 1990-91 to 2018-19 have presented in the Table 5. China, Canada and USA has shown the highest growth rate of agricultural imports in the world during the study period. Relative scarcity of land resources made China to import the land intensive agricultural commodities namely, cotton, edible oils, sugar and dairy products [Fred Gale et al 2015]. USA imported more agricultural products especially consumer oriented products such as sugar, cocoa, coffee and rubber [USDA]. Canada was importing more commercial food products, dairy products and processed products [Government of Canada].

Table 5: Growth rate (%) and instability of top 10 country wise imports of agricultural products in the world

Countries	1990-91 to 2000-01	2001-02 to 2011-12	2012-13 to 2018-19	1990-91 to 2018-19
China	3.66	17.77	2.11	8.45
	(20.90)	(55.52)	(5.30)	(80.88)
United States	5.19	9.07	4.56	6.00
	(20.02)	(27.58)	(9.07)	(52.26)
Germany	-1.13	10.71	0.83	3.27
	(8.48)	(31.93)	(5.17)	(38.14)
Netherlands	-1.16	13.02	3.09	4.88
	(10.05)	(37.15)	(11.86)	(50.72)
United Kingdom	1.21	8.34	-0.35	3.42
	(10.07)	(24.93)	(5.75)	(37.49)
Japan	2.35	7.07	-2.15	2.57
	(12.52)	(22.81)	(8.83)	(25.69)
France	-0.30	9.12	1.24	3.40
	(9.02)	(27.82)	(5.82)	(35.94)
Italy	-0.90	9.09	-0.01	2.33
	(6.57)	(26.58)	(6.83)	(31.29)
Belgium	-	10.38	0.62	-
	(0.00)	(30.56)	(5.98)	(29.63)
Canada	4.89	9.92	1.09	5.82
	(17.10)	(31.95)	(2.57)	(53.68)
Other Countries	2.24	13.44	1.78	6.04
	(15.55)	(42.11)	(5.29)	(59.15)
World	2.11	11.87	1.66	5.35
	(11.86)	(36.50)	(4.99)	(53.06)

Source: FAOSTAT; Note: Figures in parenthesis indicate the coefficient of variation.

Continent Wise Growth Rate of Global Cash Crops Exports and Imports

Continental wise growth rate of Global Cash Crops exports - imports quantity and price in the world from 1990-91 to 2018-19 have presented in the Table 6. Growth rate of export quantity of cocoa (3.70%) and cotton (1.72%) was higher than their imports (3.52% & 1.65%) in the world during the study period. Growth rate of exports quantity and price of opium (5.57% & 4.30%); rubber (3.16% & 1.76%) in the world was higher than their imports (4.74% & 3.79%), (2.87% & 1.73%) & (1.58% & 1.49%), respectively.

Export quantity of sugar crops in the Asian (5.11%), American (3.10%) and Europe (1.72%) were shown higher growth rate than their imports that accounted to be 3.99%, 0.54% and 0.36%, respectively. Asian countries exported sugar crops with the highest price than their imports. It means Asian continent get highly profited with the exports of sugar crops. Export quantity (5.41%) and price (1.92%) growth rate of cocoa in the Asian continent were higher than their imports. Growth rate of cotton exports from American (2.49%) and African (1.44%) continents were higher than their imports from 1990-91 to 2018-19. But in these continents, the growth rate of importing prices were higher than their export prices. Growth rate of cotton export price was higher than their imports. Growth rate of Opium exports quantity and price in the America (2.51% & 3.42%) and Europe (7.76% & 3.98%) was higher than their imports. Growth rate of rubber export

quantity was higher in the Africa (5.47%), America (4.23%) and Europe (7.99%) than their imports. Globally, the growth rate of rubber import prices were higher than export prices. Growth rate of tobacco export quantity was higher in the Europe than their imports. The growth rate of export price (1.45%) in the Asia was higher than their imports (0.34%).

The study revealed that Asia exported more quantity of sugar crops with the highest price in the world. America and Africa exported more quantity of cotton. Africa, America and Europe exported more quantity of tea and rubber in the world. America and Europe exported more quantity of opium with the highest price in the world. Europe exported more quantity of tobacco to other continents in the world.

Table 6: Continent wise growth rate of commercial crops exports - imports quantity and price in the world (1990-91 to 2018-19)

Continents	Variables	Quantity Growth Rate (%)				Price Growth Rate (%)			
		1990-91 to 2000-01	2001-02 to 2011-12	2012-13 to 2018-19	1990-91 to 2018-19	1990-91 to 2000-01	2001-02 to 2011-12	2012-13 to 2018-19	1990-91 to 2018-19
Sugar Crops									
Africa	Exports	4.50	-0.09	9.13	2.51	-5.44	8.07	-5.77	0.23
	Imports	3.65	5.21	6.66	5.21	-5.26	9.74	-6.81	-0.08
America	Exports	2.09	5.62	-1.51	3.10	-9.57	10.41	-7.69	-1.52
	Imports	-3.49	6.79	-1.51	0.54	-3.20	9.19	-4.85	0.75
Asia	Exports	5.65	5.59	3.83	5.11	-5.50	10.07	-7.24	0.40
	Imports	4.22	4.32	3.10	3.99	-5.31	10.42	-7.63	-0.05
Europe	Exports	2.44	-1.26	5.20	1.72	-3.99	9.86	-10.33	-0.31
	Imports	2.00	0.73	-1.50	0.36	-9.98	8.72	-8.81	-2.29
World	Exports	2.32	3.70	2.42	2.84	-7.26	9.45	-7.60	-1.05
	Imports	3.21	4.50	2.84	3.16	-1.93	22.36	-12.82	1.76
Cotton									
Africa	Exports	3.50	-1.55	0.86	1.44	-5.13	7.22	-2.33	-0.34
	Imports	-1.17	-1.82	5.43	0.44	-4.45	11.20	-1.24	0.20
America	Exports	-3.04	5.13	2.66	2.49	-2.35	9.65	-3.02	0.50
	Imports	14.14	-2.31	1.34	1.49	-3.19	9.36	-2.22	0.57
Asia	Exports	5.73	5.92	-9.03	1.81	-4.33	6.82	0.08	0.56
	Imports	1.03	6.77	-3.45	3.30	-3.16	8.69	-2.13	0.50
Europe	Exports	-5.44	-6.16	-6.21	-3.32	-5.48	10.91	0.50	0.02
	Imports	-1.28	-13.44	-6.53	-7.44	-3.57	9.53	-0.46	0.39
World	Exports	1.07	3.21	-2.66	1.72	-3.70	8.59	-1.94	0.35
	Imports	1.54	2.90	-3.17	1.65	-3.36	8.87	-2.06	0.42
Opium									
Africa	Exports	-	-7.16	-7.84	-	1.06	-1.20	12.90	3.83
	Imports	9.64	15.88	2.31	6.33	-	-17.67	12.00	-
America	Exports	1.14	1.94	2.89	2.51	3.58	1.06	0.48	3.42
	Imports	5.61	-1.71	2.47	1.55	-2.11	6.12	7.82	3.32
Asia	Exports	2.46	-0.08	8.97	4.15	1.43	12.67	-0.09	4.53
	Imports	6.79	17.90	4.76	6.60	-4.51	14.67	5.54	4.57
Europe	Exports	18.21	6.06	-3.60	7.76	-3.39	10.20	9.40	3.98
	Imports	11.53	1.01	-2.29	4.60	-3.65	9.37	10.43	3.77
World	Exports	10.84	3.45	0.77	5.57	-1.51	10.35	6.25	4.30
	Imports	10.03	3.16	-0.26	4.74	-3.38	9.65	8.99	3.79
Rubber									
Africa	Exports	3.95	4.38	11.36	5.47	-0.30	20.05	-14.71	1.61

	Imports	6.13	3.33	-4.17	-0.61	-3.40	20.73	-9.45	2.14
America	Exports	4.35	6.78	0.21	4.23	-1.95	14.91	-12.52	0.28
	Imports	3.89	1.20	0.67	1.03	-2.02	21.05	-11.69	2.02
Asia	Exports	3.09	4.11	2.17	2.84	-2.05	22.76	-12.69	1.79
	Imports	6.18	4.16	3.15	4.56	-2.74	21.92	-12.55	1.83
Europe	Exports	7.39	17.36	3.31	7.99	-2.80	17.12	-11.62	1.04
	Imports	1.71	2.01	2.42	1.39	-2.76	21.45	-12.40	1.73
World	Exports	3.21	4.50	2.84	3.16	-1.93	22.36	-12.82	1.76
	Imports	4.32	2.95	2.49	2.87	-2.67	21.50	-12.37	1.73
Tobacco									
Africa	Exports	4.94	1.76	0.23	3.37	0.94	4.79	0.51	1.52
	Imports	5.44	1.19	1.20	3.66	2.20	3.98	2.38	3.00
America	Exports	2.13	-0.91	-4.02	0.37	-2.65	1.62	3.03	-0.83
	Imports	3.68	0.49	-1.18	2.15	1.54	4.65	4.72	2.62
Asia	Exports	4.28	3.11	5.00	4.30	-1.79	2.62	5.21	1.45
	Imports	5.44	3.37	6.00	4.97	-0.15	3.23	-1.86	0.34
Europe	Exports	3.87	2.69	1.14	2.46	-0.06	6.20	-0.28	1.72
	Imports	4.33	1.01	-0.63	1.82	-1.08	6.56	0.35	1.92
World	Exports	3.53	1.68	1.02	2.52	-1.45	4.50	1.96	0.83
	Imports	4.60	1.68	1.92	3.02	-0.25	5.22	0.27	1.61

Source: FAOSTAT

Continent Wise Terms of Trade of Global Cash Crops in the World

Continent Wise Terms of Trade of Commercial Crops in the World from 1990-91 to 2018-19 have presented in the Table 7. The export price of sugar crops, opium in the Africa was greater than imports from 1990-91 to 2018-19. At the same time, the export price of cocoa, opium, rubber, in the Europe was found to be greater than the imports. The export price of rubber in the America was higher than the imports.

The study revealed that terms of trade was favored for sugar crops, opium in the Africa; cocoa, opium, rubber, in the Europe; and rubber in the America during the 1990-91 to 2018-19.

Table 7: Continent Wise Terms of Trade of Commercial Crops in the World (1990-91 to 2018-19)

Crops	Variables	1990-91 to 2000-01	2001-02 to 2011-12	2012-13 to 2018-19	1990-91 to 2018-19	1990-91 to 2000-01	2001-02 to 2011-12	2012-13 to 2018-19	1990-91 to 2018-19
Sugar Crops									
Africa	Exports	0.32	0.42	0.51	0.44	0.36	1.20	1.11	1.19
	Imports	0.88	0.35	0.46	0.37				
America	Exports	0.29	0.30	0.41	0.31	0.85	0.73	0.77	0.76
	Imports	0.34	0.41	0.53	0.41				
Asia	Exports	0.27	0.32	0.45	0.33	0.90	0.94	1.00	0.94
	Imports	0.30	0.34	0.45	0.35				
Europe	Exports	0.40	0.54	0.59	0.50	0.82	1.04	1.00	0.94
	Imports	0.49	0.52	0.59	0.53				
World	Exports	0.32	0.35	0.45	0.36	0.86	0.88	0.92	0.88
	Imports	0.37	0.40	0.49	0.41				
Cotton									
Africa	Exports	1.46	1.41	1.62	1.48	0.84	0.87	0.84	0.85

	Imports	1.74	1.62	1.92	1.74				
America	Exports	1.49	1.47	1.83	1.56	0.96	0.95	0.94	0.95
	Imports	1.56	1.54	1.94	1.65				
Asia	Exports	1.35	1.32	1.74	1.44	0.83	0.86	0.89	0.86
	Imports	1.62	1.54	1.95	1.67				
Europe	Exports	0.46	0.57	0.68	0.55	0.29	0.37	0.36	0.34
	Imports	1.59	1.53	1.91	1.64				
World	Exports	1.44	1.43	1.78	1.52	0.89	0.93	-	0.92
	Imports	1.61	1.54	-	1.66				
Opium									
Africa	Exports	2.04	1.45	1.81	1.69	1.55	1.51	0.73	1.16
	Imports	1.32	0.96	2.47	1.46				
America	Exports	1.06	1.16	1.45	1.19	0.97	0.75	0.65	0.77
	Imports	1.09	1.54	2.23	1.54				
Asia	Exports	0.90	2.04	2.96	2.55	1.80	1.58	1.17	0.93
	Imports	0.50	1.29	2.53	2.73				
Europe	Exports	0.88	1.60	2.09	1.47	0.90	1.06	0.96	1.01
	Imports	0.98	1.51	2.17	1.45				
World	Exports	0.88	1.67	2.30	1.52	0.97	1.14	1.06	1.06
	Imports	0.91	1.47	2.18	1.43				
Rubber									
Africa	Exports	0.88	1.68	1.79	1.40	0.81	0.92	0.82	0.85
	Imports	1.09	1.83	2.19	1.64				
America	Exports	1.62	2.23	2.28	2.01	1.51	1.12	1.04	1.19
	Imports	1.07	2.00	2.20	1.69				
Asia	Exports	0.94	1.80	1.85	1.49	0.97	0.97	0.93	0.96
	Imports	0.97	1.85	1.98	1.55				
Europe	Exports	1.42	2.43	2.33	2.03	1.28	1.18	1.04	1.17
	Imports	1.11	2.06	2.23	1.74				
World	Exports	1.31	1.52	1.46	1.43	1.07	0.88	0.77	0.91
	Imports	1.22	1.73	1.90	1.58				
Tobacco									
Africa	Exports	2.98	3.45	4.90	3.62	0.69	0.68	0.63	0.66
	Imports	4.30	5.11	7.77	5.45				
America	Exports	8.53	5.48	7.07	5.61	1.93	1.01	0.90	0.80
	Imports	4.41	5.40	7.82	7.02				
Asia	Exports	6.50	5.19	8.36	6.45	0.59	0.52	0.70	0.60
	Imports	10.97	10.02	11.87	10.83				
Europe	Exports	8.63	11.39	13.38	8.25	1.35	1.31	1.28	0.76
	Imports	6.38	8.70	10.48	10.82				
World	Exports	5.89	6.61	9.37	7.00	1.03	0.96	1.00	0.99
	Imports	5.73	6.86	9.37	7.04				

Source: FAOSTAT

Continent Wise Exports and Import Price Elasticity of Global Cash Crops

Continent wise exports and import price elasticity of commercial crops in the world during the period of 1990-91 to 2018-19 have presented in the Table 8. Export price elasticity of cocoa (0.51%), cotton (0.79%), rubber (1.07%) and tobacco (0.47%) in the world was greater than their

imports. Export price elasticity of sugar crops (2.54%), cotton (0.77%), opium (0.24%), rubber (0.89%) in the America was marginally higher than the imports. Export price elasticity of jute (3.76%) in the Asia was marginally higher than the imports. Export price elasticity of cotton (1.38%), rubber (0.58%), tobacco (0.54%) in the Africa was marginally higher than the imports. Export price elasticity of sugar crops (1.28%), opium (0.31%), rubber (0.72%), tobacco (0.45%) in the Europe was marginally higher than the imports. Export and import price elasticity of cocoa in the Europe were same that accounted to be 0.54%.

Table 8: Continent wise elasticity of commercial crops in the world (1990-91 to 2018-19)

Crops	Variables	1990-91 to 2000-01	2001-02 to 2011-12	2012-13 to 2018-19	1990-91 to 2018-19
Sugar Crops					
Africa	Exports	-4.95	-0.01	3.79	0.88
	Imports	-2.60	0.21	-13.32	1.03
America	Exports	-0.42	0.20	0.20	2.54
	Imports	0.61	0.25	0.27	0.38
Asia	Exports	-45.82	0.21	-1.25	0.86
	Imports	-4.14	0.17	-0.79	1.02
Europe	Exports	-1.78	-0.09	-1.20	1.28
	Imports	-0.38	0.05	0.18	-0.25
World	Exports	-1.07	0.16	-0.35	1.45
	Imports	-0.63	0.17	-0.55	1.89
Cotton					
Africa	Exports	-2.46	-0.20	-0.61	1.38
	Imports	0.26	-0.12	1.36	0.67
America	Exports	0.63	0.21	-6.58	0.77
	Imports	1.61	-0.22	-1.57	0.66
Asia	Exports	6.15	0.32	1.01	0.70
	Imports	-0.55	0.27	0.66	0.80
Europe	Exports	0.63	-0.96	1.07	1.00
	Imports	0.31	1.85	0.95	1.02
World	Exports	-0.48	0.17	-0.02	0.79
	Imports	-0.95	0.16	0.64	0.75
Opium					
Africa	Exports	-	0.56	-1.85	-
	Imports	0.84	1.17	0.11	0.31
America	Exports	0.20	0.61	0.84	0.24
	Imports	1.84	-0.30	0.19	0.19
Asia	Exports	0.59	0.00	1.01	0.22
	Imports	4.29	0.22	0.39	0.25
Europe	Exports	1.56	0.21	-0.53	0.31
	Imports	1.88	0.06	-0.22	0.28
World	Exports	1.28	0.15	0.12	0.26
	Imports	1.90	0.15	-0.02	0.28
Rubber					
Africa	Exports	1.10	0.06	-3.41	0.58
	Imports	2.88	0.05	0.39	-0.30
America	Exports	2.06	0.14	-0.02	0.89
	Imports	2.39	0.02	-0.08	0.25
Asia	Exports	3.46	0.05	-0.28	0.46
	Imports	2.16	0.05	-0.44	0.52
Europe	Exports	1.94	0.17	-0.51	0.72
	Imports	-1.77	0.03	-0.32	0.34
World	Exports	2.67	0.11	-1.52	1.07
	Imports	3.11	0.00	-0.78	0.88
Tobacco					
Africa	Exports	0.80	0.21	0.31	0.54
	Imports	0.63	0.19	0.31	0.33
American	Exports	-4.23	-1.23	3.37	-0.90
	Imports	0.65	0.08	-0.30	0.30
Asian	Exports	1.93	0.47	0.42	0.58
	Imports	1.04	0.43	1.57	0.88
Europe	Exports	1.02	0.22	1.33	0.45
	Imports	1.43	0.10	2.20	0.36
World	Exports	0.89	0.31	0.65	0.47
	Imports	0.85	0.31	0.93	0.44

Source: FAOSTAT

The study shown that export price elasticity of cocoa, cotton, rubber and tobacco was marginally greater than imports in the world. Export price elasticity of sugar crops, cotton, opium, rubber in the America; jute in the Asia; cotton, rubber, tobacco in the Africa; and sugar crops, opium, rubber, and tobacco in the Europe was marginally greater than their imports from 1990-91 to 2018-19.

IV. Conclusion

Neoliberal Agriculture trade has become competitive. Farmers welfare, Food security, Farm income and Poverty are a key international issues debatable. Access to international markets plays an important role in an economy's development. Trade increases the prosperity of nation, fueling economic growth, rising employment opportunites, reducing poverty, and raising the living standards of the people. The present paper revealed Global farmer's welfare, poverty and agricultural trade developments among the continents across the world. And also focused on the growth rates, terms of trade and elasticities of global cash crops continentally and globally.

The results show that Asia occupied more agricultural land in the world followed by Oceania, Africa, America and Europe continents during 2018. India, United States, Russia, China and Brazil shared the highest arable land area in the world. Expansion of arable land will become an important factor to enhance the growth of crop production in many countries of sub-Saharan Africa and Latin America and Europe. The Per capita agricultural land was 0.63 ha in the world. China, United States, and Australia shared the largest percentage of agricultural land that accounted to be 11.01%, 8.45% and 7.49% to the world. But, Mongolia (35.78), Australia (14.41), and Kazakhstan (11.79) have shown the highest per capita agriculture land.

Poverty rates in many nations are the highest in the world. Sub-Saharan Africa, South Asia, and, Middle East and North Africa are the regions mostly facing the poverty in the global population. 40.2% of population in the Sub-Saharan Africa has been facing poverty since 2018. While 15.2% of South Asian population has been suffering from poverty in 2014. Similarly, 7.2%, 3.8%, 1.2% and 1.1% of Middle East & North Africa, Latin America & Caribbean, East Asia & Pacific, and, Europe & Central Asia had been facing poverty, respectively since 2018. It is necessary to address the challenges of societal, demographic, and political drivers of poverty. Policy makers must concentrate on income earning opportunities of the poor to speed up the poverty reduction and increase the earnings of the farmers.

Agricultural exports in North America, South America, Europe, Australia and New Zealand were higher than imports. But in case of Africa and Asia, there was a reverse trend found that the imports were higher than exports. Trade on agricultural commodities expanded in Europe followed by Asia and North America. China, USA and Germany were highly expanded their trade during the study period. Agricultural exports and imports were dominated by Europe trade group (43.57% & 40.18%). All countries in the world have shown the positive growth rate of total agricultural exports during WTO regime. China, Canada and USA has shown the highest growth rate of agricultural imports in the world during the study period. America exported more quantity of cotton, rubber, opium and imported more quantity of tobacco. Asia exported more quantity of sugar crops while importing the more amount of cotton, opium, rubber, tobacco. Africa exported more quantity of cotton, rubber while imported the more quantity of sugar crops, cocoa, tobacco, from other continents. Europe exported more quantity of rubber, opium, tobacco and imported the more quantity of cocoa. America and Europe exported more quantity of opium with the highest price in the world. Asian countries exported sugar crops with the highest price in the world. The study revealed that terms of trade was favored for sugar crops, opium in the Africa; cocoa, opium, rubber, in the Europe; and rubber in the America during the 1990-91 to 2018-19. The study shown that export price elasticity of cocoa, cotton, rubber and tobacco was marginally greater than imports in the world. Export price elasticity of sugar crops, cotton, opium, rubber in the America; cotton, rubber, tobacco in the Africa; and sugar crops, opium, rubber, tobacco in the Europe was marginally greater than their imports from 1990-91 to 2018-19.

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The study suggest that imports from inelastic countries should be exempted from any ban (without any quantity restriction) which would help in good relationships. Trade exemptions should be reconsider towards those countries which have shown elastic in both exports and imports. Multilateral trade relationship with high CAGR countries would help in smooth trade of agricultural crops. The study findings have important implications to be considered in designing foreign trade agricultural policies and programs to boost trade and foreign earnings across continents and countries in the globe. The study guides exporters and importers of countries for market and price signals of commodities.

Suggestions

Now-a-days most of the farmers shifting from cereal crops to cash crops. Bad weather conditions affect the quality of cash crops, which may lead to increase the cost of cultivation. So, government should give prominence in framing price policies for the cash crops. Some of the commercial crops like opium need license to cultivate it. Government must increase the number of licenses at the regional areas, where the opium crop is climatically suited. China, USA and Germany were highly expanded their trade during the study period. So, other countries would be benefitted if they stick on the best policies adopted by China, USA and Germany. Government should take action against the unfair competition existing in the international markets of cash crops especially for opium and tobacco.

During WTO modern period also developing countries and continents; Africa, Latin America and South America trade economies more depend on agriculture and developed countries are manufactured sector. Developing countries and continents must design strategies and policies to promote manufactured sectors keeping agriculture sector self-sufficiency. It is necessary to address the challenges of societal, demographic, and political drivers of poverty. Further trade liberalization in these areas particularly, by both industrial and developing countries, would help Developing countries welfare is possible only through Farmers' Welfare through modern agriculture and trade liberalization.

References

Aksoy, A., and A. Isik-Dikmelik (2008). "Are Low Food Priced Pro-poor? Net Food Buyers and Sellers in Low Income Countries". *World Bank Policy Research Working Paper* No. 4642,

Allo, A. G., Satriawan, E., & Arsyad, L. (2018). The Impact of Rising Food Prices on Farmers' Welfare in Indonesia. *Journal of Indonesian Economy and Business*, 33(3), 193-215.

Allo, A. G., Satriawan, E., & Arsyad, L. (2018). The Impact of Rising Food Prices on Farmers' Welfare in Indonesia. *Journal of Indonesian Economy and Business*, 33(3), 193-215.

Antón, J., & Giner, C. (2005). Can Risk Reducing Policies Reduce Farmer's Risk and Improve Their Welfare? *AgEcon Search*. DOI: 10.22004/ag.econ.24578.

AtmaNirbhar Krishi and AtmaNirbhar Kisan are important: PIB, (2020). *Ministry of Agriculture & Farmers Welfare*. https://pib.gov.in/PressReleasePage.aspx?PRID=1646286

Balie, J., Magrini, E., & Morales Opazo, C. (2016). Cereal price shocks and volatility in Sub-Saharan Africa: What does really matter for farmers' welfare? (No. 1607). *Diskussionsbeitrag*. http://hdl.handle.net/10419/144875.

Beegle, K., & Christiaensen, L. (Eds.). (2019). Accelerating poverty reduction in Africa. The World Bank. https://elibrary.worldbank.org/doi/abs/10.1596/978-1-4648-1232-3

Bourguignon, F., & Chakravarty, S. R. (2019). The measurement of multidimensional poverty. *In Poverty, social exclusion and stochastic dominance* (pp. 83-107). Springer, Singapore.

Bruna Martinuzzi, 2018. What are the Advantages of International Trade? *Trends and Insights*. American Express. https://www.americanexpress.com/en-us/business/trends-and-insights/articles/advantages-international-trade/

Damodar NG and Sangeetha, (2007). Basic Econometrics. *Tata McGraw Hill Publishing Company Ltd*, New Delhi. 2007, pp: 182-183.

Dimova, R. (2015). The welfare impact of rising food prices. *IZA World of Labor*. DOI: 10.15185/izawol.135]

Doing Business Measuring Business Regulations. Trading across Borders. *The World Bank*. https://www.doingbusiness.org/en/data/exploretopics/trading-across-borders/why-matters)

Esteban Ortiz-Ospina and Diana Beltkian, 2018. Trade and Globalization. Our World Data. https://ourworldindata.org/trade-and-globalization

FAO () http://www.fao.org/3/x5584e/x5584e07.htm

FAO (2020). "Climate-Smart Agriculture, Drought adaptation practices and profits in Sri Lanka's rice sector: what is the missing link?" *FAO Agricultural Development Economics*. Food and Agriculture Organization of the United Nations. ISSN 2520-6540 (online) / ISSN 2520-6532 (print)]

FAO. (2009) "The State of Food Insecurity in the World 2009. Rome: Food and Agricultural Organization of the UN",. Food and Agricultural Oraganization.www.fao.org.

Fred Gale, James Hansen and Michael Jewison, 2015. China's Growing Demand for Agricultural Imports. A report summary from the Economic Research Service. *United States Department of Agriculture.* Available at www.ers.usda.gov/publications/eib-economicinformation-bulletin/eib136.aspx)

Government of Canada. https://www.canada.ca/en/services/business/permits/federallyregulatedbusinessactivities/importpermitsrestrictions/food-agricultural-product-imports.html

Gurneel Kaur, (2020). Impossible to Double Farmers Income in 2 years Specially After Budget 2020. *GrainMart*. https://www.grainmart.in/news/impossible-to-double-farmers-income-in-2-years-specially-after-budget-2020/

Hinz, R., Sulser, T. B., Hüfner, R., Mason-D'Croz, D., Dunston, S., Nautiyal, S. & Schaldach, R. (2020). Agricultural development and land use change in India: A scenario analysis of trade-offs between UN Sustainable Development Goals (SDGs). *Earth's Future*, 8(2), e2019EF001287.

IMF (2001) "Global Trade Liberalization and the Developing Countries" By IMF Staff, 01/08, November 2001

Indian Co-operative Staff Reporter, (2018). Government lists steps for doubling farmers' income. Indian Co-operative. https://www.indiancooperative.com/agriculture-2/govt-lists-steps-for-doubling-farmers-income/

Jikun Huang, Jun Yang & Scott Rozelle. China's Agriculture: Drives of Change and Implications. Economic Research Institute for ASEAN. https://www.eria.org/Chapter%204%20China.pdf)

Juan de Lucio, Raúl Mínguez, Asier Minondo and Francisco Requena, 2017. "Is Spain Experiencing an Export Miracle?" Funcas SEFO Vol. 7, No. 4_July 2017. https://www.sefofuncas.com/pdf/05_Lucio%20et%20al.pdf)

Lowder, S. K., Skoet, J. & Singh, S. (2014). What do we really know about the number and distribution of farms and family farms in the world? ESA Working Papers. *Food and Agriculture Organization of the United Nations.* http://www.fao.org/docrep/019/i3729e/i3729e.pdf

Magrini, E., Balié, J., & Morales-Opazo, C. (2017). Cereal price shocks and volatility in sub-Saharan Africa: what really matters for farmers' welfare? *Agricultural Economics*, 48(6), 719-729.

Makhmutova & Mustafin, 2017. Impact of International Trade on Economic Growth. *International Journal of Scientific Study*, Vol 5, Issue 6, Print ISSN: 2321-6379; Online ISSN: 2321-595X. DOI: 10.17354/ijssSept/2017/029.

Shri Amit Sha, (2020). India's welfare only through Farmers' Welfare – PIB. *Ministry of Home Affairs*. https://pib.gov.in/PressReleasePage.aspx?PRID=1624162

Slatmo, E. (2017). Preservation of Agricultural Land as an Issue of Societal Importance. *Rural Landscapes: Society, Environment, History*, Vol 4(1), p.2. DOI: http://doi.org/10.16993/rl.39

The World Factbook. CIA.gov. *Central Intelligence Agency*. Archived from the original on 28 March 2019. Retrieved 5 April 2019)

U.S. Agricultural Trade at a Glance. *USDA*, Economic Research Service.

Yu, X. (2018). Engel curve, farmer welfare and food consumption in 40 years of rural China. *China Agricultural Economic Review*. Vol. 10 No. 1, pp. 65-77. Available on https://doi.org/10.1108/CAER-10-2017-0184.

Raising the Cost of Doing Business in Lower Income Countries: Trade Agreements with Stringent Multilateral Environmental Regulations

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Abstract
We explore how multilateral environmental regulations may adversely affect trade flows between countries with different incomes. Using the gravity equation, we examine the effect on bilateral trade flows of increases in environmental regulation stringency ratings, taken from survey data covering a panel of 56 countries. We test for significant differences in the effects of the stringency of environmental regulations on exports across countries' income levels and EU membership. We show that an increase in environmental regulation stringency leads to a dramatic decrease in exports from poorer EU-members; conversely, a similar change in environmental regulation does not appear to significantly affect the exports of richer EU-members. The results are consistent with our theoretical model of the costs of multilateral environmental regulations, which are disproportionately borne by poorer countries due to both the uneven competitiveness effect and the uneven burden of compliance.

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Endogenous IPR-Protection in North-South Trade with R&D Offshoring

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Abstract

This study proposes a North-South theoretical model where Northern multinational firms offshore innovation to the South to increase the chances of successful product creation. These Northern firms risk information leakages when offshoring in the weak IPR-environment of the Southern region. Northern firms can lobby the Southern government to increase IPR-protection. The government of the South then sets their IPR policy in order to maximize Northern firm contributions and Southern welfare. High- tech Northern firms engage in more offshoring of R&D to the South but less lobbying for IPR reform. When other channels exist to protect an innovation, the Southern government sets weak IPR-protection policy unless there is a large degree of lobbying from Northern firms. Finally, a Southern government that is more willing to change policy in exchange for cash transfer, or a more corrupt government, induces more offshoring.

Keywords: R&D; innovation; IPR-protection; multinational; employee entrepreneurship

JEL: F1; L1; L2; O3

I. Introduction

While the practice has been rare in the past, multinational firms have begun seeking strategic advantage in the market place by offshoring their new product design to developing countries (Lewin et al., 2009; Lundin and Schwaag Serger, 2007; Moncada-Paternò-Castello et al., 2011). By fragmenting R&D across many sites, multinational firms can take advantage of many different knowledge pools at low costs without exposing their entire product to the risk of imitation; however, even information leaked on fragments of a new product could endanger future revenue streams. These firms then have an incentive to lobby the foreign governments where they do R&D in order to strengthen intellectual property rights protection. Foreign lobbying is becoming a more common strategy for multinational firms to change markets to increase their performance in those market. For example, in the US, nearly $2.4 billion was recorded as foreign lobbying funds between 2016 and 2020 (opensecrets.org). Previous studies have explored the influence that IPR-policy has on FDI (Kyrkilis and Koboti, 2015), offshoring R&D (Cohle, 2019b), and trade (Palangkaraya et al., 2017); however, few studies have explored the role that multinational firms engaged in FDI, offshoring, or trade has on the IPR-environment of the countries in which they choose to do business. In this paper, I examine the role of R&D offshoring in the IPR-policy of developing countries.

In this paper, I present a North-South model, where the North, or developed countries, influences the policies of the South, or developing countries. I create a model where Northern firms are able to offshore some research and development (R&D) to the South. Like previous

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studies (Lai et al., 2009; Cohle, 2019b,a), I model information leakage when engaging in offshoring that allows Southern firms to imitate the Northern products. The Northern firms are also able to lobby the Southern government for stronger IPR-protection laws. By apply the model developed by Grossman and Helpman (1994) to IPR-protection policy instead of tariff policy; I create a model with endogenous IPR-protection policy and the offshoring of R&D to the developing world from the developed world.

This paper presents three main results. First (Proposition 1), increasing Northern research technology increases the amount of offshoring of R&D into the South. For high-tech firms, a further increase in technology will decrease the amount of lobbying. Second (Proposition 2), an increase in the use of trade secrets to protect an innovation results in a weakening of Southern IPR-protection policy when lobbying is not present. When lobbying does occur, the increase in trade secret techniques increases both offshoring and lobbying. Finally, (Proposition 3), an increase in corruption increases the likelihood of lobbying. Lobbying occurs at large levels of corruption; however, the amount of lobbying decreases as governments become more susceptible to changing policy in exchange for lobbying funds.

The paper is organized as followed. Section 2 surveys the previous literature on offshoring R&D and lobbying. Section 3 presents the structure of the model while Section 4 details the equilibrium. Section 5 presents comparative static results of the model. Finally Section 6 concludes the paper.

II. Related Literature

This paper combines three main strands of literature: IPR-protection policy, offshoring to developing countries, lobbying. The determinants of IPR-protection policy has also been studied in past literature. Ginarte and Park (1997) build an index to measure IPR-protection in a number of countries. Using this index, the authors find that developed countries tend to have higher IPR-protection scores than developing countries. Furthermore, market freedom increases patent protection while developed countries with higher rates of R&D investment see greater IPR-protection scores.

There have been numerous studies on the optimal IPR-protection policy (Acemoglu and Akcigit, 2012; Kang, 2006). For example, Hudson and Minea (2013) find that a country's optimal IPR level for encouraging innovation depends on their GDP per capita and initial IPR-policy. Kwan and Lai (2003) use a variety expanding R&D endogenous growth model to show the optimal IPR policy for a country. The authors use US data to show that IPR policy is more likely to be under-protect innovations. Chen and Puttitanun (2005) develop a model to show the tradeoff between encourage domestic innovation and imitating foreign technology when designing IPR-policy.

This model deviates from traditional North-South models that only allow innovative R&D to take place in the North. By allowing the offshoring of R&D to the South, this paper joins previous papers that explored offshoring in a global economy (Acemoglu et al., 2015; Cohle, 2019a). For example, ? create a model where Northern firms can offshore heterogeneous tasks to workers in the South to explore the role of offshoring costs. Recent studies have explored the offshoring of R&D to developing world. (2019b) models the offshoring of R&D to the South in a global economy; however, the author uses the model to asses the brain drain eject. I contribute to this strand of literature by exploring the interaction between R&D offshoring and IPR-policy.

International trade literature on lobbying has mainly focused on the effect of lobbying on tariffs, customs, and dumping[2]. Foreign lobbying has been shown to affect trade policy in numerous studies (Stoyanov, 2009; Aidt and Hwang, 2014; Antràs and i Miquel, 2011). Gawande et al. (2006) build a model of foreign lobbying using the Grossman and Helpman (1994) framework. Using data on US firm lobbying, the authors find evidence that foreign lobbying decreases trade barriers. Kim (2017) uses data from US lobbying to show that productive firms tend to lobby for reduction in tariffs. The effect is especially strong if the product is sufficiently

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[2] De Figueiredo and Richter (2014) provides a detailed literature review on empirical lobbying literature.

differentiated. Using data on lobbying from foreign firms in the United States, Brown et al. (2018) find connections between a firm's home country and the decision to lobby in the United States. Firms from countries with high cultural differences, strong degrees of individualism, low levels of corruption, and high uncertainty avoidance are more likely to engage in lobbying in the United States. I build a model that applies lobbying by multinational firms to developing country governments for the purpose of changing IPR-policy.

R&D and political lobbying has been explored in some previous studies. For example, Brou and Ruta (2011) build a model with cost reducing R&D and rent seeking from firms. The authors show that economic integration of an area without political integration causes a reduction in growth as firms compete more heavily for rents. Stoyanov (2014) studies endogenous free trade agreements with foreign lobbying. Comin and Hobijn (2009) show that lobbies slow down technology diffusion. Cai and Li (2012) build a North-South model where the Northern government is able to provide a payment of some sort to the Southern government in exchange for strengthening IPR-protection policy on cost-reducing R&D innovations. The model finds that the South will either have no IPR-policy or a complete and stringent IPR-policy. In this paper, I build a more realistic model for current day multinational firms. Firms who engage in R&D offshoring to the South build lobbying of the Southern government into their strategy.

Foreign lobbying has been seen to be effective in the past to achieve lower taxes (Desbordes and Vauday, 2007) and less strict environment regulations (Cole et al., 2006); studies on the effectiveness of lobbying in the developing world are rare (Saha, 2019). De Figueiredo and Richter (2014) outline numerous complications of empirically studying lobbying. Quality observable data prevents many studies from using any measure other than survey evidence. Furthermore, firms often have multiple ways of lobbying. If one method is observed to decrease, it may be that the firm is putting more resources in another method rather than decreasing their lobbying efforts entirely. As such, I design a theoretical model to determine the drivers of lobbying for IPR-reform in the South.

Finally, this paper explores the role of corruption on R&D offshoring and lobbying. Olken and Pande (2012) review literature on corruption research in developing countries. The authors provide evidence that poorer countries are more corrupt. Developed countries tend to show less corruption. For example, Fisman et al. (2012) show that firms with close ties to Vice President Dick Cheney gained 0% in value from those ties. Corruption in developing countries is extremely heterogeneous (Olken and Pande, 2012). Corruption can exist in the form of bribes to elected officials, judges, politicians, and the media or theft of government funds by officials. Corruption is often measured as a risk to business. For example, Wei (2000) partly capture corruption from survey evidence that asks firms to rank their risks. I instead model corruption as the ability to buy favorable market outcomes.

III. The Model

Utility Structure

This model suppose two countries: North and South. In a similar utility function used by Antras and Helpman (2004), a representative consumer in the global economy has the following quasi-linear utility function:

$$U = x_0 + \frac{1}{\mu} X^{\mu} \tag{1}$$

where x0 is the consumption of the outside-good and X is the sub-utility function for the differentiated good. While the outside-good is sold under perfect competition, the differentiated

good is sold in a monopolistically competitive market. Let the sub-utility X function be defined as:

$$X = \left[\int x_i^\alpha di \right]^{\frac{1}{\alpha}} \qquad 0 < \alpha < 1 \qquad (2)$$

where xi represents the consumption of differentiated good from firm i. Consumer maximization of this utility function leads to the well known inverse demand for a particular variety of the differentiated good:

$$p_i = X^{\mu-\alpha} x_i^{\alpha-1} \qquad (3)$$

where $0 < \mu < \alpha < 1$. This assumption on parameters µ and α ensures that consumers prefer to substitute a differentiated good for another variety rather than the outside-good. The outside-good price is normalized to one.

Profit Structure

In a similar manner to past North-South models (Cohle, 2019b), Northern firms are the only types of firms able to create a new product. Each Northern firm has the same cost structure. Southern firms can only enter the market by imitating a Northern firm's product. Each Northern firm must research the product before they can begin selling on the open market. Assuming that the Northern firm already carries out a certain amount of research in the North, I allow the Northern firm to add researchers to the invention through offshoring. Following evidence by Zhao (2006), the Northern firm can employee extra researchers from the South to research aspects of the innovation without exposing the entire product to risk. R&D does not guarantee that the product will be successfully invented. Increasing the amount of R&D that is offshored will increase the probability that the product is successfully invented. I define the probability of successfully inventing as $(y_2 \mathcal{R}^{\frac{3}{4}})$ where $\mathcal{R}$ is amount of researchers offshored and y_2 is a parameter that scales the probability to be less than 1. The parameter y_2 can be interpreted as the quality of the Southern.

While offshoring R&D increases the chance of successfully inventing a product, the sharing of knowledge to the South creates the opportunity for Southern firms to appropriate the knowledge and create an imitation. Employee mobility acts as the channel of imitation in this model. This channel has been well established in the literature (Gorg and Strobl, 2005; Poole, 2008; Monge-González et al., 2015; Balsvik, 2011). $(1 - \zeta y_1 R^{\frac{-1}{4}})$ where ζ captures the IPR-protection policy of the South. As ζ increases, the Southern government strengthens IPR-protection policy. I assume that $0 < \zeta \leq 1$. The parameter y_1 is a scaling parameter that can also be interpreted as the ability of the Northern firm to protect their product through means other than legal appeals. Thus, y_1 captures the use of trade secrets, Southern employee management, and product complexity (Keupp et al., 2009). I assume that successful innovation results in the Southern firm fully controlling the variety[3]. A Northern firm's expected profit structure is:

$$E(\pi_i^n) = (\zeta y_1 R^{\frac{-1}{4}} y_2 R^{\frac{3}{4}})[\pi_s] - R - C_i \qquad (4)$$

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[3] Assuming the worse possible consequence of imitation is unrealistic; however, easing the assumption to allow for sharing the firms sharing the variety does not greatly change the results of the model.

where π_n is the operating profit that the Northern firm collects after successfully creating and retaining the product. I allow the Northern firm to lobby the Southern government in order strengthen IPR-protection policy in the South. The Northern firm makes a cash payment to the Southern government in exchange for a more favorable market outcome. This cash transfer can also be view as bribes within the context of the model.[4] By doing so, the Northern firm increases its expected profit. The Northern firm designs a political contribution schedule. Based on this schedule, the Southern government can earn more lobbying funds by increasing ζ. Let the Northern firm's contribution schedule be defined as:

$$C_i = c_0 \zeta^{\frac{1}{2}} \tag{5}$$

A Southern firm's expected profit structure can only be realized after the invention is successfully invented. Therefore, the expected profit function only includes the probability of imitation occurring:

$$E(\pi_i^s) = (1 - \zeta y_1 R^{\frac{-1}{4}})[\pi_s] - bR^{\frac{-1}{4}} \tag{6}$$

The Southern firm must pay fixed costs, $bR^{-\frac{1}{4}}$ in order to attempt imitation and entry into the market. These fixed costs reflect the additional costs associated with inventing aspects of the product that the Northern firm has hidden from the Southern researchers. Increases in the number of Southern researchers decreases the additional research needed to emulate the product. The parameter b captures these additional difficulties. After the invention is successfully invented by the Northern firm, the Southern firm pays the fixed cost of entry and attempts to imitate.

The outside-good sector allows for the wage in each region to be set. The technologically advanced North has a higher wage, set equal to one, than the Southern wage, w_s. Both Southern and Northern firms have the same production technology in the differentiated goods sector. Using equation (3), operating profit can be defined in terms of the sub-utility function, quantities, and wages:

$$\pi_n = X^{\mu - \alpha} x_i^\alpha - x_i \tag{7}$$

$$\pi_s = X^{\mu - \alpha} x_i^\alpha - w_s x_i \tag{8}$$

IV. Equilibrium

Timing

The timing is as follows. In stage one, the Northern firm lobbies the government. Stage two involves the Southern government setting their policy. In stage three, the Northern firm decides on R&D. Finally, in stage four, firms produce their goods and sell those goods on the market.

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[4] Bribery and lobbying have been modelled as substitutes in the past (Harstad and Svensson, 2011). Campos and Giovannoni (2007) use a dataset of 4000 firm across 25 developing countries to find that lobbying and less formal corrupt activities, such as bribery, are substitutes of each other. In areas with stronger institutions, firms use lobbying efforts to create favorable market conditions instead of bribery.

Firm Maximization

In the fourth stage, firms set their production level by choosing prices in both regions. The operating profit can then be defined as:

$$\pi_n = X^{\frac{\mu-\alpha}{1-\alpha}} \alpha^{\frac{\alpha}{1-\alpha}}(1-\alpha) \tag{9}$$

$$\pi_s = X^{\frac{\mu-\alpha}{1-\alpha}} w_s^{\frac{\alpha}{\alpha-1}} \alpha^{\frac{\alpha}{1-\alpha}}(1-\alpha) \tag{10}$$

So, π_n and π_s are determined by the number of varieties in the market. Note that a Southern firm that successfully imitates the product is able to capture the market share for that variety due to a lower cost of production. I assume $\alpha > w_s$ in order to ensure that the Southern firm is the only firm selling that specific variety.[5]

In the third stage, Northern firms take their operating profit as fixed. Maximizing the Northern profit function yields the optimal Northern research level:

$$R^* = \frac{(\zeta y_1 y_2 \pi_n)^2}{4} \tag{11}$$

This optimal value of offshored R&D prevents some intuitive results. First, the Northern firm offshores more R&D if there is a strong IPR-environment, or a large ζ. The Northern firm is able to expose more of it's product to the South due to the decreased chance of imitation. Stronger IPR-protection has been shown to encourage offshoring of R&D in the past (Cohle, 2019b). The Northern firm will also increase R&D offshoring as operating profit increases. As the innovation becomes more valuable, the Northern firm is willing to expose the product to more risk in order to increase the chances of successful invention. The trade secrets parameter, y_1 and Northern technology parameter, y_2 also have a positive relationship with the optimal level of offshoring. These parameters represent exogenous increases in both the probability of imitation not occurring and the probability of successful invention. With these increases in the probabilities of collecting operating profit, the Northern firm benefits more from offshoring while the cost remains the same. Therefore, the firm increases the amount of offshoring to bring the benefit equal to the cost.

With the optimal level of offshoring determined, the Northern firm's profit level can be rewritten as:

$$E(\pi_i^n) = \frac{[\zeta y_1 y_2 \pi_n]^2}{4} - c_0 \zeta^{\frac{1}{2}} \tag{12}$$

The Southern firm's expected profit is then:

$$E(\pi_i^s) = \left(1 - \left(\frac{2\zeta y_1}{y_2 \pi_n}\right)^{\frac{1}{2}}\right)[\pi_s] - \left(\frac{2b^2}{\zeta y_1 y_2 \pi_n}\right)^{\frac{1}{2}} \tag{13}$$

Following Grossman and Helpman (1994), I allow the Southern government to choose IPR-protection policy by maximizing its welfare function. Using the knowledge of the firm's behavior in the fourth and third stages, the government can set its policy in the second stage. Southern

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[5] The firms would compete to sell the variety under Cournot competition. I show this competition in Appendix B.1. When $\alpha > w_s$, the Northern firm's optimal quantity in competition is negative.

social welfare includes the political contributions from Northern firms, the utility of Southern consumers and the profit of Southern firms.

$$W = M_n * C_i + a * [U_s + M_s E(\pi_i^s)] \tag{14}$$

v where M_n is the number of Northern firms, M_s is the number of Southern firms, U_s is the utility of Southern consumers, and parameter α allows the government to weigh producer and consumer happiness more or less than political contributions to the government. This parameter represents the level of corruption of the Southern government. If $\alpha < 1$, the Southern government values political contributions more than the welfare of its citizens. If $\alpha > 1$, the Southern government values the welfare of its citizens more than political contributions.

Social welfare can be redefined as:

$$W = M_n * c_0 \zeta^{\frac{1}{2}} + a * [U_s + M_s E(\pi_i^s)] \tag{15}$$

The social welfare function satisfies second order conditions[6]. The government then sets IPR-policy while holding the number of firms in each region constant. That is, the number of firms is set in general equilibrium. While the IPR-policy influences the number of firms in the market, the Southern firm does not control the level of firms in the partial equilibrium. Thus, the Southern government sets ζ such that:

$$\zeta = \frac{b * a * M_s}{\left(a * M_s [\pi_s] y_1 - 2^{\frac{-1}{2}} M_n c_0 y_1^{\frac{1}{2}} y_2^{\frac{1}{2}} \pi_n^{\frac{1}{2}} \right)} \tag{16}$$

The Southern government sets the optimal IPR-protection policy to respond to an increase in the contribution schedule, c_0 with a strengthen of IPR laws. As firms increase the potential lobbying contribution gains of changing policy, the Southern government increases ζ to capture more of these funds. Without solving for the Northern firm's political contributions, the Southern government's choice of IPR shows interesting responses to the parameters of the model.

The Southern government strengthens IPR-protection as the Southern firm's fixed cost of entry increases due to an increase in b. This change is policy is partly due to decreased importance of Southern firm profits in the Southern government's welfare function; however, the stronger IPR laws also bring in more offshored R&D from the Northern firm. By setting more IPR regulation, the Southern government helps decrease the fixed cost of entry for the Southern firm. Expectedly, increasing the Southern government's preference for Southern consumers and producers, α, decreases IPR-protection policy. In a similar manner, an increase in the number of Southern firms, M_s or Southern firm operating profit, π_s increases the importance of those firms to the Southern government. The government then weakens ζ. An increase in the number of Northern firms increases the value of lobbying funds. Thus, M_n and ζ have a positive relationship. Finally, an increase in y_1, y_2, and π_n all increase the amount of offshoring from the Northern firm. The extra offshoring also allows the opportunity for the Southern to emulate the innovation. The Southern government can increase the Southern firm's expected profit function by actually lowering the probability more in favor of decreasing the Southern firm's fixed cost. So, ζ increases with y_1, y_2, and π_n.

The first stage can now be solved. A Northern firm maximizes the first stage expected profit function using the optimal level of Northern research by choosing a political contribution schedule $(C_i(\zeta))$ that defines the lobbying level at every level of IPR-protection policy. The firm

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[6] See Appendix A.1

chooses this schedule by setting the specific value c0. By using the optimal IPR level in equation (21) and the Northern firm expected profit function in equation (8), the maximization in stage 1 solutions only along the corners. The two possible contribution schedules for the Northern firm are:

$$c_0 = \begin{cases} 0 & \text{if} \quad E(\pi_i^n(0)) > E(\pi_i^n(c_0^{max})) \\ \left(\dfrac{2^{\frac{1}{2}} a M_s}{M_n y_2^{\frac{1}{2}} \pi_n^{\frac{1}{2}}} \right) \left(\pi_s y_1^{\frac{1}{2}} - b y_1^{\frac{-1}{2}} \right) & \text{if} \quad E(\pi_i^n(0)) < E(\pi_i^n(c_0^{max})) \end{cases} \tag{17}$$

where $E(\pi_i^n(c^{max}))$ denotes the expected Northern firm profit with the maximum contribution schedule. $E(\pi_i^n(0))$ denotes the expected Northern firm profit without any political contributions. I make an assumption on parameter values to ensure a positive political contribution schedule[7]. Specifically, ⇡sy1 > b. In other words, I assume a small fixed cost of entry for the Southern firm, high-tech Northern firms, and a large Southern firm operating profit. Formally, the two possible profit levels are defined as:

$$E(\pi_i^n(0)) = \frac{[y_2 \pi_n]^2}{4} \frac{2b^2}{(\pi_s^2)} \tag{18}$$

$$E(\pi_i^n(c_0^{max})) = \frac{[y_1 y_2 \pi_n]^2}{4} - \left(\frac{2^{\frac{1}{2}} a M_s}{M_n y_2^{\frac{1}{2}} \pi_n^{\frac{1}{2}}} \right) \left(\pi_s y_1^{\frac{1}{2}} - b y_1^{\frac{-1}{2}} \right) \tag{19}$$

The Northern will pick the expected profit that yields the highest profit level. Lobbying will exist in this industry if:

$$\frac{[y_1 y_2 \pi_n]^2}{4} - \left(\frac{2^{\frac{1}{2}} a M_s}{M_n y_2^{\frac{1}{2}} \pi_n^{\frac{1}{2}}} \right) \left(\pi_s y_1^{\frac{1}{2}} - b y_1^{\frac{-1}{2}} \right) > \frac{[y_2 \pi_n]^2}{4} \frac{2b^2}{(\pi_s^2)} \tag{20}$$

Lobbying will exist in the South if there is a large value y_2, a large value of y_1, and a smaller value of α. Firms that do lobby also engage in more R&D offshoring than a firm that does not lobby. Advanced Northern research technology increases the chances that the Northern firm will also engage in lobbying. These technologically advanced firms are also heavily invested in using Southern R&D. It is advantageous for these firms to then lobby to increase IPR-protection. When the Northern firm has a large amount of trade secrets, lobbying is also likely to occur due to the firm being heavily invested in offshoring.[8] Likewise, a Southern government that cares greatly about the welfare of the South over lobbying contributions will discourage lobbying completely.

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[7] To guarantee parameter values that ensure the probabilities are bounded by 0 and 1, I assume the following two conditions:

$$\text{Case 1:} \quad 2\pi_s y_1^2 < y_2 b \pi_n < 2\pi_s y_2^{\frac{-2}{3}}$$

$$\text{Case 2:} \quad y_2^{\frac{5}{6}} y_1 \pi_n < 2 < y_2 y_1^{\frac{-1}{2}} \pi_n$$

The derivation of these conditions can be found in Appendix A.2.
[8] Note that the expected Northern profit in Case 2 is concave in y_1. Furthermore, the profit function is increasing when y_1 is set such that $E(\pi_t^n(c_0^{max})) = 0$. So, condition (20) is strengthened as trade secrets increase.

The government will set its IPR policy to benefit Southern firms rather than to illicit lobbying funds.

V. Comparative Statistics

I examine the change on offshoring (R^*), IPR-policy (ζ), and political lobbying (C_i) when parameters of the model increase. Since the Northern firm lobby's their maximum effort or not at all, the analysis will focus on two cases. In Case 1, there is no lobbying ($c_0 = 0$). In Case 2, the Northern firm lobbies the maximum amount ($c_0 = c_0^{max}$).

Northern Technology

The parameter y_2 captures any advancement the Northern firm has in increasing the productivity of Southern researchers. This could look like new lab equipment, an increase in technology transferred, better managers, more effective Northern workers sharing knowledge, or some breakthrough in knowledge. Large firms can also be seen as high-tech firms based on the established connection between firm size and R&D expenditures (Symeonidis, 1996).

> **Proposition 1**: *An increase in Northern technology ($y_2 \uparrow$) will increase offshoring ($R^* \uparrow$) in both cases. In Case 1, Southern welfare increases. In Case 2, an increase in research ability will also decrease lobbying ($C_i \downarrow$).*

The increase in the Northern technology results in the Northern firm increasing the amount of offshoring in both cases. The additional technology increases value of every researcher added without increasing the cost of those workers. When technology is large enough, the Northern firm can also increase the protection around their innovation through lobbying. Only high-tech firms will be able to lobby however. Once a certain threshold is reached, an increase in technology will begin to lower the amount of lobbying contributions. When the Northern firm is already contributing the amount required for full IPR-protection, the increase in Northern technology allows the Northern firm to offshore more research. This additional offshoring also ends up increasing the Southern firm's expected profit. The Northern firm is able to lobby less due to the increased benefit given to Southern firms.

Figure 1 graphically shows Proposition 1. Offshoring increases as the Northern firm gains more technology. After a threshold has been reached, the Northern firm is so invested in Southern research that it needs to also start affecting IPR-policy in order to protect their innovation. As technology increases further, more Southern firms are able to enter into the market. The Southern government then actually needs less lobbying contributions in order to keep IPR-protection at it's highest level.

This result has empirical support. High-tech industries have been seen to offshore more R&D than low-tech industries (Hegde and Hicks, 2008). Demirbag and Glaister (2010) find strong evidence that firms with high numbers of R&D projects are more likely to offshore some R&D tasks to developing countries. Osgood and Feng (2018) find evidence that US firms in industries that produce large amounts of intellectual property are more likely to support trade agreements that strengthen IPR-protection abroad. Campos and Giovannoni (2007) finds that the probability of lobbying increases with firm size and firm age. Cao et al. (2018) find firm lobbying and firm performance are negatively related. De Figueiredo and Richter (2014) review lobbying literature to also find that large corporations are more likely to lobby government.

Figure 1: An Increase in Northern Technology
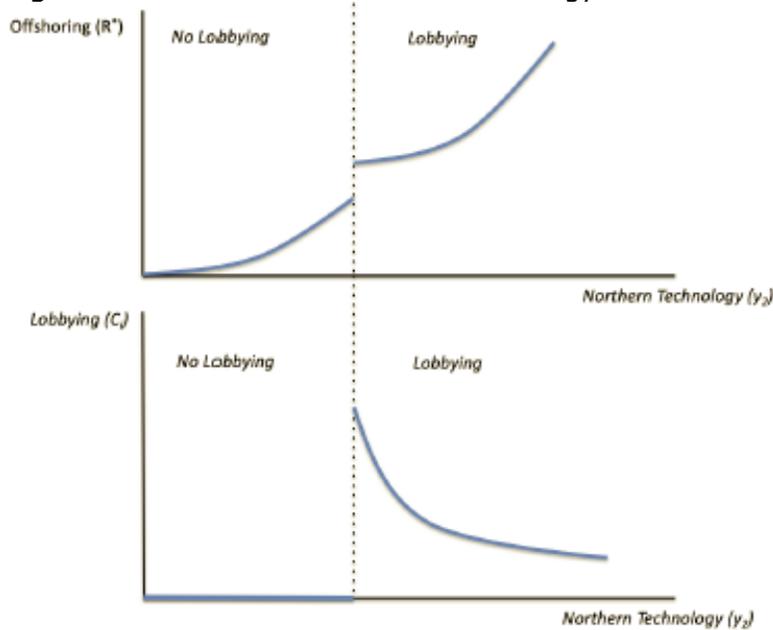
Trade Secrets

As stated by Keupp et al. (2009), a firm has multiple ways of protecting an innovation. Firms can make use of trade secrets, product complexity, employee loyalty, or government relationships. The parameter y_1 captures these ways of product protection. Firms with previous experience in doing research in the South are also likely to have closer relationships with both researchers and the government. Thus, these firms are likely to have a large y_1.

> **Proposition 2:** *In Case 1, an increase in trade secrets $(y_1 \uparrow)$ will have no effect on offshoring $(R^* \leftrightarrow)$ and decrease IPR-policy $(\zeta \downarrow)$ in the South. In Case 2, an increase in trade secrets will increase offshoring $(R^* \uparrow)$ and increase lobbying $(C_i \uparrow)$.*

An increase in trade secrets will not affect the offshoring decision of the Northern firm who does not lobby. The exogenous decrease in the probability of imitation is met with the Southern government lowering ↓ in order to compensate the loses to the Southern firm. Both effects on the Northern firm cancel each other, and the Northern firm does not change R&D levels at all. When the Northern firm is lobbying, the increase in trade secrets results in the Northern firm offshoring more. In this case, the Northern firm prevents the decrease in IPR-protection by increasing lobbying. Northern firms in this case have an already high probability of collecting operating profit. As such, the firm is willing to increase fixed costs in order prevent the probability from decreasing any further. These types of firms may also have very large operating profit.

From Figure 2, the increase in trade secrets allows for the Northern firm to begin offshoring more research and development after a certain threshold is reached. After that threshold, the Northern firm is able to protect their innovation enough that it can afford to also influence the Southern policy to further increase their revenue. As the firm increases its ability to protect their innovation regardless, it becomes more invested in Southern research. Southern governments require more lobbying in order to offset the welfare loss of Southern firms.

Figure 2: An Increase in Trade Secrets
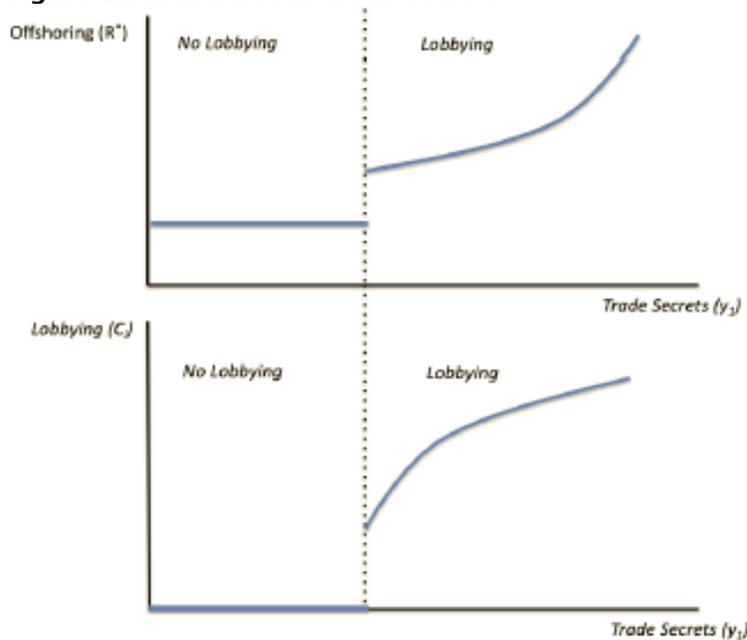
An increase in the firm's own ability to protection their invention has been seen empirically. Previous studies have found that previous experience offshoring in a country is a determinant of future offshoring of R&D (Demirbag and Glaister, 2010; Cohle, 2019b). Fernández-Méndez et al. (2018) find that firms with former politicians on their board helps facilitate FDI in foreign countries that have a similar institution environment as the firm's home country.

Corruption

Governments differ in the value they place on political contributions. The preference a government has for helping domestic industries may rely on a number of factors including the closeness of a major election, the strength of the next largest political party, and the type of industry. The parameter, a, can also be interpreted as the degree of uncertainty in the government's treatment of foreign firms. A strong preference for domestic firms may include increased tariffs, subsidies to the domestic firms, or other interventions into the market. A low a value can also be interpreted as the existence of a high degree of corruption in the South. Corruption often has a social cost. Fisman and Wang (2015) show that politically connected firms in China see a higher workplace mortality rate than firms without political connections.

> **Proposition 3:** *In Case 1, an increase in corruption $\left(\frac{1}{\alpha}\uparrow\right)$ will not affect offshoring $(R^* \leftrightarrow)$ and IPR-policy $(\zeta \leftrightarrow)$ in the South. In Case 2, an increase in corruption will not affect offshoring $(R^* \leftrightarrow)$ and decrease lobbying $(C_i \uparrow)$.*

The increase in $\frac{1}{\alpha}$ should not affect the Northern firm who does not lobby. This firm makes offshoring decision without any expectation of government influence. That is, the firm is planning on not being able to change government policy at all. For Case 2, the change in the effectiveness of lobbying initially brings in lobbying for the Northern firm. As this effectiveness increases, the Northern firm needs to devote less funds in order to create the desired policy. Since ζ does not

change, the Northern firm still offshores the same amount. Overall, increasing corruption ends up hurting the South as offshoring does not increase and lobbying funds decrease.

Figure 3: An Increase in Corruption
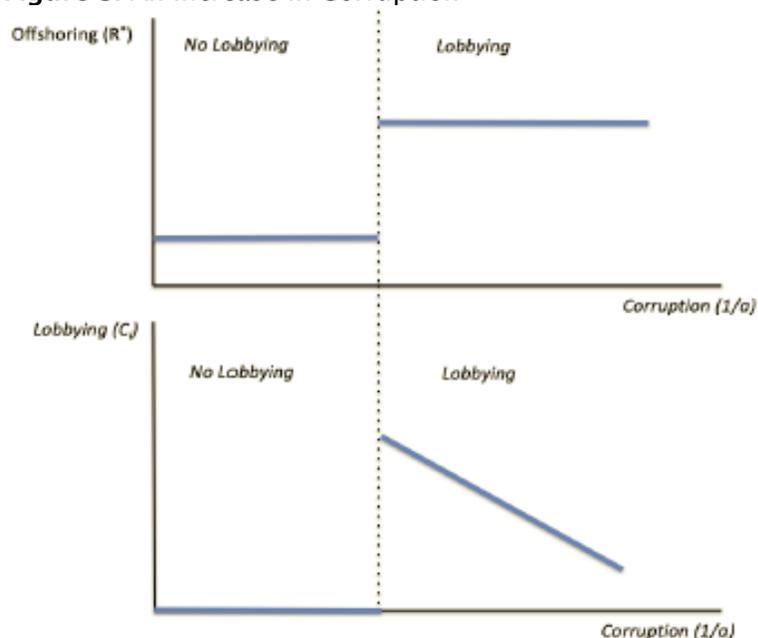
Figure 3 graphically shows Proposition 3. Corruption must be sufficiently large in order to bring in lobbying. When the firm begins to lobby, they also increase their offshoring. As corruption increases further, the amount of offshoring does not change while the amount of lobbying decreases.

Previous literature on corruption usually assumes that corruption acts just as an extra cost to firms without the possibility of a benefit. Corruption has been shown to reduce FDI in the past (Wei, 2000; Hakkala et al., 2008). Demirbag and Glaister (2010) find evidence that increased corruption decreases the likelihood of R&D offshoring to developing countries. In this model, high levels of corruption allow firms to change the market in their favor. Proposition 3 has some empirical support. Firms have been shown more likely exit foreign markets when there is a high degree of tariff uncertainty (Crowley et al., 2018). Foreign lobbies have been shown to be able to push governments into enacting welfare reducing policies (Stoyanov, 2014). Polk et al. (2014) find that multinational firms lobbying foreign governments in context of environmental regulation can be harmful to the foreign country's welfare.

A common result among the three propositions is higher levels of offshoring are associated with lobbying and strong IPR-protection laws. Stronger IPR-protection laws in developing countries have been associated with an openness to trade (Ginarte and Park, 1997). Likewise, authors have found a positive connection between IPR-protection and R&D offshoring (Cohle, 2019b).

VI. Conclusion

This paper constructs a novel North-South model to examine the interaction between the emerging trend of offshoring of R&D to the developing world and the stronger IPR protection policy in the these areas. By allowing Northern firms to both offshore R&D and lobby the Southern

government for increased IPR-protection, I show that the Southern government sets a low value of IPR-protection unless a large degree of lobbying is present. Lobbying is only carried out when Northern firms have a sufficiently high technological profile. Offshoring of R&D increases with Northern technology and only increases with trade secrets when lobbying occurs. IPR-policy decreases with trade secrets.

Future research can exploit detailed patent data on multinational firms to find examine the theoretical connections empirically. While lobbying data is often difficult to find, it is possible through a variety of sources to determine what firms are lobbying. Since the model predicts that firms either lobby the maximum amount or not at all, this data constraint should not affect any empirical examination into the results of this paper.

References

Acemoglu, D. and Akcigit, U. (2012). Intellectual property rights policy, competition and innovation. Journal of the European Economic Association, 10(1):1–42.

Acemoglu, D., Gancia, G., and Zilibotti, F. (2015). Offshoring and directed technical change. American Economic Journal: Macroeconomics, 7(3):84–122.

Aidt, T. S. and Hwang, U. (2014). To ban or not to ban: foreign lobbying and cross-national externalities. Canadian Journal of Economics/Revue canadienne d'´economique, 47(1):272–297.

Antras, P. and Helpman, E. (2004). Global sourcing. Journal of political Economy, 112(3):552–580.

Antrás, P. and i Miquel, G. P. (2011). Foreign influence and welfare. Journal of International Economics, 84(2):135–148.

Balsvik, R. (2011). Is labor mobility a channel for spillovers from multinationals? Evidence from Norwegian manufacturing. The review of economics and statistics, 93(1):285–297.

Brou, D. and Ruta, M. (2011). Economic integration, political integration or both? Journal of the European Economic Association, 9(6):1143–1167.

Brown, L. W., Yasar, M., and Rasheed, A. A. (2018). Predictors of foreign corporate political activities in united states politics. Global Strategy Journal, 8(3):503–514.

Cai, D. and Li, J. (2012). Quid pro quo and the enforcement of intellectual property rights protection: A bargaining approach. The Journal of International Trade & Economic Development, 21(6):755–772.

Campos, N. F. and Giovannoni, F. (2007). Lobbying, corruption and political influence. Public choice, 131(1-2):1–21.

Cao, Z., Fernando, G. D., Tripathy, A., and Upadhyay, A. (2018). The economics of corporate lobbying. Journal of Corporate Finance, 49:54–80.

Chen, Y. and Puttitanun, T. (2005). Intellectual property rights and innovation in developing countries. Journal of development economics, 78(2):474–493.

Cohle, Z. (2019a). Explaining the current innovative r&d outsourcing to developing countries. Journal of Industry, Competition and Trade, 19(2):211–234.

Cohle, Z. (2019b). Global innovative r&d offshoring with heterogeneous labor: The role of ipr-protection on technology transfer and the brain drain effect. Southern Economic Journal, 86(2):691–725.

Cole, M. A., Elliott, R. J., and Fredriksson, P. G. (2006). Endogenous pollution havens: Does fdi influence environmental regulations? Scandinavian Journal of Economics, 108(1):157–178.

Comin, D. and Hobijn, B. (2009). Lobbies and technology diᵭusion. The Review of Economics and Statistics, 91(2):229–244.

Crowley, M., Meng, N., and Song, H. (2018). Tariff scares: Trade policy uncertainty and foreign market entry by Chinese firms. Journal of International Economics, 114:96–115.

De Figueiredo, J. M. and Richter, B. K. (2014). Advancing the empirical research on lobbying. Annual review of political science, 17:163–185.

Demirbag, M. and Glaister, K. W. (2010). Factors determining offshore location choice for r&d projects: A comparative study of developed and emerging regions. Journal of Management Studies, 47(8):1534–1560.

Desbordes, R. and Vauday, J. (2007). The political influence of foreign firms in developing countries. Economics & Politics, 19(3):421–451.

Fern´andez-M´endez, L., Garcia-Canal, E., and Guillén, M. F. (2018). Domestic political connections and international expansion: It's not only 'who you know 'that matters. Journal of World Business, 53(5):695–711.

Fisman, D., Fisman, R. J., Galef, J., Khurana, R., and Wang, Y. (2012). Estimating the value of connections to vice-president Cheney. The BE Journal of Economic Analysis & Policy, 13(3).

Fisman, R. and Wang, Y. (2015). The mortality cost of political connections. The Review of Economic Studies, 82(4):1346–1382.

Gawande, K., Krishna, P., and Robbins, M. J. (2006). Foreign lobbies and us trade policy. The review of Economics and Statistics, 88(3):563–571.

Ginarte, J. C. and Park, W. G. (1997). Determinants of patent rights: A cross-national study. Research policy, 26(3):283–301.

Gorg, H. and Strobl, E. (2005). Spillovers from foreign firms through worker mobility: An empirical investigation. Scandinavian Journal of Economics, 107(4):693–709.

Grossman, G. M. and Helpman, E. (1994). Protection for sale. The American Economic Review, 84(4):833.

Hakkala, K. N., Norback, P.-J., and Svaleryd, H. (2008). Asymmetric effects of corruption on fdi: Evidence from Swedish multinational firms. The Review of Economics and Statistics, 90(4):627–642.

Harstad, B. and Svensson, J. (2011). Bribes, lobbying, and development. American Political Science Review, pages 46–63.

Hegde, D. and Hicks, D. (2008). The maturation of global corporate r&d: Evidence from the activity of us foreign subsidiaries. Research Policy, 37(3):390–406.

Hudson, J. and Minea, A. (2013). Innovation, intellectual property rights, and economic development: a unified empirical investigation. World Development, 46:66–78.

Kang, M. (2006). Trade policy mix: Ipr protection and r&d subsidies. Canadian Journal of Economics/Revue canadienne d'´economique, 39(3):744–757.

Keupp, M. M., Beckenbauer, A., and Gassmann, O. (2009). How managers protect intellectual property rights in china using de facto strategies. R&d Management, 39(2):211–224.

Kim, I. S. (2017). Political cleavages within industry: Firm-level lobbying for trade liberalization. The American Political Science Review, 111(1):1.

Kwan, Y. K. and Lai, E. L.-C. (2003). Intellectual property rights protection and endogenous economic growth. Journal of Economic Dynamics and Control, 27(5):853–873.

Kyrkilis, D. and Koboti, S. (2015). Intellectual property rights as determinant of foreign direct investment entry mode: the case of Greece. Procedia Economics and Finance, 19:3–16.

Lai, E. L.-C., Riezman, R., and Wang, P. (2009). Outsourcing of innovation. Economic Theory, 38(3):485–515.

Lewin, A. Y., Massini, S., and Peeters, C. (2009). Why are companies offshoring innovation? The emerging global race for talent. Journal of international business studies, 40(6):901–925.

Lundin, N. and Schwaag Serger, S. (2007). Globalization of r&d and china: empirical observations and policy implications. Technical report, IFN Working Paper.

Moncada-Patern`o-Castello, P., Vivarelli, M., and Voigt, P. (2011). Drivers and impacts in the globalization of corporate r&d: an introduction based on the European experience. Industrial and corporate change, 20(2):585–603.

Monge-González, R., Hewitt, J., and Torres-Carballo, F. (2015). Do multinationals help or hinder local firms?: Evidence from the Costa Rican ict sector.

Olken, B. A. and Pande, R. (2012). Corruption in developing countries. Annu. Rev. Econ., 4(1):479–509.

Osgood, I. and Feng, Y. (2018). Intellectual property provisions and support for us trade agreements. The Review of International Organizations, 13(3):421–455.

Palangkaraya, A., Jensen, P. H., and Webster, E. (2017). The effect of patents on trade. Journal of International Economics, 105:1–9.

Polk, A., Schmutzler, A., and Muller, A. (2014). Lobbying and the power of multinational firms. European Journal of Political Economy, 36:209–227.

Poole, J. (2008). Multinational spillovers through worker turnover. UC Santa Cruz.

Saha, A. (2019). Trade policy & lobbying effectiveness: Theory and evidence for India. European Journal of Political Economy, 56:165–192.

Stoyanov, A. (2009). Trade policy of a free trade agreement in the presence of foreign lobbying. Journal of International Economics, 77(1):37–49.

Stoyanov, A. (2014). Endogenous free trade agreements and foreign lobbying. Review of International Economics, 22(3):561–577.

Symeonidis, G. (1996). Innovation, firm size and market structure: Schumpeterian hypotheses and some new themes.

Wei, S.-J. (2000). How taxing is corruption on international investors? Review of economics and statistics, 82(1):1–11.

Zhao, M. (2006). Conducting r&d in countries with weak intellectual property rights protection. Management science, 52(8):1185–1199.

A Cross-national Investigation of Leader Motivating Language to Improve Performance Appraisal Reactions

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Abstract

This cross-national study explores the link between a leader's use of motivating language and follower reactions toward received performance appraisals. This relationship is examined in both the United States and India to add to the generalizability of the presented model. The final sample consisted of 130 respondents from the United States and 140 respondents from India. The results of this research show that while leader motivating language in organizations in the U.S. has the potential to positively influence employee reactions toward their performance appraisals, results in India significantly differ in several dimensions. Hence, the effectiveness of motivating language use by leaders may differ depending on the national setting. Several theoretical and practical implications as well as limitations and directions for future research are discussed.

Keywords: Leader motivating language; performance appraisal; leadership communication; feedback; USA; India

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The Importance of Adherence to Quality Standards in Procurement to Protect the Safety and Well-being of Healthcare Workers during the COVID-19 Pandemic

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Abstract

This research study was undertaken to gain an understanding of the importance of adhering to quality standards when using and procuring N95 respirator masks and the potential dangers to healthcare workers when a shortage of supply triggers reuse of "single use" masks and a counterfeit market of substitutes.

Keywords: Quality standards; N95 mask procurement; healthcare worker safety

I. Introduction

Organizations that employ healthcare workers in the US, that perform work that requires infection control, are required by the Occupational Health and Safety Act to provide them with the appropriate personal protective equipment of safe design and construction for the work to be done (OSHA, 2016). According to the UNC Health Care Infection Control Manual, all workers are issued facial masks by the university and used (contaminated) masks must be removed and discarded at the completion of treatment when leaving the patient treatment area (UNC Health Care, 2017). Facial masks issued to healthcare personnel are meant to be worn once and discarded to prevent transfer of aerosols, blood borne pathogens, and other potentially infectious materials to healthcare workers and between patients.

COVID-19 is contracted by transfer of aerosols. It is an airborne disease that can be spread through breathing, coughing, sneezing and other forms of exhalation by someone who has been infected. The disposable, one-time use facial mask considered the gold standard to prevent transfer of COVID-19 to healthcare workers is the N95 respirator mask (CDC, 2021). In January 2020, there were only a handful of manufacturers producing the N95 in the US. With a global pandemic on the rise creating high demand worldwide a severe reduction in supply of N95 respirator masks created a danger to both healthcare workers and the patients they treat (Davis, 2020).

II. N95 Respirator Masks

N95 respirator masks are not patented by a single entity so companies are free to produce it. The major US producers of N95's are Honeywell, Kimberly-Clark Corporation, Prestige Ameritech and 3M. According to Honeywell, N is a Respirator Rating Letter Class. It stands for "Non-Oil" meaning that if no oil-based particulates are present, then you can use the mask in the work environment. Masks ending in a 95, have a 95 percent efficiency. The filtration material on the mask is an electrostatic non-woven polypropylene fiber which has coatings that are designed to kill

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microorganisms (FDA, 2020). The masks filter out contaminants like dusts, mists and fumes. The minimum size of .3 microns of particulates and large droplets won't pass through the barrier. They are designed to be snug to create a seal around the mouth and nose and are fitted to the individual wearing it. They contain a metal strip that fits around the nose and two elastic bands that force the mask to fit snuggly to the face. They are not recommended to be worn by children or those with facial hair because they may not provide full protection, or to be reused because they lose their ability to seal to one's face properly (Honeywell, 2021).

N95 respirator masks are able to filter out 95% of the airborne contaminants that penetrate it. The reason we know this is because they are tested and evaluated by the National Institute for Occupational Safety and Health (NIOSH) for their fluid resistance, filtration efficiency and flammability and is certified under 42 CFR 84 (FDA, 2020). 42 CFR 84 are the NIOSH rules and procedures for approval of respiratory protective devices. NIOSH tests N95 respirator masks using NaCl in filter tests that use the most penetrating aerosol size, 0.3 μm aerodynamic mass median diameter to test for 95% efficiency of filtration (3M, 1995). These quality standards are used to ensure that healthcare workers are provided appropriate protection in the workplace required by the Occupational Health and Safety Act (OSHA, 2016). All NIOSH, 42 CFR 84 approved N95 respirators are labeled as "single-use," disposable devices. The Food & Drug Administration (FDA) recommends if your respirator is damaged or soiled, or if breathing becomes difficult, you should remove the respirator, discard it properly, and replace it with a new one. To safely discard your N95 respirator, place it in a plastic bag and put it in the trash. Wash your hands after handling the used respirator. (FDA, 2020). However due to supply shortages of N95 due to the COVID-19 pandemic many healthcare workers were forced to ignore the "single-use" standard for the facial masks and the FDA was forced to develop contingency strategies to optimize the supply of N95 respirator masks (FDA, 2020).

III. Contingency Strategies to Optimize Supply

The supply shortage of N95 respirator masks forced the FDA to issue Emergency Use Authorizations (EUAs) for the emergency use of decontamination systems for use in decontaminating certain respirator masks used by health care personnel when there are insufficient supplies of new respirator masks resulting from the COVID-19 pandemic. However they stressed that new NIOSH approved N95 respirator masks are always the first choice before using a decontaminated respirator mask. The FDA also reiterated that respirator masks that are NIOSH approved before decontamination only retain their NIOSH approval status post-decontamination if the respirator manufacturer permits the use of the decontamination method with the specific system and cycle parameters. To determine the NIOSH approval status of a specific decontaminated NIOSH-approved respirator masks, you must check with the respirator mask manufacturer (FDA, 2020).

Rocky Mountain Laboratories studied decontamination methods for their effectiveness on N95 respirator masks that included vaporized hydrogen peroxide, 70 ℃ heat, ultraviolet light and 70% ethanol spray (NIH, 2020). Volunteers at the lab wore the masks for two hours after these sterilization methods were used. The primary objective was to test for proper fit after exposing the masks to potentially deforming conditions (NIH, 2020). The researchers found that 70% ethanol spray allowed for two uses of the masks. They found that three uses with ethanol spray damaged the structural integrity of the N95 respirator masks (NIH, 2020). The most effective sterilization method was the vaporized hydrogen peroxide which allowed for multiple uses of the N95 masks. The researchers found that the masks were sterile after 10 minutes of using this method. Although the N95s are produced for "single use," the team at Rocky Mountain Laboratories found that decontamination, though not the preferred strategy, is certainly possible in times of limited supply.

Other research done in response to healthcare workers having to reuse N95 respirator masks was done at the University of Illinois, where they found that a pressure cooker could sterilize N95s without compromising fit or usability (Gasparini, 2020). N95 respirator masks were put

through twenty cycles in a pressure cooker, which deactivated the virus by over 99.9% (Gasparini, 2020). This method proved to be very effective in killing COVID-19. Research done by both Rocky Mountain Laboratories and the University of Illinois proved that there are ways to reuse the N95 respirator masks without compromising functionality. However, there is no evidence that these methods are approved by the N95 respirator mask manufacturers to maintain NIOSH approval status of decontaminated masks so without NIOSH approval status their quality is not maintained to its original level by decontamination.

IV. Counterfeit Products

The limited supply of N95 respirator masks has also created an international black market for counterfeit masks. According to the Department of Homeland Security, "Operation Stolen Promise" has seized more than 11 million counterfeit N95 respirator masks in at least 12 states since the investigation began in April 2020 (ICE, 2021). The latest seized masks are falsely claiming to be produced by 3M, so the manufacturer has set up a fraud section on its web site to help you to recognize the counterfeit N95 masks (3M, 2021).

   Tips for recognizing counterfeits for those procuring supplies for healthcare workers include the following: (1) 3M has strict quality standards, and therefore respirator masks that have issues such as missing or detached straps, blocked valves, faded or grainy packaging, or misspelled words are likely not authentic 3M respirator masks. (2) Counterfeit products are often sold without packaging, or in sub-standard packaging that does not match the original manufacturer's packaging, and often do not contain important user instructions. (3) 3M personal protective equipment is intended, labeled, packaged, and certified to meet the requirements of the countries in which 3M sells it (3M, 2021).

   3M also suggests purchasing 3M respiratory protection products from a 3M authorized distributors or dealers to provide the greatest assurance that you will receive authentic 3M products. A best practice would be to purchase N95 respirator masks from established businesses not those who have "popped up overnight" and are selling uncertified merchandise. Certain 3M products also contain 3M Safe Guard anti-counterfeit authentication technology in their packaging which can be validated online at https://safeguard.3m.com/Guest#/Validation. On this site you can use the numbers on the N95 respirator mask that you have purchased or are planning to purchase to input a Secure Code and a Validation Code to validate mask authenticity (3M, 2021). Counterfeit N95 respirator masks are a danger to healthcare workers' safety because they do not provide the proper infection control to protect the workers from infectious diseases. Procurement professionals should validate N95 respirator mask authenticity and adherence to quality standards before making a purchase.

V. Conclusions

Initially when the COVID-19 outbreak occurred there was no vaccine available so healthcare workers had to rely on personal protective equipment and public health policy to mitigate the transmission of the disease. According to the CDC's COVID Data Tracker (CDC, 2021), as of February 17, 2021, there have been 405,793 cases of COVID-19 documented among healthcare workers which have resulted in 1423 deaths. Hopefully the distribution and administration of the vaccine will minimize the transmission of COVID-19 for healthcare workers. Until then we must develop strategies to help healthcare organizations adhere to OSHA requirements by procuring authenticate N95 respirator masks that adhere to FDA, CDC and NIOSH quality standards to protect our healthcare workers from having to reuse "single-use" respirator masks.

References

3M. (1995) "Regulation Update – 42 CFR 84" Retrieved on February 19, 2021 from https://multimedia.3m.com/mws/media/276353O/regulations-update-18-42-cfr-84.pdf?fn=REGUP018B.pdf

3M. (2021) "Avoiding Counterfeit Respirators" Retrieved on February 19, 2021 from https://multimedia.3m.com/mws/media/1861617O/avoiding-counterfeit-respirators.pdf

3M. (2021) "Validation" Retrieved on February 19, 2021 from https://safeguard.3m.com/Guest#/Validation

Centers for Disease Control and Prevention (CDC). (2019) "Strategies for Optimizing the Supply of N95 Respirators: COVID-19." Retrieved February 19, 2021, from www.cdc.gov/coronavirus/2019-ncov/hcp/respirators-strategy/index.html.

Centers for Disease Control and Prevention (CDC). (2020) "Strategy for Optimizing the Supply of Facemasks." Retrieved on February 19, 2021 from https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/face-masks.html

Centers for Disease Control and Prevention (CDC). (2021) NIOSH Retrieved on February 19, 2021 from https://www.cdc.gov/niosh/npptl/respirators/testing/default.html

Davis, A.C. (2020) "In the early days of the pandemic, the U.S. government turned down an offer to manufacture millions of N95 masks in America." Retrieved on February 19, 2021 from https://www.washingtonpost.com/investigations/in-the-early-days-of-the-pandemic-the-us-government-turned-down-an-offer-to-manufacture-millions-of-n95-masks-in-america/2020/05/09/f76a821e-908a-11ea-a9c0-73b93422d691_story.html

Food and Drug Administration (FDA). (2020) Retrieved on February 19, 2021 from https://www.fda.gov/medical-devices/personal-protective-equipment-infection-control/n95-respirators-surgical-masks-and-face-masks

Gasparini, A. (2020) "New Research Shows How To Decontaminate Masks For Reuse Using An Electric Cooker." [online] Forbes. Retrieved on February 19, 2021 from https://www.forbes.com/sites/allisongasparini/2020/08/08/new-research-shows-how-to-decontaminate-masks-for-reuse-using-an-electric-cooker/#2e3d34714a3f

Honeywell. (2021) N95 Masks Explained. Retrieved on February 19, 2021 from https://www.honeywell.com/us/en/news/2020/03/n95-masks-explained

National Institutes of Health (NIH). 2020. NIH Study Validates Decontamination Methods For Re-Use Of N95 Respirators. Retrieved on February 19, 2020 from: https://www.nih.gov/news-events/news-releases/nih-study-validates-decontamination-methods-re-use-n95-respirators

Occupational Health and Safety Administration (OSHA). (2016) "Standard 1910.132" Retrieved on February 19, 2021 from https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.132

UNC Health Care. (2017) "Infection Control Manual" Retrieved on February 19, 2021 from https://ehs.unc.edu/wp-content/uploads/sites/229/2015/08/bbpexposurecontrol.pdf

US Immigration and Customs Enforcement (ICE). (2021) "DHS prevents millions of counterfeit N95 masks from reaching hospital workers, first responders" Retrieved on February 19, 2021 from https://www.ice.gov/news/releases/dhs-prevents-millions-counterfeit-n95-masks-reaching-hospital-workers-first

U.S. – China Trade Profile and Recent Trends

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Abstract
This paper examines the hotly debated issue related to the persistent U.S. trade deficit with China. This preliminary version of the paper discusses the recent profile of the U.S. trade with China with recent trends and the direction of exports to, imports from and the trade deficit with China, the largest trading partner of the U.S. in terms of combined exports and imports with each other. The paper reports the top fifteen export partners and import partners of the U.S. along with the top fifteen countries with largest trade deficits and largest trade surpluses. While Canada is the largest export partner of the U.S. and has been so for many years, this if followed by Mexico and China in that order. In terms of imports, China is the largest supplier of U.S. import goods followed by Mexico and Canada. It is also found that U.S. exports to China has grown over time, but U.S. imports from China has grown even faster, causing the large and persistent U.S. trade deficit with China. It is also found that the U.S. has the largest trade deficit with China compared to any other country in the world that trades with the U.S. This persistent trade deficit with China has raised concerns among policymakers, political leaders, media, and public in the U.S. that led to the U.S.-China trade war initiated by the former President Trump. While the exchange rate could be a major issue in explaining the persistence of U.S. trade deficit with China, this issue will be explored with rigorous econometric analysis in a subsequent paper.

Keywords: Exchange rate; exports; imports; trade deficit; United States; China

JEL: F10; F14; F31; F32

I. Introduction

The U.S. is the largest economy (measured in terms of GDP) and the most powerful nation on earth and China has emerged as the second largest economy in the world (measured by GDP but could be the largest economy using the international PPP dollar) and is becoming a growing economic and military power in the world stage. As such, an analysis of bilateral trade flows between these two largest economies in the world is of critical importance. While the U.S. exports to and imports from China had been growing over time particularly since China began to open its economy to the U.S. and other countries in the world since 1979, however, the U.S. has been experiencing growing trade with China over the years. and holds the largest trade surplus with the U.S., conversely the largest trade deficit for the U.S.

The growing and persistent U.S. deficit with China has raised debates and concerns in the U.S. among some policymakers and political leaders, some in media, labor unions, and other stakeholders in the U.S. (U.S. Congress 2013; Reinbold and Wen 2018). Various concerns have been voiced about sustainability of this relationship as China is accused of unfair trade practices, currency manipulation, violation of labor rights, lax environmental quality enforcements, intellectual property infringements, undue subsidies and supports to state run businesses, among others. Such a persistent U.S. trade deficit has resulted in the loss of many manufacturing

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jobs in the U.S. and China accumulating large holdings of U.S. foreign debts. Because of these accusations, some in the U.S. has even argued if China cannot be trusted as a reliable partner of the U.S. in terms of bilateral trade, cross-border investments, and other economic matters. On top of these are geo-political and strategic concerns in the U.S. about China's rising economic and military prowess.

In the above backdrop, this preliminary version of the paper examines the recent profile of the U.S.-China trade with recent trends and the direction of trade flows (exports to, imports from China) and the direction and trend in the U.S. trade deficit with China. China has emerged as the largest trading partner of the U.S. in terms of combined exports and imports with each other. The paper reports the top fifteen export partners and import partners of the U.S. along with the top fifteen countries with largest trade deficits and largest trade surpluses. While Canada is the largest export partner of the U.S. and has been so for many years. This if followed by Mexico and China in that order. In terms of imports, China is the largest supplier of U.S. import goods followed by Mexico and Canada. It is also found that U.S. exports to China has grown over time, but U.S. imports from China has grown even faster, causing the large and persistent U.S. trade deficit with China. It is also found that the U.S. has the largest trade deficit with China compared to any other country in the world that trades with the U.S.

The above-mentioned persistent trade deficit with China has raised concerns among policymakers, political leaders, media, and public in the U.S. that led to the U.S.-China trade war initiated by the former President Trump. While the exchange rate could be a major issue in explaining the persistence of U.S. trade deficit with China, this issue will be explored with rigorous econometric analysis in a more elaborate paper. In this analysis, a historical long annual time-series data spanning from 1975 to 2019 with a sample size of 45 year is utilized to empirically examine the above-mentioned issues. The data is collected from several sources including IMF (2021), the World Bank (2021), U.S. Bureau of Census (2020), and U.S. Congress (2013).

II. U.S. China Aggregate Trade: Profile and Trend

Before engaging in more sophisticated quantitative and econometric analysis, this section provides some background information about the trend and pattern of U.S. Trade and trade balance with China over the years. Some discussion with the U.S. top export and import countries, U.S. top trade deficit and trade surplus countries, the historical trend in the U.S. overall exports, imports and trade balance with the world is also carried out as follows.

Table 1 presents U.S. export trade data by combined top fifteen countries as well as individual top fifteen trading partner countries from January to November 2020. The top fifteen countries constitute about 75% of all U.S. exports to the world. On an individual country basis, Canada has been and remains as the topmost export partner country of the U.S. with a volume of 232.6 billion U.S. dollar, about 18% of the total U.S. exports over the eleven-month period from January to November 2020. This is followed by Mexico (about 15% of imports) as the second and China (with about 9% of imports) as the third export partner of the U.S.

Table 2 presents U.S. import trade data by combined top fifteen countries as well as individual top fifteen trading partner countries from January to November 2020. The top fifteen countries constitute about 80% of all U.S. imports from the world. On an individual country basis, China has emerged as the topmost import partner country of the U.S. with an import volume of 393.6 billion U.S. dollar, about 19% of the total U.S. total imports over the eleven-month period from January to November 2020. This is followed by Mexico as the second (about 14% of imports) and Canada (about 12% of imports) as the third largest import partner of the U.S.

Table 3 shows the top 15 trade deficit countries of the U.S. with the topmost deficit country being China. Over the eleven-month period from January to November 2020, U.S. trade deficit with China being 283.6 billion U.S. dollar (which will be higher if December data is added). This high and persistent trade deficit with China has caused many concerns leading to the most recent trade war initiated by former President Trump in recent years. In the dicit front, China is followed by Mexico (deficit of about 103 billion U.S. dollar) as the second and Vietnam (with about 64

billion U.S. dollar) as the third largest trade deficit country of the U.S. Among the fifteen countries, the U.S. has the smallest deficit with Canada, the largest trading partner of the U.S., but has deficit,

Table 1: U.S. Top Fifteen Export Countries – January to November 2020

Rank	Country		Exports (b. U.S.$)	Percent of Total Exports
---	**Total, All Countries**		**1,299.0**	**100.0%**
---	**Total, Top 15 Countries**		**970.5**	**74.7%**
1	Canada		232.6	17.9%
2	Mexico		193.0	14.9%
3	China		110.0	8.5%
4	Japan		58.5	4.5%
5	United Kingdom		54.3	4.2%
6	Germany		53.0	4.1%
7	Korea, South		46.4	3.6%
8	Netherlands		41.4	3.2%
9	Brazil		31.7	2.4%
10	Taiwan		27.8	2.1%
11	Belgium		25.5	2.0%
12	France		25.2	1.9%
13	Singapore		24.8	1.9%
14	India		24.6	1.9%
15	Hong Kong		21.6	1.7%

Source: U.S. Census Bureau, foreign trade statistics, Nov. 2020.

Table 2: U.S. Top Fifteen Import Countries – January to November 2020

Rank	Country	Imports (B. US$)	Percent of Total Imports
---	**Total, All Countries**	**2,121.1**	**100.0%**
---	**Total, Top 15 Countries**	**1,687.8**	**79.6%**
1	China	393.6	18.6%
2	Mexico	295.8	13.9%
3	Canada	245.7	11.6%
4	Japan	108.1	5.1%
5	Germany	104.2	4.9%
6	Vietnam	72.7	3.4%
7	Switzerland	70.1	3.3%
8	Korea, South	68.7	3.2%
9	Ireland	59.3	2.8%
10	Taiwan	54.7	2.6%
11	India	46.3	2.2%
12	United Kingdom	45.3	2.1%
13	Italy	44.6	2.1%
14	Malaysia	39.7	1.9%
15	France	39.1	1.8%
15	Hong Kong	21.6	1.7%

Source: U.S. Census Bureau, foreign trade statistics, Nov. 2020.

Table 3: U.S. Top Fifteen Trade Deficit Countries – January to November 2020

Rank	Country	Deficit (b. US$)
1	China	-283.6
2	Mexico	-102.8
3	Vietnam	-63.7
4	Switzerland	-54.1
5	Germany	-51.2
6	Ireland	-50.5
7	Japan	-49.6
8	Malaysia	-28.3
9	Taiwan	-26.9
10	Italy	-26.0
11	Thailand	-24.1
12	Korea, South	-22.3
13	India	-21.7
14	France	-13.9
15	Canada	-13.0

Source: U.S. Census Bureau, foreign trade statistics, Nov. 2020.

Table 4: U.S. Top Fifteen Trade Surplus Countries – January to November 2020

Rank	Country	Surplus (b. U.S.$)
1	Netherlands	16.5
2	Hong Kong	13.9
3	Brazil	11.1
4	United Arab Emirates	10.4
5	United Kingdom	9.1
6	Australia	8.6
7	Belgium	6.7
8	Panama	4.5
9	Chile	2.3
10	Bahamas	2.3
11	Egypt	2.2
12	Dominican Republic	2.2
13	Peru	2.0
14	Guatemala	1.8
15	Qatar	1.6

Source: U.S. Bureau of Census, foreign trade statistics, Nov. 2020.

Perhaps due to extensive focus and discussions in the media, policymakers and public about U.S. trade deficits with China and many other countries, one may perceive that the U.S. does not export much and has trade deficit with all countries in the world. That is, however, not true. The U.S. has a lot of export products that many countries need, and the U.S. has generated trade surplus with some countries in the world. Table 3 shows the top fifteen trade surplus countries of the U.S. with the topmost surplus country being Netherlands. Over the eleven-month period from January to November 2020, U.S. trade deficit with this country recorded to be 16.5 billion U.S. dollar. This country is followed by followed by Hong Kong (with surplus of about 14 billion

U.S. dollar) as the second and Brazil (with surplus of about 11 billion U.S. dollar) as the third largest trade surplus country of the U.S. It is to be noted, however, that the volume of deficit with top fifteen individual countries are larger than the volume of surplus with top fifteen individual surplus countries. As such, the U.S. has an overall trade deficit with the rest of the world.

Going beyond aggregate trade, Table 5 shows the top ten products the U.S. Exports to China in 2017. The top export ten product's combined value is 51.6 billion US$ with a percentage share of 39.0% of all U.S. exports to China. Aircrafts top the list with an export value of 13.1 billion US$, which constitute about 10% of total U.S. exports to China in 2017. This item is followed by Soybeans as the second ranked product exported to China with a value of 12.5 billion US$ that constitute 9.4% of total exports to that country. The third category of exports is occupied by Vehicle engines valued about 8 billion US$ with a percentage share of 6% of exports to China. The value and percentage share of seven other products top export products are shown in this table.

Table 5: Top Ten Products U.S. Exports to China 2017

Rank from Top	Product	Value (Billion US$)	Percent of Total Exports
1.	Aeroplanes and other aircraft	$13.1	9.9%
2.	Soya beans	$12.5	9.4%
3.	Vehicles with only spark-ignition internal combustion reciprocating piston engine	$7.9	6.0%
4.	Electronic integrated circuits; Processors and controllers	$4.9	3.7%
5.	Oils	$4.0	3.0%
6.	Gold	$2.1	1.6%
7.	Machines and apparatus for the manufacture of semiconductor devices or of electronic integrated circuits	$1.9	1.5%
8.	Vehicles for transport of persons	$1.9	1.4%
9.	Petroleum gases and other gaseous hydrocarbons	$1.7	1.3%
10.	Copper	$1.6	1.2%
Total Top Ten	All top ten combined	$51.6	39.0%

Source: Viens (2019) and author calculations.

In terms of top products that the U.S. imports from China, the top ten products with their value and percentage share are shown in Table 6 for 2017. The top ten import product's combined value is 132.1 billion US$ with a percentage share of about 30% of all U.S. imports from China. The top ranked product is telephones for cellular and wireless networks values at 43.7 billion US$ that constitute about 10% of all U.S. imports from China. The second largest import item is data processing machines worth 37.2 billion US$ with a percentage share of 8.4%. this is followed in the third rank is various types of wheeled toys vehicles including tricycles and scooters. These are worth 11.3 billion US$ with a percentage shar of about 3% of all imports from China. The value and percentage share of the remaining top seven other products are shown in this table.

Figure 1 reports the annual time trend in the U.S. exports to China vis-à-vis U.S. imports from China from 1975 to 2019. This figure shows that U.S. trade (both exports and imports) with China has been relatively small and generally balanced with a negligible trend from 1970's until 1990 even after China began to open its economy to the U.S. and the world since 1979. China was an isolated closed economy since after its independence in 1949 but decided to come out of isolation and began to open its economy to the western world in 1979 under the leadership of the Chinese leader Deng Xiaoping (Islam and Dong, 2011). His economic reforms and opening of China with the U.S. and the rest of the world has contributed significantly to what China has become today, a strong and powerful economy with a dominant trading position in the global stage.

Table 6: Top Ten Products U.S. Imports from China 2017

Rank from Top	Product	Value (Billion US$)	Percent of Total Imports
1.	Telephones for cellular networks or for other wireless networks	$43.7	9.8%
2.	Automatic data processing machines	$37.2	8.4%
3.	Tricycles, scooters and similar wheeled toys & other toys	$12.3	2.8%
4.	Communication apparatus	$11.3	2.5%
5.	Games; articles for funfair	$5.4	1.2%
6.	Other Monitors	$4.7	1.1%
7.	Units of automatic data processing machines	$4.4	1.0%
8.	Electrical static converters	$4.6	1.0%
9.	Seats	$4.3	1.0%
10	Reception apparatus for television	$4.2	0.9%
Total Top Ten	All top ten combined	$132.1	29.7%

Source: Viens (2019) and author calculations.

Figure 1: U.S. Exports to and Imports from China 1975 - 2019
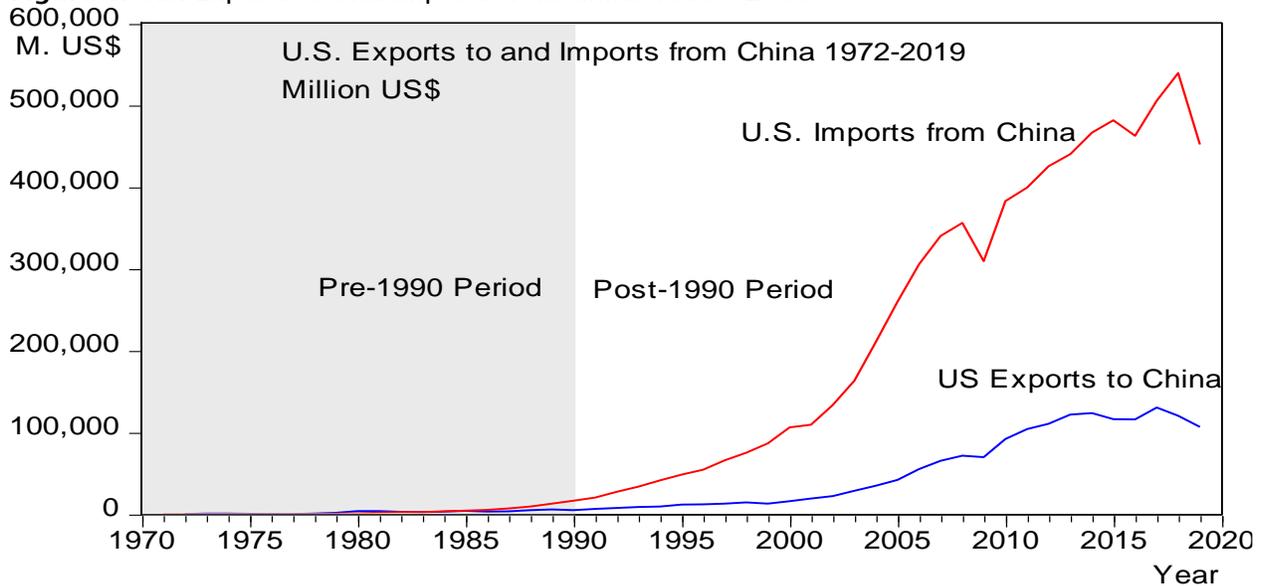
Source: Author calculation and drawing.

Figure 2 displays the U.S. trade balance with China vis-à-vis the U.S. trade balance with the entire world. Both curves stayed below the zero-balance line indicating that the U.S. suffers from trade deficit not only with China but also with the entire world. Since 1990's, both deficits kept increasing with the U.S. having bigger deficit with the world compared to that with China. However, this trend changed since 2005 with the deficit with the world narrowing while that with China kept increasing. This resulted in an increasing share of U.S. deficit with China relative to that of the world.

Figure 3 shows the U.S. trade deficit with the world decomposed by goods versus services. It shows that the U.S. generally has trade surplus in services but deficit in goods trade. As a result, the overall deficit is somewhat mitigated and reduced due to service trade surplus.

Figure 2: U.S. Trade Balance with China versus the World 1970 - 2019
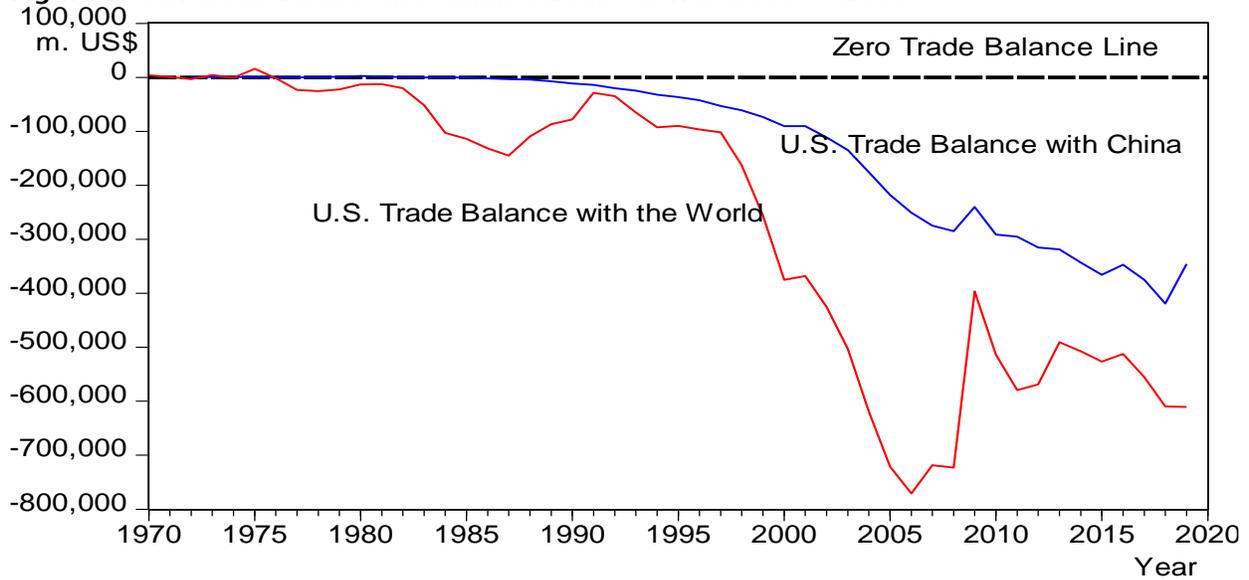
Source: Author calculation and drawing.

Figure 3: U.S. Trade Deficit with the World by Goods, Services, and Overall
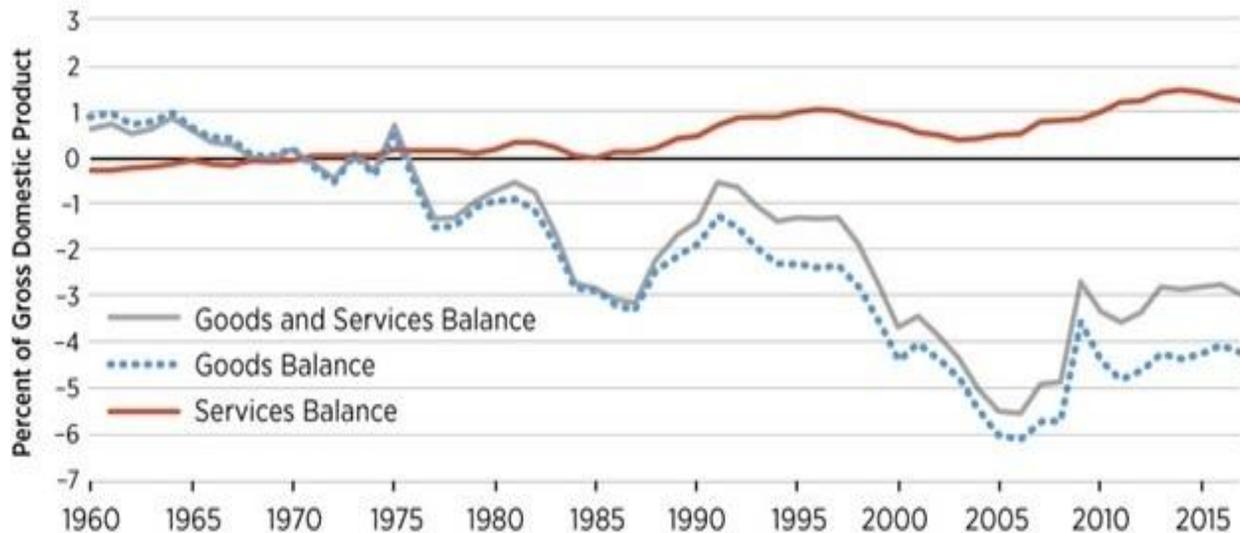
Source: Reinbold and Wen (2018), data from U.S. Bureau of Economic Analysis

III. Conclusion

This paper examined the hotly debated issue related to the persistent U.S. trade deficit with China. This preliminary version of the paper discusses the recent profile of the U.S. trade with China. It examined the recent trends and the direction of aggregate exports to and aggregate imports from China. It also discussed overall trade deficit with China, the largest trading partner of the U.S. in terms of combined exports and imports with each other. In terms of trade profile, the paper reports the fifteen to export partners and import partners of the U.S. along with the top fifteen countries with largest trade deficits and largest trade surpluses. Canada is the largest

export partner of the U.S. and has been so for many years. This if followed by Mexico and China in that order. In terms of imports, China is the largest source of U.S. import goods followed by Mexico and Canada. It is also found that U.S. exports to China has grown over time, but U.S. imports from China has grown even faster, causing the large and persistent U.S. trade deficit with that country.

It is also found that the U.S. has the largest trade deficit with China compared to any other country in the world that trades with the U.S. This persistent trade deficit with China has raised concerns among policymakers, political leaders, media, and public in the U.S. that has led to the recent U.S.-China trade war initiated by the former President Trump. While the exchange rate could be a major issue in explaining the persistence of U.S. trade deficit with China, this issue will be explored with rigorous econometric analysis in a more elaborate and rigorous empirical paper that is in progress. This paper will follow Rose (1990), Rose and Yellen (1989), Rahman and Islam (2006), Islam and Rana (20190 and Singh (2002), Soofi (2009) in developing a theoretical and an empirical formulation of the U.S. trade deficit with China and then empirically estimate the trade deficit function using annual long time series data for the U.S.-China trade.

References

IMF (2021), IMF Direction of Trade Statistics data base. Accessed at: www.imf.org. Islam, Anisul and Dong, Haiyi (2011), "A Brief Overview of China's Global Trade performance", Southwest Review of International Business Research, 22, 1, March 1-7.

Islam, Anisul M. and Rana, Sudhir (2019), "Impact of exchange rate movements and world output on Indian exports" included in Srivastava, A.K., Rana, S., Mohapatra, A.K. and Ram, M. (eds.), Advances in Management, Publisher Taylor and Francis, chapter 4, pp. 51-70.

Rahman, M. and Islam, A. (2006), "Taka-Dollar Exchange Rate and Bangladesh Trade Balance: Evidence on J-Curve or S-Curve?" (coauthor: Rahman), Indian Journal of Economics and Business, vol. 5, no. 2, 2006, pp. 279-288.

Rose, A.K. (1990), Exchange rates and the trade balance: some evidence from developing countries, *Economics Letters*, 3, 271-5.

Rose, A.K. and Yellen, J.L. (1989), Is there a J-curve? *Journal of Monetary Economics,* 24, 53-68.

Singh, T. (2002) India's trade balance: the role of income and exchange rates, *Journal of Policy Modeling*, 24, 437-52.

Soofi, A. (2009), "China's exchange rate policy and the United States' trade deficits", *Journal of Economic Studies*, Vol. 36 No. 1, pp. 36-65.

Reinbold, Brian and Wen, Yi 2018), "Understanding the Roots of the U.S. Trade Deficit". Accessed at:

https://www.stlouisfed.org/publications/regional-economist/third-quarter-2018/understanding-roots-trade-deficit

U.S. Census Bureau of (2021), "U.S. Top Trade Partners", U.S. of Census Bureau, Foreign Trade Statistics. Accessed at:

https://www.census.gov/foreign-trade/statistics/highlights/top/top2011yr.html

U.S. Congress (2013), "China's Currency Policy: An Analysis of the Economic Issues", U.S. Congressional Report. Accessed at:

https://www.everycrsreport.com/reports/RS21625.html#:~:text=China%20began%20to%20gradually%20reform,basis)%20against%20the%20U.S.%20dollar

Viens, Ashley (2019), Visualized: Ranking the Goods Most Traded Between the U.S. and China". Accessed from:

https://www.visualcapitalist.com/visualized-ranking-the-goods-most-traded-between-the-us-and-china/

World Bank (2021), World Development Indicators data base. Accessed at: www.worldbank.org

Global RMG Industry: A Study of Disaster Management in Response to the COVID 19 Pandemic

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Abstract

The $797 billion global ready-made garments (RMG) industry provides work for around 40-60 million people worldwide and approximately 75% of them are women. The COVID-19 pandemic has thrown a havoc on global garment supply chain and at the same time global brands and retailers are withdrawing their orders from their supplier factories. Many RMG factories in Bangladesh, Cambodia and Vietnam are suspending their production. As a result, more than 1 million worker have lost or been temporarily barred from their jobs and many more are at risk in losing their jobs in the coming months. Poor wages, hazardous and unhygienic workplaces and poor health already makes the RMG workforce highly susceptible to the worst effects of the Covid-19.

While a few countries like Vietnam has been very successful in containing the COVID 19 outbreak, the situation looks very grim for most RMG exporting countries. Initial report suggests mass confusion, inefficiency and scarcity of resources in managing the epic disaster have been severely affecting the industry manufacturers and the huge workforce. While countries are struggling in mitigating the affects with different rescue packages, the mitigation process will require all actors- governments, financial institutions, international organizations, brands and retailers, manufacturers, and other stakeholders- to work together without any delay.

My research provides useful insights into how the Covid-19 pandemic has impacted the RMG industry and what role different stakeholders including international institutions are playing in the disaster management process and how its policy implications might reshape the industry.

Keywords: Covid-19; disaster management; RMG industry; apparel

Research Outcomes

RMG workers: How many people have lost their jobs or has been temporarily suspended from work due to Covid-19, how has the pandemic affected the job security, payment of wages and benefits and occupational health and safety for those still working, how has it impacted the female workers in particular?

Manufacturers: How is factory management coping with the COVID-19 effect on cancellation of export orders in terms of ensuring safety, security and wages and benefits of their workers.

Governments: How big, smooth, swift and equitable is the distribution of the government rescue package benefits to factories and workers.

Brands/Retailers: How are the international brands and retailers coping with the shortage of demand and sales due to the pandemic.

International Institutions: How are the international institutions like ILO, IMF playing their roles in bringing all the key stakeholders to the table to survive the economic disruption caused by the pandemic.

Data Collection Mode: Secondary data source

The Prebisch-Singer Hypothesis with Comovements and Structural Changes

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Abstract

Prebisch (1950) and Singer (1950) set forth the hypothesis that, in the long run, there should be a declining trend in primary commodity prices relative to the prices of manufactured goods. This proposition has come to be known as the Prebisch-Singer (PS) hypothesis. The validity of this hypothesis has important implications for growth and the terms of trade in developing countries since such economies tend to rely most heavily on primary commodities as a major source of exports. This study is the first to deploy a comprehensive approach to examining the PS hypothesis that incorporates the common comovements based on dynamic factor models in analyzing the stationarity and trend of relative commodity prices through more efficient estimators. Specifically, we analyze the stationarity and trend of relative commodity prices through more efficient estimators via residual augmented least squares utilizing the estimated common factors. We employ a Fourier function suggested by Gallant (1981) and Enders and Lee (2012a) in the examination of the trend given the frequent fluctuations of relative commodity prices. The common trend and the estimated common factor show a significant negative trend in the sample spanning from 1900 to 2018. These results support the PS hypothesis. When examining individual series, we find that a negative trend is observed for 12 out of 24 relative commodity prices. A positive trend is found for only six series, while the remaining prices show no clear pattern. However, we observe the emergence of a positive trend in several relative commodity prices in the early 2000s.

Keywords: Prebisch-Singer; factor; cross-correlation; Fourier; structural changes; nonlinear trend; panel data models

JEL: C12; C23; F31

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Before-after COVID-19 Work

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Abstract
To what extent does working at home differ during conditions of COVID-19 from office work and to what extent do people want/intend to continue to work at home when companies are open to return to the office? Delone and McLean's findings on system reliability, operational quality, and data and service quality were used as the basis for developing a model of several types of satisfactions to test the extent to which individuals working at home would want to continue working at home when COVID-19 restrictions are lifted. Other types of satisfactions included computing resources, IT support, data security, and company added resources (for, e.g., communications). Preliminary results show mixed support for the model; full data collection and analysis should be complete by the time the conference is held.

Keywords: System satisfaction; field research; WarpPLS; structural equation modeling

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Reliability Assessment using WarpPLS in SEM Models with Composites and Factors

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Abstract

This presentation will discuss how one can conduct a reliability assessment in structural equation modeling (SEM) employing composites as well as factors. Composites are exact linear combinations of indicators, and thus do not explicitly account for measurement error. Factors are linear combinations of indicators and measurement error. Therefore, factor-based models tend to provide more accurate estimates of parameters in the context of SEM than composite-based models. As will be seen, reliability coefficients tend to be overestimated in composite-based models.

Keywords: Composites; factors; partial least squares; reliability; structural equation modeling; WarpPLS

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Minimum Sample Size Estimation using WarpPLS in SEM Employing Composites and Factors

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Abstract

This presentation will discuss how a researcher can estimate the minimum required sample size in a structural equation modeling (SEM) analyses employing composites and factors. Factors linearly aggregate indicators and measurement error; where the indicators are quantifications of question-statements answered by questionnaire respondents. Composites, on the other hand, linearly aggregate indicators, but not measurement error. Because of this, composite-based models normally yield less accurate estimates of parameters in the context of SEM than factor-based models. As will be seen, this leads to different minimum sample size requirements for models employing composites and factors, with the latter requiring lower sample sizes.

Keywords: Composites; factors; minim sample size; partial least squares; structural equation modeling; WarpPLS

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Employing WarpPLS in a Course on Data Analytics and Business Decision Modeling: First Student Project

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Abstract
This presentation will discuss the first of two student projects conducted as part of a data analytics and business decision modeling course, where data was gathered and analyzed through advanced statistical methods with the goal of informing organization decisions. The project employed the software WarpPLS to assess whether hypothesized predictors of a main dependent variable in a multiple regression model were statistically significant predictors. The causal relationships among predictors and dependent variable were hypothesized based on knowledge obtained from organizational stakeholders. The path coefficients among predictors and dependent variable were used to prioritize recommended actions, where stronger paths were recommended for higher priority actions. Additional tests were conducted to ensure confidence on the results of the analyses, including multicollinearity tests.

Keywords: Data analytics; WarpPLS; multiple regression; partial least squares; structural equation modeling; multicollinearity

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Employing WarpPLS in a Course on Data Analytics and Business Decision Modeling: Second Student Project

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Abstract
This presentation will discuss the second of two student projects conducted as part of a data analytics and business decision modeling course, where data was gathered and analyzed through advanced statistical methods with the goal of informing organization decisions. The project employed the software WarpPLS to assess whether hypothesized predictors of a main dependent variable in a multiple regression model were statistically significant predictors. The causal relationships among predictors and dependent variable were hypothesized based on knowledge obtained from organizational stakeholders. The path coefficients among predictors and dependent variable were used to prioritize recommended actions, where stronger paths were recommended for higher priority actions. Additional tests were conducted to ensure confidence on the results of the analyses, including multicollinearity tests.

Keywords: Data analytics; WarpPLS; multiple regression; partial least squares; structural equation modeling; multicollinearity

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Assessing the Competitiveness of Mexican and Brazilian Businesses: Are they Equal Rivals?

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Abstract

This study looks at the competitiveness of Mexican and Brazilian businesses in Latin American markets. Mexican and Brazilian businesses have a competitive edge when entering Latin American markets due to their location within Latin America, their shared cultures and customs, and the economic ties that already exist between these countries. This study assesses how competitive Mexican and Brazilian firms are, based on their type of business (manufacturing versus service) and their competitiveness (measured in three dimensions: efficiency, innovation, and human capital). Our results demonstrate that businesses in the two countries complement each other. In the manufacturing sector, Brazilian firms have a significant competitive edge over their Mexican firm rivals. In the service sector, Mexican firms show a significant competitive edge over their Brazilian firm rivals.

Keywords: Competitiveness; technology; efficiency; human capital; synergy; developing countries; innovation; business environment

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Capturing Untapped Alternative Markets in Latin America

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Abstract

Firms seek efficiencies to increase market share, while upholding their stakeholder management and corporate social responsibility (CSR) initiatives. From the strategic management perspective, foreign market entry must be tactical and sustainable; therefore, avenues such as Cause-Related Marketing (CRM) can serve to access novel, untapped market demographics. In scenarios of CRM, it is essential to determine if the message or product drives the purchase. As an extension to preliminary survey research results that indicate U.S. consumers did not have an increased, positive response to common consumer products promoting CRM efforts centered on the CSR Rainbow Flag initiative, this study will investigate several Latin American markets followed with a comparison of the U.S. results. The survey will examine the differences of consumers' attitudes, perception of brand trust, general brand image, CSR, and CRM. Although this demographic is often excluded in traditional marketing platforms, it conservatively represents 10% of Latin American society. Acknowledging and capturing this market segment can assist firm's primary objective to increase market share, along with contributing to an under-researched area. This research is grounded on considering the Transaction Costs that include marketing, information costs, and lost market share that foster inefficiencies.

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Are Corruption and Regulation Less Burdensome in Special Economic Zones?

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Abstract

Many developing country governments would like to attract investment and create jobs in manufacturing and high-tech industries. Heavy and unpredictable laws and regulations, frequent demands for bribes, high taxes, poor quality roads, slow and inefficient ports, and unreliable power, however, deter private investors. Moreover, political opposition and fiscal constraints prevent governments from resolving the many issues. Rather than attempting to solve everything everywhere, many governments have tried to fix problems in only small regions. These special economic zones (SEZs) often have lower taxes, more liberal regulation, and better infrastructure. This paper asks whether two facets of the investment climate—regulation and corruption—are less demanding in African and South Asian SEZs than elsewhere in the country. We find, on average, they are. Firms in the zones are less likely to pay bribes than firms outside the zones and spend less time dealing with inspections and regulations. However, this is not true in Africa; firms in African zones find corruption and regulation as troublesome as similar firms outside the zones.

I. Introduction

Many developing countries see private investment as an instrument for creating jobs, boosting exports, and diversifying into manufacturing and high-tech industries. Although some have successfully attracted private and foreign investors, others have struggled. Private firms do not want to risk entering countries with costly and unpredictable regulations, unreliable electricity and roads, high taxes on formal businesses, and corrupt officials demanding bribes. When countries have poor business environments, private firms will search for more attractive destinations.

The best way to increase private investment would be to provide all firms with a better investment climate. Solving all problems across the entire country, however, can be challenging. Existing firms with market power often oppose policies that make it easier to start new businesses. Improving roads, ports, and electricity is expensive and time-consuming, especially when the country has underinvested for many years. Cutting taxes on formal businesses can damage public finances in countries with many informal firms. And reducing the burden of regulation can undermine the country's other social and environmental goals. Completing all needed reforms can be overwhelming and costly.

Governments, therefore, often adopt a second-best approach. Rather than trying to fix everything everywhere, they set up special economic zones (SEZs) that offer a more attractive business environment in a limited area. The zones offer benefits that will attract new, and often foreign, investors who might otherwise go elsewhere. Firms in the zones often pay lower taxes,

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[2] The data used in this paper are from the Enterprise Surveys (http://www.enterprisesurveys.org), The World Bank. Responsibility for all errors, omissions, and opinions rests solely with the author.

avoid some regulations, get licenses more quickly, import raw materials more efficiently, and have more reliable power and transportation. The benefits differ across zones—although most offer either temporary or permanent tax benefits.

Despite their prominence, SEZs have not always successfully attracted new investment — especially in sub-Saharan Africa. With a few exceptions such as Mauritius, Farole (2011a) finds African zones have not significantly increased investment, created jobs, or boosted exports. Farole and Moberg (2014) argue the zones often fail because the investment climate in the African zones remains less attractive than in the countries' competitors.

This paper explores why some zones—including those in Africa—have failed to attract investment. It asks whether corruption and regulation—two important parts of the investment climate—are less onerous in the zones.[3] It uses data from the World Bank's Enterprise Surveys to compare the costs of corruption and regulation for firms inside and outside the zones. The advantage of Enterprise Survey data over other surveys is the Enterprise Surveys include identical data for firms inside and outside the zones.[4]

We find the zones have lighter and less corrupt regulatory regimes than other regions in the same countries.[5] SEZ firms spend less time, on average, dealing with government regulations and are less likely to pay bribes than other firms. This suggests the zones have reduced how much corruption and regulation cost firms.

Although some zones reduce the burden imposed by regulation and corruption, others do not. SEZs have been most successful in middle-income countries in South Asia. In contrast, firms inside and outside the zones in sub-Saharan Africa report similar problems with corruption and regulation, possibly explaining why many African SEZs have failed to attract significant investment.

II. Regulation and Corruption in Special Economic Zones

Special economic zones are areas within a country where taxes, regulations and other investment climate policies are different from elsewhere in the country. Farole (2011a, p. 17) defines special economic zones as:

> *"…spatially delimited areas within an economy that function with administrative, regulatory, and often fiscal regimes that are different (typically more liberal) than those of the domestic economy."*

Because governments want to use the zones to attract private and foreign investment, boost exports, and create jobs, they adopt policies that will make the zones more attractive to private investors.

The number of special economic zones, and the number of countries with zones, has been growing. Using data from the International Labour Organization's database, Farole (2011a) reports there were 176 zones in 47 countries in 1986. By 2006, there were 3,500 zones in 130 countries. By 2015, there were 4,300 zones (Hartwell, 2018).

As the number of zones has increased, they have become more diverse.[6] Different zones have different goals, offer different incentives, and cover different industries. The smallest zones can

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[3] This paper focuses on the bribes that zone firms pay. This is not, however, the only concern related to corruption in SEZs. Farole and Moburg (2014), for example, argue many land deals setting up the zones were 'rife with corruption.'

[4] Two earlier studies have used the same data to look at other questions. Davies and Mazhikeyev (2019) find firms inside SEZs are more likely to export than non-SEZ firms in open, but not closed, economies. Davies and others (2018) find firms in SEZs use energy more intensively than firms outside the zones.

[5] This is a different question than in Hartwell (2018), which compares corruption and other institutions in countries with and without zones.

[6] Farole (2011a) and Foreign Investment Advisory Service (2008) provide rigorous definitions of different types of zones including commercial free zones, free trade zones, bonded warehouses, export processing zones, freeports, and free enterprises.

contain only a single firm, while the largest can cover entire regions or even the entire country.[7] Some focus on a single sector such as textiles or high tech industry, while others are large and diversified (Stein, 2008). Some, such as free ports and export processing zones (EPZs), focus on exports while others do not.

Although different zones offer different benefits, tax incentives are among the most important. In Togo, twelve of seventeen firms in EPZs said tax incentives were the main reason they located in the zones.[8] Similarly, Kinyondo and others (2016) found firms in Tanzanian SEZs reported the same; tax incentives were the most important benefit they received. Finally, based on firm surveys in African SEZs, Farole (2011a) found tariffs and corporate taxes were the fourth and fifth most important criteria—out of eleven—when deciding where to invest.[9] Perhaps because of this, most special economic zones offer some tax incentives. In a survey of SEZs in twenty-six sub-Saharan African countries, Newman and Page (2017) found all but one offered some tax incentives to firms in the zones.

The zones do not only offer tax incentives; many also provide more liberal regulatory regimes.[10] Governments can allow firms to avoid complying with labor regulations, make hiring foreign managers and specialists easier, and reduce the number of required licenses—especially for importing and exporting (Farole, 2011b, p. 2). Some zones also have specialized agencies that can either provide firms with the licenses they need or can help them get licenses from other departments (Farole and Moberg, 2014; Moberg, 2018). These 'one-stop-shops' can also help firms handle other laws and regulations—something especially important for foreign investors who are unfamiliar with the country. Firms in African zones ranked regulation as the third most important criteria (of eleven) when deciding where to invest, while firms in non-African zones ranked it fifth (Farole, 2011a).

If these policies reduce the cost of complying with regulation, zone firms should spend less time dealing with regulation than similar firms in other parts of the country. To test this, we must control for other differences between firms that affect the regulatory burden. For example, managers of exporting firms might spend more time dealing with customs than managers of non-exporting firms. If zone firms are more likely to export, it might appear the zones failed to reduce the regulatory burden if we do not control for this. This leads to our first hypothesis:

> *Hypothesis 1: All else equal, we would expect firms inside the zones to spend less time dealing with government regulation than firms outside the zones.*

Policies that liberalize regulation and cut taxes might also reduce corruption. Managers might be willing to pay small bribes if doing so allows them to get an import license more quickly or avoid installing expensive equipment to comply with environmental regulations. But when approvals are faster and complying with regulations less expensive or time-consuming, managers might be less willing to pay bribes.[11] Similarly, when taxes are low, businesses have less reason to bribe tax inspectors. Reforms that lighten the regulatory burden, reduce taxes, and streamline licensing procedures will reduce managers' reasons to pay bribes and bureaucrats' ability to ask for them.

Empirical studies support the idea that improving regulation also reduces corruption. Corruption is a smaller problem in countries with lighter regulation (Knack and Keefer, 1995; Langbein and Knack, 2010; Mauro, 1995). Similarly, bribes are more common in countries where registering a business takes longer (Djankov and others, 2002; Svensson, 2005). Finally, firms

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[7] Baissac (2011) notes countries sometimes have stopped requiring firms locate in a specific area, instead making the zone a legal space that allows the firm to operate anywhere within the country.

[8] Author's calculations using data from the 2009 World Bank Enterprise Survey for Togo. Three of the remaining firms said 'other' and two said labor costs.

[9] Taxes ranked lower in the non-Africa SEZs covered by the survey—sixth and eighth for taxes and tariffs.

[10] Newman and Page (2017), for example, argue "to attract investment, the SEZ authority needs to be able to streamline government services (including licenses, registration, utility connections, dispute setting, and fee setting)"

[11] Some studies have suggested bureaucrats might even create burdensome regulations so they can earn bribes from firms trying to avoid the regulations (Faria and others, 2013; Shleifer and Vishny, 1993)

are more likely to pay bribes when they meet more often with government agencies and spend more time dealing with regulation (Clarke, 2011; Gonzalez and others, 2007).[12]

Governments can also use direct policies to target corruption in the zones. For example, they can set up watchdogs to monitor corruption, pay officials higher salaries, or have 'one-stop-shops' that can issue licenses and permits, bypassing corrupt officials in existing agencies.

Although reducing corruption is difficult, reforms that only affect the zones might face less political opposition. Privileged interest groups outside the zones might not oppose—or even know about—reforms that only affect zone firms. Governments can therefore experiment with controversial policies and programs in the zones that would be too politically difficult for the whole country (Auty, 2011; Moberg, 2015; Stein, 2008). For example, corruption watchdogs that focus only on zone officials might not threaten bribetakers outside the zones. Similarly, introducing a new licensing regime in a new SEZ will be less threatening if the government preserves the old regime elsewhere—especially if zone firms focus on exporting or competing with imports.[13] Officials working in agencies that process licenses might resist changes that simplify applications or eliminate licenses if they would lose their jobs or their opportunities to take bribes.[14] But if the reforms only affect new investors in the SEZs, they might feel less threatened. This leads us to our second hypothesis:

> Hypothesis 2: All else equal, we would expect firms inside the zones to be less likely to pay bribes than firms outside of the zones.

For the reasons outlined above, corruption and regulation should be less costly inside the zones. Newman and Page (2017), however, argue reform has not always succeeded in Africa. Among the SEZs and EPZs they studied, only some reduced regulation or improved institutions.

One problem is agencies that enforce regulations might not treat SEZ firms differently from other firms. First, overwhelmed agencies might find it difficult to quickly process applications from firms within the zones with their limited resources. Second, they might actively oppose the reforms. They might feel the regulations they enforce are important and so oppose reforms within the zones that weaken them. They might also oppose the reforms if they feel it affects their agency's power or undermines their ability to collect bribes. Third, they might lack the resources to effectively manage and enforce multiple regimes. The agencies might therefore fail to cooperate with zone officials.

One way to circumvent existing agencies is to set up independent agencies that directly regulate zone firms or help zone firms navigate the existing bureaucracy. Although 'one-stop-shops' seem attractive, these agencies often fail. One problem is they often lack the authority to issue licenses directly, instead relying on bureaucrats seconded from their parent agencies (Farole and Moberg, 2014). Because these officials' appointments remain in their parent agencies, their interests might not change. They, therefore, might fail to process licenses and permits efficiently. In other cases, the one-stop-shop can only route the applications to the relevant agencies rather than processing them directly. Without the same incentives as one-stop-shop officials, officials in the existing agencies might treat applications from zone firms in the same way as they treat other applications. Further, workers in the one-stop-shops might not have the institutional power or influence to force recalcitrant officials to behave any differently. Consequently, the process in the zones is often no faster or less costly than elsewhere—a common problem in Africa.[15] Newman and Page (2017) write: "there are few African countries where central SEZ authorities have the decision-making power over regulatory authorities" (p. 24). They note the one-stop shop in

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[12] Reducing corruption could be particularly important for foreign investors from high income countries where investors might be prosecuted in their home country if caught paying bribes (D'Souza, 2012). Foreign direct investment is negatively correlated with corruption (Egger and Winner, 2006; Habib and Zurawicki, 2002).

[13] See, for example, the discussion of EPZs in the Dominican Republic in Moberg (2018).

[14] Governments with limited resources sometimes use bribes to supplement officials' salaries (Cai and others, 2011). When bureaucrats cannot support themselves without taking bribes, they might resist reform. Consistent with this idea, Sato (2009) argues low or declining government salaries lead to corruption.

[15] Some observers, therefore, refer to 'one-stop-shops' as 'one-more-stop-shops' (Wells and Wint, 1993; World Bank, 2004).

Lesotho could not ensure officers from the various ministries worked together. They also note in other countries, including Tanzania, Nigeria, and Kenya, there was no formal institutional link between the agencies in the SEZs.

Another reason zones might not have lower regulatory burdens is they often make firms comply with extra rules (Moberg, 2015). For example, firms might need to hire enough local workers, export enough, or invest enough in the zones. The new requirements introduce new opportunities for corrupt bureaucrats to ask for bribes and for firms to offer bribes to avoid complying. Based on a survey of twenty-four firms in Tanzanian EPZs, Kinyondo and others (2016) report officials inspected the average firm thirteen times to ensure they were fulfilling zone requirements. Most requirements related to exporting or fulfilling policy and technical requirements.

In summary, firms might find regulation and corruption less costly inside SEZs than elsewhere in the country. First, governments often adopt reforms—simplified regulatory regimes and one-stop-shops—that could reduce the regulatory burden in the zones. Lighter and improved regulation—and lower taxes—might also reduce firms' incentives to pay bribes and officials' ability to demand them. Second, political opposition might be lower if the government implements reform only in the zones, especially when the SEZ firms are new entrants focused on exporting. If these reforms succeed, firms might find regulation and corruption to be lesser constraints in the SEZs. But reforms sometimes fail and, therefore, the zones might not have less regulation or corruption.

III. Data

This paper uses data from the World Bank's Enterprise Surveys (WBES). We use all surveys completed since 2006 that contain information on whether the firm is in an SEZ. The resulting data set has information on 50 low and middle-income countries in South Asia and sub-Saharan Africa (see appendix for list).

The WBES surveys include manufacturing, retail and other service firms with at least five workers. Because government agencies provide most lists for the sampling frames, the samples do not include informal or unregistered firms. Although the survey includes some firms with partial government ownership, it does not include fully government owned firms. Table 1 includes sample means of all the main variables in the analysis.

Table 1: Sample Statistics

	Means
Firm is in an SEZ	38%
Ave. percent of time spent dealing with regulation	6.3
% of firms reporting paying bribes	26%
Age of firm	17.6
Number of Workers	105.7
% of firms exporting	19%
% of firms foreign owned	5%
% of firms partly government owned	0%

Note: Based only on observations in the regression in column 3 of Table 2.

Special Economic Zones

This paper's main research questions are about regulation and corruption in the SEZs. The main independent variable shows whether the firm operates in an SEZ. The survey question reads: "Is your establishment located in an export processing or other industrial zone?" Before 2009, managers answered 'yes' or 'no'. After 2009, managers answered "export processing zone",

"other industrial zone" or "neither". The early surveys only tell us whether the firm is in a zone, not the type. In contrast, the later surveys also tell us whether the zone is an EPZ.

EPZs are zones that focus on attracting foreign investment in export-oriented manufacturing. The zones often impose restrictions on firms to ensure they do not compete with domestic firms.[16] The EPZs might have different levels of corruption and regulation than other industrial zones. EPZ authorities might be more likely to regulate zone firms directly or help them deal with outside bureaucrats. But EPZs might also have stricter rules about firm behavior. Rules about exporting, investing, and hiring local workers might increase the burden of regulation and provide opportunities for corruption in the EPZs.

Because corruption and regulation might be different in EPZs and other zones, we run two regressions. The first, which we can run for the whole sample, includes a single dummy indicating the firm is in any zone. The second, which we can only run for the later surveys, includes separate dummies for EPZs and other industrial zones. Because the early surveys did not collect enough information to construct the two dummies, the sample is smaller when we include both.

Because only the sub-Saharan African and South Asian surveys included the question on SEZs, we can only include these countries in the sample. Although the WBES questionnaire always asks some core questions, regional and country teams at the World Bank can add some questions. Although the regional teams in sub-Saharan Africa and South Asia chose to add the question about SEZs to their regional surveys, teams in Latin America, Europe and Central Asia, East Asia, and the Middle East and North Africa did not do the same.

Corruption

The dependent variables measure whether firms say they pay bribes and how much time managers spend dealing with government regulations. We focus on objective rather than subjective questions for two reasons. First, it is easier to quantify the difference between SEZs and the rest of the country when using objective questions. Second, things other than corruption and regulation might affect answers to subjective questions about them.[17]

The question on corruption reads:

> *We've heard that establishments are sometimes required to make gifts or informal payments to public officials to "get things done" with regard to customs, taxes, licenses, regulations, services etc. On average, what percent of total annual sales, or estimated total annual value, do establishments like this one pay in informal payments or gifts to public officials for this purpose? (World Bank, 2007)*

We use this question to make a dummy with a value 'one' if the manager reported firms must pay bribes. We focus on whether the manager says firms must pay bribes rather than on how much firms need to pay because earlier studies have found there are problems with the amounts they report. Managers can answer the question in local currency or as a percent of sales. Because the managers also report sales, we can calculate bribes either as a percent of sales or in local currency for all firms. Although it should not matter how the manager answers the question, it does (Clarke, 2011; Malomo, 2013). Firms that report bribes as a percent of sales report paying between four and fifteen times more than firms that report bribes in monetary terms. Further, this difference is not because of either observable or unobservable differences between firms that report bribes as a percent of sales and firms that report bribes in local currency (Clarke, 2011). This suggests either managers who report bribes as a percent of sales overreport them or managers who report bribes in local currency underreport them. Because we cannot compare the answers of managers who report in different ways, we focus on whether the firm paid a bribe.

Another important observation is the question asked what the manager thinks other firms do rather than what the firm does. The reason the survey does this is that it allows managers to report bribes without admitting they have done anything illegal. Although there are valid

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[16] See, for example, Moberg (2018) who discusses the political economy of the Dominican Republic's SEZs.
[17] See, for example, Clarke (2011).

questions about how firms respond to indirect questions, we will assume managers answer them thinking about their own firm.[18] We can justify this in three ways. First, managers might recognize the survey asks the question indirectly to protect them and that the interviewer really wants to know what they do—not what they think their competitors do (Johnson and others, 2002). Second, even if they do not recognize this, managers who pay bribes might believe others also pay bribes. This might be reasonable—people believe others act and think like they do even when others act and think differently (Ross and others, 1977).[19] Third, it is convenient to do this for expositional reasons. It is less clumsy to write "firms in SEZs are less likely to pay bribes" than to write "firms in SEZs believe firms like theirs are less likely to pay bribes.'

Zone firms were less likely to pay bribes than firms outside the zones. Whereas only 20 percent of firms in the SEZs reported paying bribes, about 30 percent of other firms did.

Regulation

The other dependent variable looks at how much time senior managers spend dealing with regulations, inspections and other legal requirements. The question reads:

> *In a typical week over the last year, what percentage of total senior management's time was spent on dealing with requirements imposed by government regulations? [By senior management I mean managers, directors, and officers above direct supervisors of production or sales workers. Some examples of government regulations are taxes, customs, labor regulations, licensing and registration, including dealings with officials and completing forms] (World Bank, 2007)*

Managers could spend all their time or no time dealing with regulation. Because of this, the amount is censored below at zero percent and above at 100 percent. In practice, few managers reported spending all their time dealing with government regulations (less than one percent), while many reported spending no time dealing with regulations (38 percent). Because of the censoring, we estimate the model as a two-sided Tobit model.

Firms inside and outside the zones spend similar time dealing with government regulations. On average, managers of zone firms said they spent 6.2 percent of their time dealing with regulations—only slightly lower than other firms' managers (6.3 percent).

IV. Econometric Model and Results

This section presents the econometric models we will use to test the hypotheses from Section II.

Econometric Model

The first model asks whether firms in special economic zones are less likely to pay bribes than other firms. The second asks whether firms in the zones spend less time dealing with government regulation than other firms.

To see whether SEZ firms are less likely to pay bribes, we assume the firm's propensity to pay bribes depends on whether it is in a zone and on other firm characteristics:

$$\text{Propensity to pay bribes}_{ij} = \alpha + \beta SEZ_{ij} + \gamma X_{ij} + \lambda_j + \varepsilon_{ij} \qquad (1)$$

We do not observe the manager's propensity to pay bribes. Instead, we only see whether they said firms like theirs pay bribes. As discussed in the previous section, we assume managers who

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[18] Earlier studies usually take this approach. See, for example, Clarke and Xu (2004); Johnson and others (2002), and Svensson (2003).

[19] This is called the false consensus effect.

pay bribes will be more likely to answer 'yes' when asked whether firms like theirs pay bribes. We assume the error term, ε_{ij}, has a normal distribution and so estimate the model as a Probit model:

$$\text{Firm answers 'yes' to question about bribes}_{ij} = \begin{cases} 1 & if & \text{Propensity}_{ij} > 0 \\ 0 & if & \text{Propensity}_{ij} \leq 0 \end{cases} \quad (2)$$

The dummy showing whether the firm operates in an SEZ (SEZ_{ij}) interests us most. We code the dummy as 1 for SEZ firms and 0 otherwise. The post-2009 surveys asked whether the zone was an EPZ or a different industrial zone. For these surveys, we can therefore include two dummies indicating the type of zone. Because the early surveys did not collect information on zone type, including the two dummies reduces sample size. If the zones have less corruption, the dummy's coefficient will be negative.

As well as the SEZ dummy, the regression includes several controls (X_{ij}). These include three dummies representing whether the firm has foreign owners, whether it exports, and whether the government partly owns it.[20] Second, the regression also controls for the firm's age and size.[21] Third, the model also includes 34 industry dummies at the four-figure ISIC 3.1 level to control for differences in regulation across industries. If firms in some industries meet with government officials more often, they might face more frequent demands for bribes. Finally, it includes country-year dummies to control for differences between countries that affect the likelihood firms pay bribes. For example, firms might be more likely to pay bribes when a country has worse institutions, less effective courts, or where civil service pay is low. Because the regressions include country dummies, we can interpret the results as comparing SEZ firms with other firms in the same countries.

To see whether the burden of regulation is lower in SEZs than outside them, we also run the following regression:

$$\text{Percent of time spent dealing with regulations}_{ij} = \alpha + \beta SEZ_{ij} + \gamma X_{ij} + \lambda_j + \varepsilon_{ij}$$

The dependent variable measures how much time senior managers spend dealing with regulations, inspections, and other legal requirements. The variable is greater than or equal to 0 percent—some managers spend no time dealing with government requirements—and less than 100 percent—although few managers spend all their time dealing with regulation. We therefore estimate the model as a two-sided Tobit model, which assumes the error, ε_{ij}, has a normal distribution.

The variable that most interests us is the SEZ dummy. If zone firms spend less time dealing with regulations, the dummy's coefficient will be negative. If the burden is higher in the zones—perhaps because SEZ firms must file extra paperwork related to export or labor requirements—it will be positive.

The regression also includes the firm-level controls and country dummies included in the previous regression. Because the country dummies control for differences between countries, we can interpret the SEZ dummy as the difference in the regulatory burden between SEZ firms and other firms in the same country.

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[20] Previous studies have found these are associated with the likelihood the firm pays bribes (Breen and others, 2017; Clarke and Xu, 2004; Rand and Tarp, 2012; Svensson, 2003)

[21] Size is measured by the number of workers. Previous studies have found large firms are more likely to pay bribes and pay more in bribes than do other firms (Breen and others, 2017; Rand and Tarp, 2012). We include a squared term to allow for a non-linear relationship. The firm's age might also affect whether firms pay bribes (Clarke, 2019).

Main Results

Table 2 shows results from the regressions for whether the firm paid a bribe and for the percent of time spent dealing with regulations. Table 3 shows the marginal differences for firms located in special economic zones and other firms.

Table 2: Difference in Bribes and Regulation in SEZs

	(1)	(2)	(3)	(4)
	Firm pays bribes (dummy)		% of time spent dealing with regulation	
Observations	20,491	13,579	23,428	15,818
Number of Country-Years	48	24	50	26
Sector Dummies	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes
Firms is in a special economic zone				
Firm is in special economic zone	-0.130***		-1.381***	
[dummy]	(-5.21)		(-4.23)	
Firm is in export processing zone		-0.312***		-6.261***
[dummy]		(-5.03)		(-6.23)
Firm is in industrial zone		-0.255***		-2.385***
[dummy]		(-7.68)		(-4.36)
Other firm characteristics				
Age of firm	-0.014	0.032*	0.845***	1.344***
[year, natural log]	(-1.00)	(1.72)	(4.65)	(4.56)
Number of workers	0.325***	0.336***	3.589***	3.809***
[natural log]	(8.28)	(6.84)	(7.44)	(5.06)
Number of workers squared	-0.038***	-0.042***	-0.350***	-0.375***
[natural log]	(-7.86)	(-6.82)	(-6.03)	(-4.15)
Firm is an exporter	0.139***	0.139***	6.159***	9.177***
[Dummy]	(4.55)	(3.64)	(15.61)	(14.71)
Firm is foreign owned	-0.148***	-0.059	0.848	2.363*
[Dummy]	(-2.93)	(-0.75)	(1.29)	(1.92)
Firm is partly government owned	-0.273	0.002	-0.488	-1.524
[Dummy]	(-1.59)	(0.01)	(-0.22)	(-0.37)
Pseudo R-Squared	0.205	0.104	0.0224	0.0236
H0: Coefficients on EPZ and other zones equal (X2[1])		0.76		13.9
(p-value)		0.38		0.00***

Source: Author's calculations based upon data from the World Bank Enterprise Survey data.
Note: t-statistics in parentheses. All regressions include country and sector dummies (ISIC 4-figure). The bribe variable is a dummy and so the model is a Probit model. The regulation variable is censored at 0 and 100 percent and so the model is a Tobit model.
***, **, * Statistically significant at 1%,5% and 10% significance levels.

Likelihood of Paying a Bribe

Consistent with the first hypothesis, the SEZ dummy's coefficient is negative and statistically significant. This suggests firms in special economic zones are less likely to pay bribes than other firms.

When we separate the zones into export processing and other industrial zones, the coefficients on both dummies are negative and significant. This suggests firms in both EPZs and other industrial zones are less likely to pay bribes than other firms. The coefficient is larger for EPZ firms than for firms in other industrial zones. The difference between the two, however, is not statistically significant ($\chi^2[1]$ = 0.76, p-value = 0.38).

Firms in zones are far less likely to pay bribes than other firms. The likelihood the average firm would pay a bribe would be 12.7 percent in an EPZ, 13.5 percent in some other industrial

zone, but 19.5 percent outside the zones.[22] The six-percentage point difference means non-zone firms were close to 50 percent more likely to report paying bribes.

The difference is smaller—although still significant—in the regression with a single SEZ dummy. The likelihood the average firm would pay a bribe would be 23.8 percent inside the zones but 27.1 percent outside the zones—a 3.3 percentage point difference. The weaker results for the single dummy could be due to sample differences—the earliest surveys did not ask about the type of zone. We explore this further in the robustness checks.

Table 3: Marginal Effects of Being in SEZs

	Probability that firm has paid bribe	% of time dealing with regulations
Firms in EPZs	12.7%	6.6
Firms in other Industrial Zones	13.8%	8.1
Firms outside of zones	19.5%	9.1
Difference between EPZ and non-SEZ firms	*-6.8%*	*-2.5*
Difference between firms in Industrial Zones and non-SEZ firms	*-5.8%*	*-1.0*
Firms in SEZs	23.8%	7.7
Firms outside of zones	27.1%	8.4
Difference between SEZ and non-SEZ firms	*-3.3%*	*-0.7*

Source: Author's calculations based upon data from the Zambia Business Survey MSME survey.
Note: Levels are calculated by calculating the probability that the firm pays a bribe/engages in a particular transaction for each observation assuming each firm is in an EPZ, then assuming each firm is in another industrial zone and then assuming that each firm is in neither type of zone. The probabilities for each firm are then averaged over all observations.

Time Spent Dealing with Regulation

Consistent with the second hypothesis, managers of SEZ firms spent less time dealing with regulations than managers of firms outside the zones. The SEZ dummy's coefficient and the EPZ and other zone dummies' coefficients are negative and significant. In contrast to bribes, however, firms in other industrial zones spend significantly more time dealing with regulations than do EPZ firms ($\chi^2[1] = 13.9$, p-value = 0.00).

These results might explain why SEZ firms are less likely to pay bribes. Because SEZ firms spend less time dealing with government officials, the officials might have fewer opportunities to ask for bribes. Further, when regulation is not too burdensome, managers might have less incentive to pay bribes to speed approvals or avoid complying.

Although the difference between SEZ firms and non-zone firms is significant, it is smaller than the difference for paying bribes—especially for firms in other industrial zones. The manager of the average firm would spend about 7.7 percent of his or her time dealing with regulations if in a zone but 8.4 percent if outside the zones. The difference is larger for firms in EPZs. The manager of the average firm would spend 6.6 percent of his or her time dealing with regulations if the firm were in an EPZ. But if not, he or she would spend more time dealing with regulation—9.1 percent if outside the zones and 8.1 percent if in a non-EPZ industrial zone.

Additional Results and Robustness Checks

In this sub-section, we look at differences between zone and non-zone firms in different groups of countries. We run separate regressions by region, then by income, and then by how corrupt the country is. We also run some robustness checks. Table 4 summarizes the results from these additional regressions. Full results are available in an appendix.

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[22] To calculate the differences, we calculate the likelihood each firm would pay a bribe assuming it were in an EPZ, in another industrial zone, and not in a zone. The average likelihood is then calculated averaging over all firms.

Table 4: Robustness Checks

Column	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable	**Corruption**			**Regulation**		
Coefficient on:	Special economic zone	Export processing zone	Other industrial zone	Special economic zone	Export processing zone	Other industrial zone
All	-0.130***	-0.312***	-0.255***	-1.381***	-6.261***	-2.385***
By Region						
Africa	0.037	0.008	-0.170**	1.503***	0.576	3.454**
South Asia	-0.267***	-0.554***	-0.315***	-3.364***	-9.366***	-4.006***
By Income Level						
Low income	0.023	-0.223**	-0.153*	0.350	-2.303*	0.835
Middle income	-0.219***	-0.340***	-0.268***	-3.259***	-8.254***	-3.429***
By income level and region						
Low-income Africa	0.096*	0.023	0.107	0.151	-2.931	-0.670
Low-income Asia	-0.067	-0.419***	-0.287***	0.734*	-0.366	2.172**
Middle-income Africa	-0.049	-0.033	-0.254***	3.121***	3.943	4.871**
Middle-income Asia	-0.344***	-0.594***	-0.314***	-6.264***	-13.569***	-5.507***
By Corruption						
High Corruption	-0.072**	-0.239***	-0.224***	1.106**	-0.969	2.274**
Low Corruption	-0.176***	-0.422***	-0.277***	-3.513***	-10.994***	-4.708***
Sample						
Small Sample	-0.265***	-0.312***	-0.255***	-3.056***	-6.261***	-2.385***

Source: Author's calculations based upon data from the World Bank Enterprise Survey data.
Note: Table reports coefficients from regressions like those in Table 2. The coefficient in column (1) corresponds to the regression in column (1) of Table 2, the coefficients in columns (2) and (3) correspond to column (2) of Table 2, the coefficient in column (4) corresponds to the regression in column (3) of Table 2 and the coefficient in column (5) and (6) corresponds to the regression in column (4) of Table 2. All regressions include control variables from Table 2 including country and sector dummies (ISIC 4-figure). The bribe variable is a dummy and so the model is a Probit model. The regulation variable is censored at 0 and 100 percent and so the model is a Tobit model.
***, **, * Statistically significant at 1%,5% and 10% significance levels.

Breakdown by Region

We first run separate models for Africa and Asia (see Table 4). The sample contains more African than Asian countries (39 compared with 9), but fewer African observations (8,318 compared with 12,154).

The results are weaker for Africa than for the whole sample. In Africa, SEZ firms are no more likely to pay bribes than non-zone firms. When the model includes two dummies—one for EPZs and one for other industrial zones—the EPZ dummy's coefficient remains insignificant. The other dummy's coefficient, however, is negative and significant.

The results for regulation are also weaker. Firms in African SEZs reported spending more, not less, time dealing with regulations than firms outside the zones. Senior managers would spend about 11.6 percent of their time dealing with government regulations at the average firm if it were in a zone compared with 10.7 percent if it were outside the zones. When we split the zones into EPZs and other zones, firms in other zones, but not firms in EPZs, report spending more time dealing with regulation.

In summary, firms in African SEZs do not face a lower regulatory burden than firms outside the zones and are no less likely to pay bribes. Thus, we do not find strong evidence supporting the idea the regulatory environment in Africa is better inside than outside the zones.

Results for South Asia

In contrast to Africa, firms in South Asian SEZs face better regulatory environments than firms outside the zones (see Table 4). They are less likely to pay bribes and spend less time dealing with regulations than firms outside the zones.

The regulatory environment is especially favorable in EPZs.[23] The likelihood the average firm would pay a bribe would be 7 percent if it were in an EPZ, compared with 11 percent if in a non-EPZ zone and 17 percent if outside a zone. Similarly, the manager of the average firm would spend 3.7 percent of their time dealing with government regulations if in an EPZ. By comparison, he or she would spend 5.4 percent if in a non-EPZ zone and 7.0 percent if not in a zone. In summary, and in contrast to Africa, firms in South Asian SEZs—and especially in South Asian EPZs—spend less time dealing with regulation and were less likely to pay bribes than South Asian firms outside the zones.

Results by Income

The results suggest SEZs have been more successful in South Asia than in Africa. Firms in South Asian SEZs were less likely to report paying bribes and reported spending less time dealing with regulation than other South Asian firms, while the same was not true in Africa. The South Asian sample, however, differs from the African sample in several ways. One way is the African sample is mostly from low-income countries (29 of 41 surveys) whereas the South Asian sample is more mixed (5 of 9 surveys are from low-income countries).[24] We, therefore, re-run the regressions by income class and then by income class and region.

SEZ firms in middle-income economies were less likely to report paying bribes and spent less time dealing with government regulations than similar firms outside the zones (see Table 4).[25] The differences between firms inside and outside the zones are large. The estimated likelihood the average firm would pay a bribe was 12.8 percent if it were in a zone compared with 17.5 percent if it were not. Similarly, we estimate, on average, managers would spend 7.3 percent of their time dealing with regulations if their firm were in a zone and 8.7 percent if not. Results are similar when we look at firms in EPZs and other industrial zones separately.

The results for low-income countries are more mixed. For the largest sample, when we do not distinguish between EPZs and other zones, SEZ and other firms were equally likely to pay bribes and spent similar time dealing with regulations. When we include two dummies, however, firms in both EPZs and other industrial zones were less likely to pay bribes than other firms. Firms in EPZs also spent less time dealing with government regulations. Even in the smaller sample with two dummies, however, the differences are smaller and less significant in low-income countries.

Breakdown by Income Class and Region

As a next exercise, we divide the sample into four groups: low-income African countries, low-income Asian countries, middle-income African countries, and middle-income Asian countries. Doing this makes the samples smaller (see appendix tables) and might therefore make it harder to find robust results, especially when we include the two dummies.

For middle-income Asian countries, we find a large difference between firms inside and outside SEZs. Firms inside SEZs were much less likely to report paying bribes and spent much less time dealing with government regulations than other firms. The estimated likelihood the average firm would pay a bribe was 8.5 percent if it were in a zone and 14.5 percent if not. Similarly, the estimated time the average firm's manager would spend dealing with regulation

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[23] We can reject the null hypothesis that the coefficients on the EPZ and other zone dummies are equal at a 1 percent level or higher in both regressions (p-values of 0.01 and 0.00). See bottom row of Table 7.

[24] Countries are classified based on World Bank criteria for low- and middle-income countries at the time the World Bank conducted the survey. We downloaded the World Bank's classification from the World Bank's webpage (https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups).

[25] Full results are available in an appendix.

would be 7.7 percent if in a zone and 5.3 percent if not. Results are similar in the smaller sample with two dummies.

For low-income countries in Africa, firms in SEZs were more, not less, likely to pay bribes than similar firms outside the zones. This result, however, did not hold in the smaller sample with two dummies. Further, SEZ and non-SEZ firms spend similar amounts of time dealing with regulations in these countries.

For middle-income African countries and low-income Asian countries, the results are more mixed. Firms in SEZs were less likely to report paying bribes, but the differences were sometimes not significant. Moreover, firms in SEZs reported spending more, not less, time dealing with regulations than other firms. But, again, the differences are not consistently significant.

In summary, the results are strongest for middle-income countries in South Asia. Firms in SEZs spent less time dealing with regulation and were less likely to pay bribes than firms outside the zones. Some evidence suggests firms in low-income countries in Asia and middle-income countries in Africa were also less likely to pay bribes—but the differences were not always significant. Firms inside zones in these countries, however, spend more, not less, time dealing with regulations. Finally, firms in zones in low-income countries in Africa were no less likely to pay bribes and spent no less time dealing with regulation than firms outside the zones.

High and Low Corruption Countries

Rather than splitting the sample into middle- and low-income countries, we next split it by how corrupt the country is. Ranking countries based on the share of firms that paid bribes might be problematic. Because more firms will pay bribes when there are more sample firms in the zones, splitting the sample based on survey data might introduce endogeneity. We, therefore, use the Worldwide Governance Indicators to split the sample (Kaufmann and others, 2009). Highly corrupt countries rank below the sample median on control of corruption, while less corrupt countries rank above it.[26]

Middle-income countries are less corrupt, on average, than low-income countries. Corruption was high in 9 of 21 middle income countries and 24 of 37 low income countries. The partial overlap between income and corruption could make it difficult to know which affects zone performance more.

When we run separate analyses for more and less corrupt countries, the results suggest corruption is lower in SEZs for both groups. The coefficients on the zone dummies are always significant and negative. They are, however, larger in the less corrupt countries.

The zone dummies' coefficients are also negative and significant in the less corrupt countries in the regulation regressions. This suggests the regulatory burden is lower inside the zones in less corrupt countries. In contrast, two of the coefficients are positive and statistically significant for more corrupt countries. This suggests, if anything, the regulatory burden in SEZs is greater in highly corrupt countries.

Restricting Sample to Smaller Sample

As discussed earlier, the results for the smaller sample suggest zones affect corruption and regulation more than do the results for the full sample. The larger effects, which are visible for both EPZ firms and firms in other industrial zones, could occur because the two samples include different countries. If SEZs are more effective in some countries than others—and the earlier results suggest they are—we might see different effects in the small and large samples. To see if this is the case, we rerun the regressions for the smaller sample including only a single dummy.

When we do this, the coefficient on the single SEZ dummy becomes larger than in the full sample in both the bribe and regulation regressions (see Table 4). In both cases, the single dummy's coefficient is close to, but slightly larger than, the coefficient for other industrial zones. This suggests the stronger results for the separate dummies are due to sample differences. One

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[26] Higher scores on control of corruption mean corruption is better controlled.

possible reason is South Asian firms dominate the small sample; they make up three-quarters of the small sample, but only 60 percent of the full sample. The stronger results in the small sample might therefore reflect that SEZs affect corruption and regulation more in South Asia than in Africa.

V. Discussion and Conclusions

Many developing countries, including most in Africa, have established special economic zones, aiming to attract investment, create jobs, and increase exports. By offering an appealing bundle of liberal regulation, low taxes, and high-quality infrastructure, governments hope to entice private and foreign firms into the zones. Despite these efforts, some zones have not attracted much private investment—especially in sub-Saharan Africa (Farole, 2011a). Foreign Investment Advisory Service (2008, p. 1) notes "successes in East Asia and Latin America have been difficult to replicate, particularly in Africa, and many zones have failed."

This paper suggests one reason for the zones' limited success—regulation is less burdensome only in some countries. Although we find less corruption and more liberal regulation inside some countries' zones, we do not find gains everywhere. The most consistent improvements were in middle-income countries in South Asia. Firms in South Asian zones were less likely to pay bribes and spent less time dealing with regulation. In contrast, firms in African SEZs spent more, not less, time dealing with regulation and were no less likely to pay bribes than other firms. If the zones fail to liberalize regulation, firms will only locate in the zones if they receive generous tax breaks or subsidies.

The limited success the zones have had in reducing corruption and liberalizing regulation is disappointing for another reason. Successful zones might convince government officials and voters to demand similar national reforms (Hartwell, 2018).[27] Stein (2008, p. 9), for example, writes: "The zone allows an experimental forum to develop habits that will lead to efficiencies that can be emulated elsewhere in the country while at the same time building up trust with foreign investors." But the zones will inspire reforms elsewhere, only if they succeed. This paper's results might therefore partly explain why earlier studies have found corruption is no lower in countries with SEZs (Hartwell, 2018).[28] If corruption is lower only in middle-income countries' zones, it is not surprising zones do not inspire reforms that reduce corruption in other countries.

This paper could be extended in several ways. One way to expand the analysis would be to collect similar data in other regions. SEZs might perform better elsewhere than they do in Africa. It would, therefore, be useful to collect similar data for other regions including East Asia and Latin America.

A second useful way to expand the analysis would be to collect better information on the zones and the benefits they offer. The gains were larger in export processing zones than in other industrial zones; EPZ firms reported spending less time dealing with regulation than firms in other zones. Unfortunately, we had little information on the zones, other than whether they were EPZs. More information on the zones might allow us to better understand what incentives and requirements work best.

References

Auty, R. 2011. Early reform zones: Catalysts for dynamic market economies in Africa. In T. Farole & G. Akinici eds., Special economic zones: Progress, emerging challenges, and future directions (pp. 207-226). Washington DC: World Bank.

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[27] Successful reforms in the zones might also create interest groups that support business-friendly reforms (Auty, 2011; Moberg, 2018). The zone firms might be a counterweight to entrenched interests such as government bureaucrats or import-substituting local industries.
[28] Although Hartwell (2018) finds property rights are better protected and it takes less time to import and export goods in countries with SEZs, he also finds corruption is higher in countries with SEZs.

Baissac, C. 2011. Brief history of SEZ and overview of policy debates. In T. Farole,ed., Special economic zones in Africa: Comparing performance and learning from global experiences (pp. 23-60). Washington DC: World Bank.

Breen, M., Gillanders, R., McNulty, G., and Suzuki, A. 2017. Gender and corruption in business. Journal of Development Studies 53(9): 1486-1501.

Cai, H., Fang, H., and Xu, L. C. 2011. Eat, drink, firms, government: An investigation of corruption from entertainment and travel costs of Chinese firms. Journal of Law and Economics 54(1): 55-78.

Clarke, G. R. G. 2011. Are managers' perceptions about constraints reliable? Evidence from a natural experiment in South Africa. Journal of Globalization and Development 2(1): 1-28.

Clarke, G. R. G. 2019. Is corruption a greater burden for registered MSEs? Evidence from Zambia. Review of Development Economics 23(4): 1604-1623.

Clarke, G. R. G., and Xu, L. C. 2004. Privatization, competition and corruption: How characteristics of bribe takers and payers affect bribes to utilities. Journal of Public Economics 88(9-10): 2067-2097.

D'Souza, A. 2012. The OECD anti-bribery convention: Changing the currents of trade. Journal of Development Economics 91(1): 73-87.

Davies, R. B., Edwards, T. H., and Mazhikeyev, A. 2018. The impact of special economic zones on electricity intensity of firms. The Energy Journal 39(1): 5-23.

Davies, R. B., and Mazhikeyev, A. 2019. The impact of special economic zones on exporting behavior. Review of Economic Analysis 11(2): 145-174.

Djankov, S., La Porta, R., Lopez-de-Silanes, F., and Shleifer, A. 2002. The regulation of entry. Quarterly Journal of Economics 117(1): 1-37.

Egger, P., and Winner, H. 2006. How corruption influences foreign direct investment: A panel data study. Economic Development and Cultural Change 54(2): 459-486.

Faria, H. J., Monetesinos-Yufa, H. M., Morales, D. R., Aviles B., C. G., and Brito-Bigott, O. 2013. Does corruption cause unencumbered business regulations? An IV approach. Applied Economics 45(1): 65-83.

Farole, T. 2011a. Special economic zones in Africa: Comparing performance and learning from global experiences. Washington DC: World Bank.

Farole, T. 2011b. Special economic zones: What have we learned. Washington DC: World Bank.

Farole, T., and Moberg, L. 2014. It worked in China, so why not in Africa? The political challenge of special economic zones. Wider Working Paper No. Helsinki, Finland: United Nations University World Institutes for Development Economics Research.

Foreign Investment Advisory Service. 2008. Special economic zones: Performance, lessons learned, and implications for zone development. Washington DC: World Bank.

Gonzalez, A., Lopez-Cordova, J. E., and Valladares, E. E. 2007. The incidence of graft on developing country firms. Policy Research Working Paper No. 4394.Washington DC: World Bank.

Habib, M., and Zurawicki, L. 2002. Corruption and foreign direct investment. Journal of International Business Studies 33(2): 291-307.

Hartwell, C. A. 2018. Bring the benefits of David to Goliath: Special economic zones and institutional improvement. Regional Studies 52(10): 1309-1321.

Johnson, S., McMillan, J., and Woodruff, C. 2002. Property rights and finance. American Economic Review 92(5): 1335-1356.

Kaufmann, D., Kraay, A., and Mastruzzi, M. 2009. Governance matters VIII: Governance indicators for 1996-2008. Policy Research Working Paper No. 4978.World Bank, Washington DC: World Bank.

Kinyondo, A., Newman, C., and Tarp, F. 2016. The role and effectiveness of special economic zones in Tanzania. WIDER working paper No. Helsinki, Finland: United Nations University World Institute for Development Economics Research (UNU-WIDER).

Knack, S., and Keefer, P. 1995. Institutions and economic performance: Cross-country tests using alternative institutional measures. Economics and Politics 7(3): 207-227.

Langbein, L., and Knack, S. 2010. The Worldwide Governance Indicators: Six, one, or none? Journal of Development Studies 46(2): 350-370.

Malomo, F. 2013. Factors influencing the propensity to bribe and size of bribe payments: Evidence from formal manufacturing firms in west Africa. Brighton, UK: University of Sussex.

Mauro, P. 1995. Corruption and growth. Quarterly Journal of Economics 110(3): 681-712.

Moberg, L. 2015. The political economy of special economic zones. Journal of Institutional Economics 11(1): 167-190.

Moberg, L. 2018. Liberalizing rent-seeking: How export processing zones can save or sink an economy. The Journal of Private Enterprise 33(4): 61-89.

Newman, C., and Page, J. M. 2017. Industrial clusters: The case for special economic zones in Africa. Helsinki, Finland: United Nations University (UNU), World Institute for Development Economics Research.

Rand, J., and Tarp, F. 2012. Firm-level corruption in Vietnam. Economic Development and Cultural Change 60(3): 571-595.

Ross, L., Greene, D., and House, P. 1977. The 'false consensus effect': An egocentric bias in social perception and attribution processes. Journal of Experimental Social Psychology 13(3): 279-301.

Sato, Y. 2009. How to deal with corruption in transitional and developing economies. Journal of Financial Crime 16(3): 220-228.

Shleifer, A., and Vishny, R. W. 1993. Corruption. Quarterly Journal of Economics 108(3): 599-617.

Stein, H. 2008. Africa, industrial policy and export processing zones: Lessons from Asia. Ann Arbor, MI: University of Michigan.

Svensson, J. 2003. Who must pay bribes and how much? Evidence from a cross section of firms. Quarterly Journal of Economics 118(1): 207-230.

Svensson, J. 2005. Eight questions about corruption. Journal of Economic Perspectives 19(3): 19-42.

Wells, L. T., and Wint, A. G. 1993. Don't stop with the one-stop shop: Foreign investment in a liberalizing third world. International Executive 35(5): 367-383.

World Bank. 2004. World Development Report 2005: A better investment climate for everyone. Washington DC: World Bank.

World Bank. 2007. The World Bank enterprise survey core module (2007). Washington DC: World Bank.

Appendix

Table 5: List of Countries in Main Model

Country	Obs.	EPZ and other zones separate?	Country	Obs.	EPZ and other zones separate?
Afghanistan 2014	246	Yes	Kenya 2007	395	No
Angola 2006	211	No	Madagascar 2009	319	Yes
Angola 2010	58	Yes	Malawi 2009	136	Yes
Bangladesh 2007	1,482	No	Mali 2007	301	No
Bangladesh 2013	1,390	Yes	Mali 2010	58	Yes
Benin 2009	65	Yes	Mauritania 2006	80	No
Bhutan 2009	241	No	Mauritius 2009	170	Yes
Botswana 2006	43	No	Mozambique 2007	340	No
Botswana 2010	84	Yes	Namibia 2006	104	No
Burkina Faso 2009	188	Yes	Nepal 2013	472	Yes
Burundi 2006	102	No	Niger 2009	98	Yes
Cameroon 2009	211	Yes	Nigeria 2007	945	No
Cape Verde 2009	81	Yes	Nigeria 2014	1,733	Yes
Central African Republic 2011	25	Yes	Pakistan 2007	802	No
Chad 2009	103	Yes	Pakistan 2013	529	Yes
Côte d'Ivoire 2009	311	Yes	Rwanda 2006	58	No
Dem. Republic of Congo 2006	148	No	Rwanda 2011	58	Yes
Dem. Republic of Congo 2010	106	Yes	Senegal 2007	259	No
Eritrea 2009	107	Yes	South Africa 2007	678	No
Ethiopia 2011	165	Yes	Sri Lanka 2011	495	Yes
Gambia 2006	31	No	Swaziland 2006	66	No
Ghana 2007	291	Yes	Tanzania 2006	267	No
Guinea 2006	125	No	Togo 2009	99	Yes
Guinea Bissau 2006	47	No	Uganda 2006	290	No
India 2014	8,511	Yes	Zambia 2007	304	No

Note: Observations are the number of observations in the regression in column 3 of Table 2.

Table 6: Difference in Bribes and Regulation in SEZs, Africa only

	Firm pays bribes (dummy)		% of time spent dealing with regulation	
Observations	8,318	3352	9260	4175
Number of Country-Years	39	18	41	20
Sector Dummies	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes
Firms is in a special economic zone				
Firm is in special economic zone	0.037		1.503***	
[dummy]	(0.99)		(2.86)	
Firm is in export processing zone		0.008		0.576
[dummy]		(0.08)		(0.28)
Firm is in industrial zone		-0.170**		3.454**
[dummy]		(-2.53)		(2.46)
Other firm characteristics				
Age of firm	-0.023	0.079**	0.035	-0.045
[year, natural log]	(-1.14)	(2.31)	(0.12)	(-0.06)
Number of workers	0.275***	0.191**	5.243***	7.656***
[natural log]	(4.63)	(2.27)	(6.53)	(4.46)
Number of workers squared	-0.038***	-0.030**	-0.572***	-0.814***
[natural log]	(-4.76)	(-2.56)	(-5.39)	(-3.53)
Firm is an exporter	0.198***	0.288***	5.129***	9.247***
[Dummy]	(4.58)	(4.61)	(8.28)	(6.67)
Firm is foreign owned	-0.110**	-0.046	0.452	0.022
[Dummy]	(-2.02)	(-0.52)	(0.60)	(0.01)
Firm is partly government owned	-0.244	0.118	1.723	-1.164
[Dummy]	(-1.27)	(0.42)	(0.64)	(-0.19)
Pseudo R-Squared	0.140	0.122	0.0201	0.0242
H0: Coefficients on EPZ and other zones equal (X2[1])		2.70		1.63
(p-value)		0.10		0.20

Source: Author's calculations based upon data from the World Bank Enterprise Survey data.
Note: t-statistics in parentheses. All regressions include country and sector dummies (ISIC 4-figure). The bribe variable is a dummy and so the model is a Probit model. The regulation variable is censored at 0 and 100 percent and so the model is a Tobit model. Income classifications are based on the World Bank's rankings for the year of the survey.
***, **, * Statistically significant at 1%,5% and 10% significance levels.

Table 7: Difference in Bribes and Regulation in SEZs, South Asia only

	Firm pays bribes (dummy)		% of time spent dealing with regulation	
Observations	12,154	10,207	14,168	11,643
Number of Country-Years	9	6	9	6
Sector Dummies	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes
Firms is in a special economic zone				
Firm is in special economic zone	-0.267***		-3.364***	
[dummy]	(-7.75)		(-8.03)	
Firm is in export processing zone		-0.554***		-9.366***
[dummy]		(-6.51)		(-8.28)
Firm is in industrial zone		-0.315***		-4.006***
[dummy]		(-8.05)		(-7.29)
Other firm characteristics				
Age of firm	0.001	0.021	1.370***	1.607***
[year, natural log]	(0.06)	(0.94)	(5.80)	(5.33)
Number of workers	0.456***	0.484***	2.802***	2.049**
[natural log]	(8.05)	(7.44)	(4.46)	(2.52)
Number of workers squared	-0.050***	-0.056***	-0.262***	-0.183*
[natural log]	(-7.43)	(-7.18)	(-3.61)	(-1.94)
Firm is an exporter	0.053	0.015	6.736***	8.311***
[Dummy]	(1.19)	(0.29)	(12.99)	(12.51)
Firm is foreign owned	-0.277*	0.115	3.222*	8.599***
[Dummy]	(-1.65)	(0.55)	(1.89)	(3.48)
Firm is partly government owned	-0.579		-5.157	-6.613
[Dummy]	(-1.40)		(-1.26)	(-0.91)
Pseudo R-Squared	0.246	0.0788	0.0149	0.0124
H0: Coefficients on EPZ and other zones equal (X2[1])		7.71		22.21
(p-value)		0.01		0.00

Source: Author's calculations based upon data from the World Bank Enterprise Survey data.
Note: t-statistics in parentheses. All regressions include country and sector dummies (ISIC 4-figure). The bribe variable is a dummy and so the model is a Probit model. The regulation variable is censored at 0 and 100 percent and so the model is a Tobit model. Income classifications are based on the World Bank's rankings for the year of the survey.
***, **, * Statistically significant at 1%,5% and 10% significance levels.

Table 8: Difference in Bribes and Regulation in SEZs, Low Income only

	Firm pays bribes (dummy)		% of time spent dealing with regulation	
Observations	8,479	2,846	9,902	3,635
Number of Country-Years	32	14	34	16
Sector Dummies	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes
Firms is in a special economic zone				
Firm is in special economic zone	0.023		0.350	
[dummy]	(0.60)		(0.97)	
Firm is in export processing zone		-0.223**		-2.303*
[dummy]		(-2.06)		(-1.65)
Firm is in industrial zone		-0.153*		0.835
[dummy]		(-1.80)		(0.76)
Other firm characteristics				
Age of firm	-0.035*	0.021	-0.037	-0.623
[year, natural log]	(-1.70)	(0.55)	(-0.20)	(-1.28)
Number of workers	0.340***	0.403***	3.885***	5.142***
[natural log]	(5.98)	(4.32)	(7.74)	(4.29)
Number of workers squared	-0.035***	-0.044***	-0.289***	-0.314**
[natural log]	(-5.09)	(-3.93)	(-4.86)	(-2.24)
Firm is an exporter	0.235***	0.349***	2.164***	2.877***
[Dummy]	(5.02)	(4.30)	(5.05)	(2.61)
Firm is foreign owned	-0.268***	-0.343***	0.615	2.498*
[Dummy]	(-4.30)	(-3.07)	(1.09)	(1.88)
Firm is partly government owned	-0.530**		1.214	4.079
[Dummy]	(-2.30)		(0.62)	(0.60)
Pseudo R-Squared	0.192	0.116	0.0369	0.0467
H0: Coefficients on EPZ and other zones equal (X2[1])		0.29		3.60
(p-value)		0.59		0.06*

Source: Author's calculations based upon data from the World Bank Enterprise Survey data.
Note: t-statistics in parentheses. All regressions include country and sector dummies (ISIC 4-figure). The bribe variable is a dummy and so the model is a Probit model. The regulation variable is censored at 0 and 100 percent and so the model is a Tobit model. Income classifications are based on the World Bank's rankings for the year of the survey.
***, **, * Statistically significant at 1%,5% and 10% significance levels.

Table 9: Difference in Bribes and Regulation in SEZs, Middle Income only

	Firm pays bribes (dummy)		% of time spent dealing with regulation	
Observations	11,973	10,688	13,526	12,183
Number of Country-Years	16	10	16	10
Sector Dummies	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes
Firms is in a special economic zone				
Firm is in special economic zone	-0.219***		-3.259***	
[dummy]	(-6.66)		(-6.05)	
Firm is in export processing zone		-0.340***		-8.254***
[dummy]		(-4.39)		(-6.15)
Firm is in industrial zone		-0.268***		-3.429***
[dummy]		(-7.28)		(-5.28)
Other firm characteristics				
Age of firm	0.005	0.037*	1.605***	1.942***
[year, natural log]	(0.25)	(1.71)	(5.19)	(5.32)
Number of workers	0.348***	0.362***	3.362***	3.643***
[natural log]	(6.11)	(6.01)	(4.05)	(3.84)
Number of workers squared	-0.046***	-0.048***	-0.404***	-0.435***
[natural log]	(-6.38)	(-6.26)	(-3.99)	(-3.77)
Firm is an exporter	0.032	0.057	9.381***	11.159***
[Dummy]	(0.78)	(1.29)	(14.35)	(14.71)
Firm is foreign owned	0.004	0.226*	0.951	1.483
[Dummy]	(0.04)	(1.93)	(0.67)	(0.73)
Firm is partly government owned	0.117	0.205	-3.435	-3.433
[Dummy]	(0.45)	(0.78)	(-0.77)	(-0.67)
Pseudo R-Squared	0.0994	0.0959	0.0170	0.0149
H0: Coefficients on EPZ and other zones equal (X2[1])		0.85		12.83
(p-value)		0.36		0.00***

Source: Author's calculations based upon data from the World Bank Enterprise Survey data.
Note: t-statistics in parentheses. All regressions include country and sector dummies (ISIC 4-figure). The bribe variable is a dummy and so the model is a Probit model. The regulation variable is censored at 0 and 100 percent and so the model is a Tobit model. Income classifications are based on the World Bank's rankings for the year of the survey.
***, **, * Statistically significant at 1%,5% and 10% significance levels.

Table 10: Difference in Bribes and regulation in SEZs, Low Income Africa only

	Firm pays bribes (dummy)		% of time spent dealing with regulation	
Observations	5,097	1,172	5,510	1,527
Number of Country-Years	27	11	29	13
Sector Dummies	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes
Firms is in a special economic zone				
Firm is in special economic zone	0.096*		0.151	
[dummy]	(1.94)		(0.27)	
Firm is in export processing zone		0.023		-2.931
[dummy]		(0.15)		(-1.14)
Firm is in industrial zone		0.107		-0.670
[dummy]		(0.72)		(-0.31)
Other firm characteristics				
Age of firm	-0.038	-0.013	-0.182	-1.142
[year, natural log]	(-1.48)	(-0.25)	(-0.65)	(-1.31)
Number of workers	0.323***	0.244	4.168***	6.573**
[natural log]	(3.89)	(1.41)	(4.64)	(2.48)
Number of workers squared	-0.045***	-0.041*	-0.387***	-0.648*
[natural log]	(-4.00)	(-1.71)	(-3.26)	(-1.89)
Firm is an exporter	0.249***	0.442***	1.612**	-0.537
[Dummy]	(4.11)	(3.51)	(2.39)	(-0.25)
Firm is foreign owned	-0.172**	-0.278**	0.926	3.537*
[Dummy]	(-2.57)	(-2.21)	(1.32)	(1.86)
Firm is partly government owned	-0.540**		3.579	8.790
[Dummy]	(-1.98)		(1.37)	(0.96)
Pseudo R-Squared	0.149	0.162	0.0355	0.0416
H0: Coefficients on EPZ and other zones equal (X2[1])		0.18		0.54
(p-value)		0.67		0.46

Source: Author's calculations based upon data from the World Bank Enterprise Survey data.
Note: t-statistics in parentheses. All regressions include country and sector dummies (ISIC 4-figure). The bribe variable is a dummy and so the model is a Probit model. The regulation variable is censored at 0 and 100 percent and so the model is a Tobit model. Income classifications are based on the World Bank's rankings for the year of the survey.
***, **, * Statistically significant at 1%,5% and 10% significance levels.

Table 11: Difference in Bribes and Regulation in SEZs, Low Income Asia only

	Firm pays bribes (dummy)		% of time spent dealing with regulation	
Observations	3,367	1,664	4,392	2,108
Number of Country-Years	5	3	5	3
Sector Dummies	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes
Firms is in a special economic zone				
Firm is in special economic zone	-0.067		0.734*	
[dummy]	(-1.03)		(1.77)	
Firm is in export processing zone		-0.419***		-0.366
[dummy]		(-2.60)		(-0.26)
Firm is in industrial zone		-0.287***		2.172**
[dummy]		(-2.66)		(2.18)
Other firm characteristics				
Age of firm	-0.013	0.060	0.191	-0.089
[year, natural log]	(-0.37)	(1.13)	(0.82)	(-0.19)
Number of workers	0.556***	0.618***	4.381***	5.054***
[natural log]	(6.27)	(5.14)	(8.10)	(4.80)
Number of workers squared	-0.051***	-0.062***	-0.333***	-0.318***
[natural log]	(-5.05)	(-4.51)	(-5.55)	(-2.70)
Firm is an exporter	0.198**	0.234**	2.517***	4.613***
[Dummy]	(2.54)	(2.11)	(5.10)	(4.51)
Firm is foreign owned	-0.749***	-0.073	1.979	5.971**
[Dummy]	(-3.50)	(-0.22)	(1.58)	(2.41)
Firm is partly government owned	-0.231		-3.832	-57.150
[Dummy]	(-0.46)		(-1.26)	(-0.04)
Pseudo R-Squared	0.260	0.108	0.0298	0.0386
H0: Coefficients on EPZ and other zones equal (X2[1])		0.52		2.51
(p-value)		0.47		0.11

Source: Author's calculations based upon data from the World Bank Enterprise Survey data.
Note: t-statistics in parentheses. All regressions include country and sector dummies (ISIC 4-figure). The bribe variable is a dummy and so the model is a Probit model. The regulation variable is censored at 0 and 100 percent and so the model is a Tobit model. Income classifications are based on the World Bank's rankings for the year of the survey.
***, **, * Statistically significant at 1%,5% and 10% significance levels.

Table 12: Difference in Bribes and Regulation in SEZs, Middle Income Africa only

	Firm pays bribes (dummy)		% of time spent dealing with regulation	
Observations	3,204	2,161	3,750	2,648
Number of Country-Years	12	7	12	7
Sector Dummies	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes
Firms is in a special economic zone				
Firm is in special economic zone	-0.049		3.121***	
[dummy]	(-0.87)		(2.97)	
Firm is in export processing zone		-0.033		3.943
[dummy]		(-0.25)		(1.27)
Firm is in industrial zone		-0.254***		4.871**
[dummy]		(-3.28)		(2.55)
Other firm characteristics				
Age of firm	0.007	0.138***	0.410	0.883
[year, natural log]	(0.21)	(3.06)	(0.65)	(0.82)
Number of workers	0.226***	0.176*	7.082***	8.404***
[natural log]	(2.65)	(1.81)	(4.67)	(3.61)
Number of workers squared	-0.033***	-0.027*	-0.812***	-0.861***
[natural log]	(-2.81)	(-1.94)	(-4.04)	(-2.68)
Firm is an exporter	0.139**	0.260***	9.178***	13.769***
[Dummy]	(2.20)	(3.50)	(7.70)	(7.31)
Firm is foreign owned	-0.003	0.262*	0.059	-2.660
[Dummy]	(-0.03)	(1.92)	(0.03)	(-0.81)
Firm is partly government owned	0.304	0.400	-6.104	-10.534
[Dummy]	(1.02)	(1.26)	(-1.00)	(-1.25)
Pseudo R-Squared	0.109	0.117	0.0124	0.0158
H0: Coefficients on EPZ and other zones equal (X2[1])		2.53		0.08
(p-value)		0.11		0.77

Source: Author's calculations based upon data from the World Bank Enterprise Survey data.
Note: t-statistics in parentheses. All regressions include country and sector dummies (ISIC 4-figure). The bribe variable is a dummy and so the model is a Probit model. The regulation variable is censored at 0 and 100 percent and so the model is a Tobit model. Income classifications are based on the World Bank's rankings for the year of the survey.
***, **, * Statistically significant at 1%,5% and 10% significance levels.

Table 13: Difference in Bribes and Regulation in SEZs, Middle Income Asia only

	Firm pays bribes (dummy)		% of time spent dealing with regulation	
Observations	8,745	8,510	9,776	9,535
Number of Country-Years	4	3	4	3
Sector Dummies	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes
Firms is in a special economic zone				
Firm is in special economic zone	-0.344***		-6.264***	
[dummy]	(-8.19)		(-9.95)	
Firm is in export processing zone		-0.594***		-13.569***
[dummy]		(-5.68)		(-9.13)
Firm is in industrial zone		-0.314***		-5.507***
[dummy]		(-7.31)		(-8.48)
Other firm characteristics				
Age of firm	0.006	0.008	1.740***	1.764***
[year, natural log]	(0.25)	(0.33)	(4.95)	(4.89)
Number of workers	0.522***	0.542***	1.114	1.159
[natural log]	(6.37)	(6.53)	(1.09)	(1.12)
Number of workers squared	-0.065***	-0.066***	-0.154	-0.153
[natural log]	(-6.44)	(-6.55)	(-1.27)	(-1.25)
Firm is an exporter	-0.092	-0.079	8.816***	9.195***
[Dummy]	(-1.57)	(-1.34)	(11.22)	(11.48)
Firm is foreign owned	-0.005	0.100	1.981	6.132*
[Dummy]	(-0.02)	(0.37)	(0.63)	(1.73)
Firm is partly government owned			-7.136	-5.471
[Dummy]			(-0.98)	(-0.67)
Pseudo R-Squared	0.0490	0.0505	0.0135	0.0102
H0: Coefficients on EPZ and other zones equal (X2[1])		7.27		30.47
(p-value)		0.00***		0.00***

Source: Author's calculations based upon data from the World Bank Enterprise Survey data.
Note: t-statistics in parentheses. All regressions include country and sector dummies (ISIC 4-figure). The bribe variable is a dummy and so the model is a Probit model. The regulation variable is censored at 0 and 100 percent and so the model is a Tobit model. Income classifications are based on the World Bank's rankings for the year of the survey.
***, **, * Statistically significant at 1%,5% and 10% significance levels.

Table 14: Difference in Bribes and Regulation in SEZs, High Corruption Countries only

	Firm pays bribes (dummy)		% of time spent dealing with regulation	
Observations	8,363	4,360	10,327	5,669
Number of Country-Years	27	15	28	16
Sector Dummies	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes
Firms is in a special economic zone				
Firm is in special economic zone	-0.072**		1.106**	
[dummy]	(-1.97)		(2.33)	
Firm is in export processing zone		-0.239***		-0.969
[dummy]		(-2.80)		(-0.63)
Firm is in industrial zone		-0.224***		2.274**
[dummy]		(-4.06)		(2.22)
Other firm characteristics				
Age of firm	-0.045**	0.051*	0.188	0.050
[year, natural log]	(-2.15)	(1.71)	(0.69)	(0.09)
Number of workers	0.303***	0.285***	4.837***	6.123***
[natural log]	(5.90)	(4.40)	(7.69)	(5.32)
Number of workers squared	-0.030***	-0.031***	-0.421***	-0.506***
[natural log]	(-4.72)	(-3.76)	(-5.59)	(-3.60)
Firm is an exporter	0.236***	0.297***	6.212***	10.253***
[Dummy]	(5.46)	(5.46)	(11.20)	(9.89)
Firm is foreign owned	-0.252***	-0.116	0.247	0.658
[Dummy]	(-3.55)	(-1.11)	(0.27)	(0.35)
Firm is partly government owned	-0.317	0.170	-1.639	-3.348
[Dummy]	(-1.48)	(0.58)	(-0.58)	(-0.57)
Pseudo R-Squared	0.160	0.0611	0.0234	0.0265
H0: Coefficients on EPZ and other zones equal (X2[1])		0.03		3.65
(p-value)		0.09		0.06

Source: Author's calculations based upon data from the World Bank Enterprise Survey data.
Note: t-statistics in parentheses. All regressions include country and sector dummies (ISIC 4-figure). The bribe variable is a dummy and so the model is a Probit model. The regulation variable is censored at 0 and 100 percent and so the model is a Tobit model. Corruption is based on scores from the World Governance Indicators' scores for the year of the survey. Countries below the sample median are treated as high corruption and countries above the sample median are treated as low corruption.
***, **, * Statistically significant at 1%,5% and 10% significance levels.

Table 15: Difference in Bribes and Regulation in SEZs, Low Corruption Countries only

	Firm pays bribes (dummy)		% of time spent dealing with regulation	
Observations	12,087	9,167	13,101	10,149
Number of Country-Years	21	9	22	10
Sector Dummies	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes
Firms is in a special economic zone				
Firm is in special economic zone	-0.176***		-3.513***	
[dummy]	(-5.06)		(-7.68)	
Firm is in export processing zone		-0.422***		-10.994***
[dummy]		(-4.45)		(-8.09)
Firm is in industrial zone		-0.277***		-4.708***
[dummy]		(-6.40)		(-7.27)
Other firm characteristics				
Age of firm	0.015	0.018	1.247***	1.671***
[year, natural log]	(0.77)	(0.76)	(5.10)	(4.91)
Number of workers	0.405***	0.454***	2.095***	1.712*
[natural log]	(6.24)	(5.58)	(2.81)	(1.67)
Number of workers squared	-0.053***	-0.058***	-0.245***	-0.204*
[natural log]	(-6.56)	(-5.80)	(-2.72)	(-1.68)
Firm is an exporter	0.028	-0.004	5.724***	8.055***
[Dummy]	(0.64)	(-0.08)	(10.17)	(10.29)
Firm is foreign owned	-0.017	0.058	1.185	2.846*
[Dummy]	(-0.24)	(0.46)	(1.28)	(1.75)
Firm is partly government owned	-0.296		-0.813	-4.015
[Dummy]	(-1.02)		(-0.24)	(-0.66)
Pseudo R-Squared	0.0824	0.0541	0.0217	0.0212
H0: Coefficients on EPZ and other zones equal (X2[1])		2.33		21.45
(p-value)		0.13		0.00***

Source: Author's calculations based upon data from the World Bank Enterprise Survey data.
Note: t-statistics in parentheses. All regressions include country and sector dummies (ISIC 4-figure). The bribe variable is a dummy and so the model is a Probit model. The regulation variable is censored at 0 and 100 percent and so the model is a Tobit model. Corruption is based on scores from the World Governance Indicators' scores for the year of the survey. Countries below the sample median are treated as high corruption and countries above the sample median are treated as low corruption.
***, **, * Statistically significant at 1%,5% and 10% significance levels.

Table 16: Difference in Bribes and Regulation in SEZs, Low Corruption Countries only

	Firm pays bribes (dummy)		% of time spent dealing with regulation	
Observations	13,579	13,579	15,818	15,818
Number of Country-Years	24	24	26	26
Sector Dummies	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes
Firms is in a special economic zone				
Firm is in special economic zone	-0.265***		-3.056***	
[dummy]	(-8.44)		(-5.90)	
Firm is in export processing zone		-0.312***		-6.261***
[dummy]		(-5.03)		(-6.23)
Firm is in industrial zone		-0.255***		-2.385***
[dummy]		(-7.68)		(-4.36)
Other firm characteristics				
Age of firm	0.032*	0.032*	1.364***	1.344***
[year, natural log]	(1.74)	(1.72)	(4.63)	(4.56)
Number of workers	0.335***	0.336***	3.786***	3.809***
[natural log]	(6.82)	(6.84)	(5.03)	(5.06)
Number of workers squared	-0.041***	-0.042***	-0.378***	-0.375***
[natural log]	(-6.81)	(-6.82)	(-4.17)	(-4.15)
Firm is an exporter	0.137***	0.139***	9.035***	9.177***
[Dummy]	(3.60)	(3.64)	(14.50)	(14.71)
Firm is foreign owned	-0.061	-0.059	2.104*	2.363*
[Dummy]	(-0.77)	(-0.75)	(1.72)	(1.92)
Firm is partly government owned	-0.003	0.002	-1.886	-1.524
[Dummy]	(-0.01)	(0.01)	(-0.46)	(-0.37)
Pseudo R-Squared	0.104	0.104	0.0234	0.0236

Source: Author's calculations based upon data from the World Bank Enterprise Survey data.
Note: t-statistics in parentheses. All regressions include country and sector dummies (ISIC 4-figure). The bribe variable is a dummy and so the model is a Probit model. The regulation variable is censored at 0 and 100 percent and so the model is a Tobit model. Corruption is based on scores from the World Governance Indicators' scores for the year of the survey. Countries below the sample median are treated as high corruption and countries above the sample median are treated as low corruption.
***, **, * Statistically significant at 1%,5% and 10% significance levels.

Does Corruption Moderate the Relationship between Beliefs and Activism Intention in the VBM model? Evidence from Mexico and the United States

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Abstract

Over the years, Stern's Values-Norms-Beliefs Model has explained activism behavior involving environmental problems. Specifically, it posits that values, beliefs, and norms all form a causal chain that predict activism intentions. Past research has found that this model has been quite useful in explaining activism intentions in industrialized Northern European countries and in the United States. On the other hand, research into activism intentions suggests that consumers in developing countries in the "Global South" are less inclined to get involved in protesting an environmental problem. This research argues that corruption may moderate the relationship between beliefs and activism intention and can explain why activism intentions are not readily activated in developing countries like Mexico when compared to consumers in the United States.

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Crises Response Strategies in Higher Education Institutions

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Abstract

This study describes effective leader crisis response strategies for higher education institutions and its impact on students' satisfaction and perceived reputation. Higher education institutions can gain from understanding crisis response strategies due to the reputational threat that occurs during a crisis. Crisis in higher education institutions challenges academics and affects student's perceptions of their institutions. This research addresses students as potential stakeholders of higher education institutions who have the power to influence the reputation of their institution when they are unsatisfied. A framework is proposed to give an understanding of how leadership communication and situational crisis communication theory (SCCT) crisis response strategies affect how students will react in a crisis. An effective and efficient leader crisis response strategy will lead to positive perceptions of the crisis and a positive institutional reputation. Finally, the propositions are discussed in terms of how it contributes to organization theory and management practice.

Keywords: Crisis; crisis communication; crisis response strategy; reputation; SCCT; leader communication; students

I. Introduction

Generally, higher education institutions pass through a number of inevitable crisis (Wu, 2020). Higher education institutional crises can be defined and classified by several circumstances, such as the degree of responsibility, the form of damage, stakeholder's engagement, the pattern of institutional operations, and prevailing organizational reputation (Marsen, 2020). Higher educational institutions have faced various crises over the past few years (Gainy, 2009), and students and institutions are vulnerable to crisis outcomes (Watson, 2000). Crises that have occurred include crises of alcohol and drugs, weapons and violence, student discipline issues, student and staff deaths, severe weather, and natural disasters (Gainy, 2009). The vulnerability of crisis responses results in harm to institutions and individuals in many ways, such as harm to staff, students, and visitors (Watson, 2000). There is a demand for effective crisis management to prevent this kind of harm caused by crises. Institutional crises, like-alcohol and drugs, weapons and violence, and so on, have tremendously impacted academic operations (Gainy, 2009). To deal with these crises, institutions must take special action such as disciplinary action programs, special training programs, counseling, and follow-up programs with parents or guardians.

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Higher educational institutional crisis management becomes effective based on the efficient manner in which leaders respond. During a crisis such as Covid-19, higher educational institutions undergo financial decline causing new budget constraints (Smith, 2013). Due to budget pressures, academic institutions may cut down on costs and reduce other opportunities for existing and potential students and may increase the cost of tuition for students whereby students bear the burden for the financial constraints (Smith, 2013). As a result, students who cannot really afford educational expenses will stop enrolling or disenroll from the school (Smith, 2013). So, the rate of educational enrollment decreases. To manage higher educational institutional crises, management should implement strategies that are different in the manner in which communication and relationships with internal and external parties occur (Gainy, 2009).

Typically, crises in higher education institutions fall under performance crisis, disaster crisis, violence crisis, ethical crisis (Marsen, 2020), and financial crisis (Wu, 2020). When there is a performance crisis, higher education institutions may not be able to conduct regular hours of academic operations. A disaster crisis occurs when any sort of natural disaster like covid-19 happens or any other natural disaster. Violence or attack crises occur when higher education institutions' reputation is criticized by the media (Morris & Goldsworthy, 2012). Violence crises have been emerging rapidly in higher education institutions, which mainly involves shootings and killings in higher education institution premises. Any means of crisis higher education institutions face conflicts with their social norms and values (Morris & Goldsworthy, 2012). Monetary crisis connotes the crucial financial situation higher education institutions struggle with to balance their budgets due to several reasons, such as insufficient tuition fees from students, infrequent funding from outside sources, and so on (Wu, 2020).

Covid-19 is a disaster crisis that has currently affected higher educational institutions and their students (Marsen, 2020). The Covid-19 pandemic devastated all the major sectors of the economy and brought strict attention to the management of higher education institutions around the world (Gigliotti, 2019). The pandemic situation created challenges such as negative effects on reputations, hindrance to in-person class academic instruction, enhanced leadership responsibilities, and commitments for related departments. The pandemic also necessitated quick and relevant responses from leaders (Gigliotti, 2019). The Covid-19 crisis is currently long-term, and its end is uncertain. Due to the pandemic, higher education institutions have postponed in-person classes and institutional events, converted to virtual learning systems, restricted international student travel, and physical meetings and appointments. (Gigliotti, 2019).

Crisis may be defined as a threat to operations and needs to be handled properly; otherwise, it will lead to negative outcomes (Combs, 2007). Crisis management is a critical role for organizations where leaders have a significant position to address and defend the crisis outcomes in several ways (Combs, 2007). Crisis communication involves the actions and decisions of both experts and intellectuals in overcoming crisis situations through enacting policy and effective interactive communication (Marsen, 2020). Generally, leaders are mandated to know and understand a crisis situation before proceeding to take action (Clampitt, Berk & Williams, 2002). Leader strategic communication has a significant impact on managing the catastrophic situation of crises effectively (Mayfield & Mayfield, 2004). Notably, effective crisis response strategy is one of the obvious and vital decisions for leaders to communicate among concerned parties in order to effectively face the existing and potential crisis and eliminate possible risks (LSA Global, 2020).

Effective crisis response strategy during a crisis is not an easy phenomenon (Holton, Edmondson & Niu, 2020). However, once leaders actively participate in tackling the crisis and communicating with necessity, clarity, and sympathy (Holton, Edmondson & Niu, 2020), a crisis situation can be managed. Hence, the necessity of crisis response inspires leaders to make decisions at once, according to the crisis situation. On the other hand, ineffective leadership communication during a crisis is detrimental in several ways, such as: creating misperception among the stakeholders and management, frustration, inefficiencies, disengagement, low-performance, and conflict among related stakeholders (Holton, Edmondson & Niu, 2020). The goal of this study is to contribute to the scholarly knowledge of effective crisis response strategies for higher education institutions to protect and restore its reputation due to negative outcomes students react to from a crisis. The relationship between students' perceived satisfaction and institution reputation has not gained much attention in the literature. Many studies found in the

field of higher education institutions have given much attention to satisfaction, perceived quality, value, and loyalty individually or collectively, but student satisfaction and institutions reputation, which in turn impacts institution financial performance, remain understudied jointly or individually (Palacio et al., 2002).

Figure 1: Crises Response Strategies
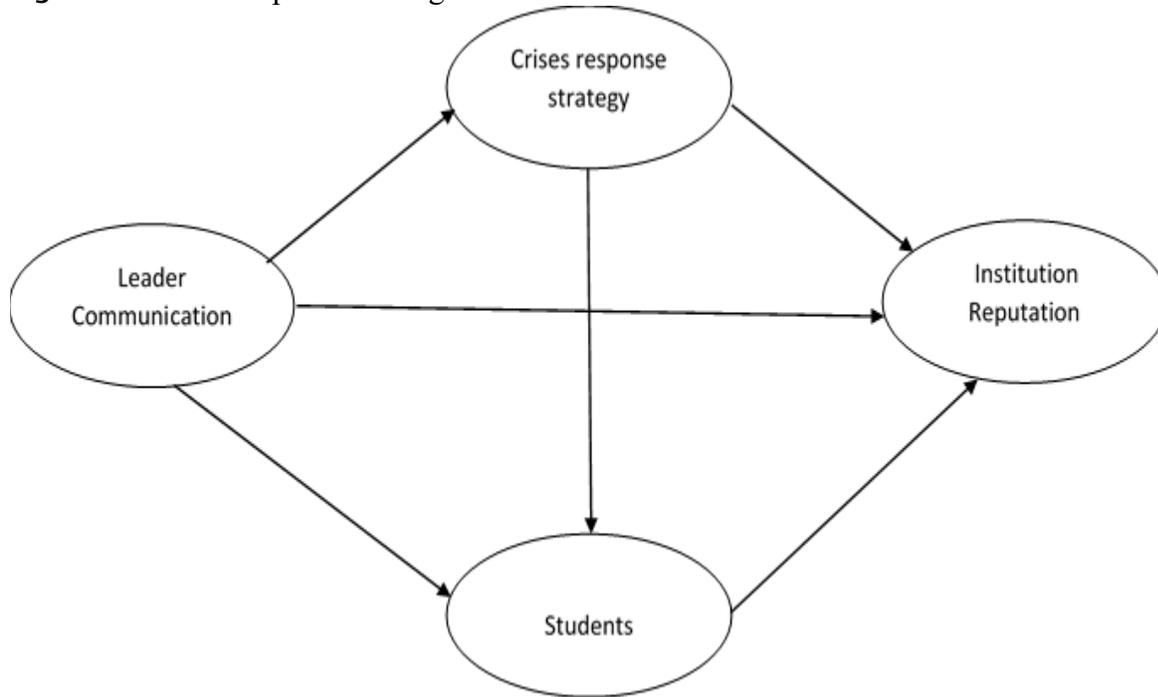
Propositions
1a: Leader communication- Crises response strategy
1b: Leader Communication- Institutions Reputation
1c: Leader Communication- Students
2a: Crises response strategy- Institutions Reputation
2b: Crises response strategy- Students
2c: Students- Institutions Reputation

Higher education institutions' reputation has gained a developing interest in the academic interest of corporate communication. However, most research has focused on the institution as a transmitter and ignored the recipient, the students. Students have perceived reputation of their educational institutions that range from teaching, management, and institution services which could be adequate or inadequate. They either view their institution in a positive or negative light; hence it is essential for higher education institutions to take into account studying their reputation and continuous reputation formation, which plays a vital role in competitive advantage for higher education institutions that would not want to distort their future (Parameswaran & Glowacka, 1995). Mostly, this paper focuses on leadership communication and situational crisis communication theory to examine crisis in higher education institutions. This paper will discuss the literature review of these response strategies and propositions, followed by contributions and conclusion of the research topic.

II. Literature Review and Framework

Crisis and Higher Education Institution Reputation

Crisis is an unforeseen occurrence that interrupts an organization's processes and is a danger to its reputation (Coombs, 2007). Crises are harmful to students emotionally, financially, and even physically. Also, Coombs (1998) mentions that the effects of a crisis and how it is handled by the leadership of the higher educational institutions can result in huge damages that enable students to perceive their institution's reputation negatively. If reputation is perceived as unfavorable, students can minimize or dislodge from how they interact with their institutions, especially when they are potential victims of the crises. When crises occur in higher education institutions, management stands a lot to lose from its effects (Coombs, 1996). The damage that could be caused springs from loss of financial support to inadequate student enrollment or decline in enrollment, where many students transfer or drop out. Students can also propagate negative comments about their institutions, and this can cause many of their peers to severe ties with it (Coombs, 2007).

Reputation

Reputation is an assessment of how stakeholders get meaning of how properly their organization meets their expectations (Wartick, 1992). Students are higher education institutions' stakeholders, and their expectation of how favorable or unfavorable the behavior of their institution is in response to a crisis is vital because their behavior can affect the institution's reputation (Bryson, 2004). Reputation is an intangible asset, and it is valuable and widely recognized by students (Fombrun & Van Riel, 2004). Higher education institutions' reputation gathers positive comments from students, financial investors, and it creates top talent and competitive advantage (Carmeli & Tishler, 2005). Reputation is evaluative; therefore, students will compare the information they have about how their institution is handling a crisis and compare it with other institutions to find out if their institution meets their expectations for managing and handling the crises (Fombrun & Van Riel, 2004). When the institution fails to meet the desired expectations, gaps persist (Reichart, 2003), thereby creating negative perceptions in the long run.

Reputation and Financial Performance

When higher institutions have a good reputation, it enables the institution to have consistent profits and sustained financial performance (Roberts & Dowling, 2002). Hence, Roberts and Dowling (2002) conclude that reputation impacts the current and future financial performance of institutions. Reputation is a perception of the extent an organization is regarded in high esteem, and this perception is a global view (Weiss, Anderson, & MacInnis, 1999). Therefore, it is an organizational attribute by which students perceive their institution as good or bad. Williams (2005) states that business reputation is how stakeholders perceive their organization and how the business responds to their stakeholders. As a result of this, leaders of institutions engage in various strategic activities to improve their institution's reputation (Fombrun, 1996). According to Podolny (1994), management sets associations to engage and form partnerships that enable the transfer and benefit of their organizational reputation. Shamsie (2003) found support of a positive relationship between reputation and firm performance (Fombrun & Shanley, 1990). According to Cabral (2012), an institution's financial performance is contingent on its reputation, and the reputation is dependent on the institution's strategies to sustain and improve it.

Reputation and Students Satisfaction

An essential and efficient strategy that sustains and improves an institution's long-term reputation is improving customer satisfaction (Anderson & Sullivan, 1993). Galbreath and Shum (2012) approve that reputation is a result of customer satisfaction. Customer satisfaction is the degree of how services and products offered by an institution meet the customers' expectations (Ahmed, Gul, Hayat, & Qasim, 2001). Matzler and Hinterhuber (1998) have stated that various institutions use this measure as an indicator of performance; therefore, high institutional performance levels are affected by high customer satisfaction. Anderson, Fornell, and Rust (1997) found out that customer satisfaction leads to a high level of return on investment and thus high financial performance because satisfied customers are most likely to patronize the institution more frequently. Additionally, satisfied customers increasingly become loyal (Keh, 2009) to an institution offering and introducing others to the institution. Gupta (2002) states that the critical mechanisms of competitive advantage are customer satisfaction and reputation.

Also, a significant relationship between reputation and competitive advantage was found in an empirical study by Awang and Jusoff (2009). This competitive advantage enables differentiation from competitors. Therefore, from these studies, it may be concluded that a positive association between customer satisfaction and reputation has an impact on an institution's competitive advantage, which has a positive impact on an institution's financial performance. For the purpose of this study, customer satisfaction here has been considered as students' satisfaction, which could be an outcome of the adequate or inadequate teaching services and academic support offered to students from their higher institutions (Palacio et al., 2002).

Since reputation is valued, students will value being associated and being enrolled with a higher institution that has a good reputation (Roberts & Dowling, 2002). This implies a cost advantage to higher education institutions as students are interested in being enrolled in higher institutions with a good reputation (Roberts & Dowling, 2002). Even more favorably, since the firm has a positive reputation, students' perception of the institution will be positive (Goldberg & Hartwick, 1990). They will believe their academics and interests will be positive in occurrences of crisis hazards and communication and delivery of recovery strategies in the situation of crisis will be exceptional (Dowling, 2001) because reputation is an indication of the quality of an institution's services and students pay to be enrolled in reputable educational institutions, and all institutions nevertheless are characterized with uncertainty such as crisis (Shapiro, 1983).

Reputation and Legitimacy

Allen and Caillouet (1994) mention certain manners and behaviors that organizations should exhibit which need to be consistent with the approved and consented societal norms and expectations. Therefore, when organizations follow the norms of society and meet up to the expectations required, they are considered legitimate. An organization that is legitimate ensures they are seen as worthy of their business operations in the society, and they avoid problems and criticisms with their stakeholders (Finet, 1994; Massey, 2001). When a crisis occurs, it becomes more often than not a destruction of the expectations of the society and also a destruction of its normative systems.

Perceived Reputation by Students and Legitimacy

Reputation and legitimacy are assessments of approval of an institution's activities (Deephouse & Carter, 2005; Elsbach, 2006). Traditional norm dictates that all institutions require legitimacy, but reputation is advantageous even though not necessary but vital (King & Whetten, 2008).

When an institution conforms to the social expectations related with a certain populace, they acquire legitimacy, and in contrast, reputation is comparing institutions with its competitors (Deephouse & Carter, 2005). According to King and Whetten (2008), the comparisons of both are grounded in the ideals that stakeholders use to evaluate the suitability and quality of an

institution's behavior. Legitimacy expresses the laws, moral and social norms that institutions obey, and these norms are relevant and held dominant by institutions (Tyler & Fagan, 2008). Institutions view these laws and norms as their moral obligation and cooperate willingly in achieving them. The cooperation to act on these laws and norms is also with respect to institutions' authorities and stakeholders (Tyler, 2004). Institutions are charged with the responsibility to adhere and comply with them, in that stakeholders rely on these internalized values (Tyler, 2004).

Students' perceptions of the legitimacy of their higher education institutions form based on the manners in which leaders and management of higher education institutions exercise their authority and if the exercise of authority is perceived as being reasonable and reputable (Jacobsen, 2015). Students are potential stakeholders of higher education institutions, and they have the power of word of mouth to influence alumni and other prospective students with their evaluations on unreasonable events and actions exercised by their institutions. This negative event can affect their institution's reputation. More so, students compare their institution with other institutions and can switch enrollment if they perceive the reputation to be unfavorable to them. Students are evaluative of the quality of decision making of their institutions in times of crisis; the decisions that are being made based on the facts of the crisis and how their institutions apply moral norms and rules during this situation are all evaluated and account for viewing their institution as reputable (Jacobsen, 2015). Students also evaluate decisions on tuition fees to ensure they get value for their money in times of crisis. Additionally, students will have perceived evaluations on the quality of consideration of their views in times of crises and how it affects them, the interpersonal treatment they receive from management, and the respect attributed to them during the hard times. (Tyler & Fagan, 2008). The legitimacy that higher education institutions exercise is critical to their encounter with students (Gau & Brunson, 2010). An important legitimate law in times of crisis is allowing students to participate in the procedures of the outcome of the situation. This participation is critical to students' perceived evaluation of their institution's reputation (Tyler, 2004). Students also evaluate their institutions in terms of the laws being fair to all involved in the crisis. All students should be treated equally with fairness (Herbert, 2006).

Students expect to be regarded with respect by their institution's authorities (Jacobsen, 2015). In times of crisis, the demonstration of compassion and concern is vital, and the consideration of students' rights is important to the evaluation of how they perceive their institution's reputation. All of these factors contribute to enhancing the institution's legitimacy as a result.

Reputation and Perceived Leader Competence

Reputation is an organization's store of perpetual social assets, which signifies the quality of the relationship that has been recognized and built with stakeholders and how the stakeholders view the organization as a brand (Fombrun & Van Riel, 2004). A crisis can cause damage to reputation; thus, reputation social capital will be lost. An organization that has a positive reputation preceding a crisis can still have a strong reputation post-crisis than an organization that had an unfavorable reputation prior to a crisis. Nevertheless, rebounds can happen to an organization with a favorable reputation even post-crisis if their crisis response strategy is not rapid and if it is not in the best interest of their stakeholders (Knight & Pretty, 1999).

Therefore, organizations are charged to rebuild their legitimacy when a crisis occurs and they can do so using leader communication and various other corporate communication and discussions (Allen and Caillouet, 1994; Benoit, 1995; Sellnow, Ulmer & Snider, 1998). Leaders of organizations can utilize crisis response strategies to shield their reputation and to rebuild their legitimacy throughout a crisis (Coombs & Holladay, 1996). When a crisis jeopardizes the legitimacy of organizations, it concurrently endangers the organization's reputation and how stakeholders will view the organization's reputation due to the damages caused. In this time, it becomes essential for organizations to build credibility and trust as its core elements (Coombs, 1998; Fombrun, 1996; Massey, 2001) to ensure the protection of their reputation because their legitimacy and reputation are tied to these core elements.

III. Effective Crisis Response Strategy

Crisis management is the critical and strategical way to manage crises efficiently and effectively (Coombs, 2007), and it can be used to understand how managers can protect their reputation during a crisis situation (Coombs, 2007). Reputational damage can be repaired by the use of crisis communication. (Coombs & Holladay, 2005). Usually, crises bring threats, such as reputation loss and financial loss and crisis management is designed to help prevent crisis damages through strategic crisis response (Coombs, 2007).

Crises are a threat to higher education institutions' reputations because the damages produced by the crises influence the interactions of the educational institution and its students. Failure to address the crises increases the damage from the crises. Therefore, crisis management is intended to protect higher education institutions and their students from crises and decrease the damage caused by the crises (Coombs, 2006). Crisis managers can choose which crisis response strategies to use in a crisis situation and choosing response strategies are optional but required. According to Sturges (1994) the main tenet of protecting an organization's reputation is to choose the suitable crisis response strategy.

Leader Communication during Crisis

A crisis is an undesirable event that ascribes leaders to consider crisis responsibility (Coombs, 2007). During crises, leadership communication is a crucial factor to establish and sustain the crisis (Johansson & Back, 2017). Leaders need to coordinate and communicate information to ensure that stakeholders do not perceive the organization's reputation negatively. Hence, leadership is very vital for organizations to continue high performance (Peters & Austin, 1985). Leadership communication should be targeted as a priority to develop and improve crisis management (T'Hart & Sundelius, 2013). Many studies have shown that leadership is endorsed in organizational communication for many years (Fairhurst & Connaughton, 2014). Pearson and Clair (1998) emphasized the crucial need for leadership in response to a crisis in the organization. Hall (1977) argued that leadership behavior is required in a crisis.

Leader communication behaviors involve enacting goals, problem-solving between management, and the stakeholders in crises situations (Johansson & Back, 2017). The timeliness and quality of communication is perceived by stakeholders as effective or not. Many scholars have argued that the specific role that leaders should play to identify change during crisis and organizational learning is considered after crisis events (Brockner & James, 2008). Organizational learning is an essential aspect for crisis leaders (Pearson & Clair, 1998) to change behavioral responses of the crisis (Glynn, Lant, & Milliken, 1994) and to limit the exposure to the crisis situation in the future (Wooten & James, 2004; Sitkin, 1992). This gives an organization an advantage over firms that do not learn from a crisis. Eventually, organizations will achieve better opportunities from a leader who communicates during a crisis effectively and who is focused on learning (Edmonson & Cannon, 2005). The empirical study of Wodak et al. (2011) and Johansson et al. (2014) shows five communication strategies of how a leader can affect the consequence of an outcome and they are: bonding, encouraging, directing, modulating, and recommitting. A bonding strategy is a leader's communication of relating that molds relationships with the stakeholders (Johansson et al., 2014). Encouraging is a leader communication strategy that involves the participation of other stakeholders' advice, request, etc. (Johansson et al., 2014) Modulating strategy is a leader communication that mitigates and regulates the insights of threats and the organizational imperative to take responsibility. (Wodak et al., 2014). Johansson et al. (2014) mention that directing is a leader's communication strategy to structure ideas, responses, and plans towards an expected outcome.

According to Wodak et al. (2011), recommitting involves leaders' decision and commitment to take steps forward for future purposes to address a situation since they are now understanding the issue at hand. According to Johansson et al. (2014), this communication is future oriented. Accordingly, this outcome is expressed by these propositions:

Proposition 1a: The quality and timeliness of leader communication strategies (1) bonding, (2) encouraging, (3) directing, (4) modulating, and (5) recommitting will encourage the enforcement of effective crisis response strategies during a crisis situation.

Proposition 1b: The quality and timeliness of leader communication strategies (1) bonding, (2) encouraging, (3) directing, (4) modulating, and (5) recommitting will protect and restore higher education institutions' reputation in the best possible way.

Proposition 1c: The quality and timeliness of leader communication strategies (1) bonding, (2) encouraging, (3) directing, (4) modulating, and (5) recommitting leads students to judge leaders as efficient or inefficient during a crisis situation.

IV. Situational Crisis Communication Theory

SCCT proposes crisis response strategies should protect reputation assets (Coombs, 2007). Situational Crisis Communication Theory (SCCT) offers a practical framework to understand crises and to safeguard the reputation of an organization. SCCT is a useful foundation to understand crisis situations, and it stands as an effective instrument to predict stakeholders' reactions to a crisis when an organization's reputation is threatened by it (Coombs, 2007). Understanding the reactions of stakeholders will help the crisis communication. This framework gives the guidelines of how higher education institutions' management may use crisis response strategies to safeguard their institution's reputation from the damage of crisis. The crucial point of the SCCT is the crisis situation (Coombs, 2007). The measure of reputation damage that an organization receives accounts for the crisis response strategy that will be selected. SCCT holds that the purpose of crisis responsibility and its escalated factors are due to the probable damage to reputation caused by a crisis.

The empirical research of this theory provides evidence of crisis communication guidelines that are useful for organizations. Higher education institutions need to take measures to assist their students in a crisis. This is a suitable way to ensure that the regulation, norms, and cognition of the organization are not infringed. Rendering assistance to students helps higher education institutions continue academics and its other business processes, thereby protecting its reputation (Coombs & Holladay, 2002). The action and responsibility taken to manage the crisis are perceived as an act of concern and compassion that can reduce the reputational damage from the crisis. SCCT offers three-fold basic objectives for using crisis response strategies in relation to protecting organizations' reputation, which include: to shape the outcome of the crises, change crisis perceptions, and to decrease the negative effect caused by the crisis (Coombs, 1995). These objectives are pursued by combining any of them with crisis responses.

The SCCT states that when a crisis manager understands the crisis, then they can choose the crisis response strategy that will maximize the damage and protect reputation. This theory is centered on the examination of the crisis event by the crisis manager to know the degree of threat that the crisis presents to the reputation of the organization. This threat is the extent of harm the crisis can exact on the organization's reputation when no responsibility is put in place.

SCCT crisis response strategy is utilized to mend reputation and reduce the negative effect and negative behavior in response to a crisis. These response strategies are what management communicate and act upon during and after a crisis (Bradford & Garrett, 1995; Benoit, 1995). Taking responsibility is very vital, and it shows accountability for the crisis situation, and organizations must be accountable for their actions (Weiner, 2006). This crisis response strategy is effective and a key answer to manage the crisis situation. According to Coombs (2006), there are three main groups of SCCT response strategies which are (1) denial, (2) diminish, and (3) deal/rebuild to respond to the crisis situation centered on the perception of the organization in taking accountability for a crisis (Coombs, 2006; Coombs & Holladay, 2002).

Deny Strategies

This strategy acts to removes any connection of the organization with the crises. If there is no involvement in the crises, the organization bears no damage from it. When there is a rumor about a crisis that poses a challenge, managers have to refute the claims of the rumor, which saves them from any reputation harm (Coombs & Holladay, 1996).

Diminish Strategies

This crisis response posits that a crisis is not terrible like people believe it to be, and the organization has not lost control in dealing with the crisis (Coombs, 2007). The duty of the crisis managers using this strategy is to reduce the organization's link with the crisis so that stakeholders can have a negative view of the threat of the crisis. The managers, however, need to back this claim with enough evidence; if not, this strategy will fail. One major key point of this strategy is to use past or current favorable works to remind stakeholders of the organization's reputation, and this helps to compensate for the negative effects of the crisis.

Deal/Rebuild Strategies

This is the major strategy to create new social reputation. This strategy is used to improve the organization's reputation by assisting victims of the crisis through symbolic aids (Coombs, 2007). The crisis manager is in the business of ensuring stakeholders benefit from the crisis situation and makes positive actions to counteract the crisis by offering an apology or compensation (Coombs, 2007). This is mainly used in the case of accidental or intentional crises. Accordingly, this outcome is expressed by these propositions:

> **Proposition 2a**: The application of the deny/diminish/deal crisis response strategies in specific crisis situations will protect and restore higher education institution's reputation in the best possible way.
> **Proposition 2b**: The application of the deny/diminish/deal crisis response strategies in specific crisis situations will lead students to judge the outcome of the crisis as efficient or inefficient.
> **Proposition 2c**: Students perceive deny/diminish/deal crisis response strategies of their higher education institutions as efficient or inefficient and they have positive or negative reputations towards their institutions.

V. Discussion

The framework of propositions built above illustrates how effective leader communication crisis response strategies for higher education institutions impact students' satisfaction and perceived reputation. The discovery from this framework is that institutions face crisis challenges in terms of expansion of capacity, competitiveness, and accessibility (Gainy, 2009). During a crisis, academic institutions can suffer reputational damage if the organization fails to maintain its reputation. Some implications that arise during a crisis could be issues in the quality of education, reduction in research and development, shutting down existing programs, and hindering the initiation of new programs (Smith, 2013). To recover from this kind of crisis, academic institutions need to arrange sufficient funding and resources while maintaining higher levels of communication. The framework discussed contributes to effective leader communication strategy during a crisis event. When higher educational institutions deal with crises by taking effective steps, it becomes easy to regulate the continuation of regular academic operations, offering financial assistantship and other opportunities. Then, students, as well as other related stakeholders, will have satisfaction and trust in the institution. Ultimately, the institution maintains its reputation with its students.

VI. Contribution

The outbreak of crisis such as the Covid-19, a very serious and fatal virus which developed into a pandemic that has affected the whole world, has provided opportunities to learn and improve crisis response and crisis communications. When higher educational institutions are faced with a crisis, they need to have the ability to respond and communicate effectively and efficiently so that their reputation is maintained. We think that our current study creates a number of key contributions to organizational theory and change. Our research helps us to comprehend crisis management, concentrating on leader communications in organizations, especially in higher education institutions. Furthermore, our research helps us to understand how leader communications affect the reputation of higher education institutes. We use the framework of Situational Crisis Communication Theory (SCCT) by Combs (2007) to further understand crisis management and leader communication strategy. By using SCCT to evaluate leader crisis communication, this study allows for greater comprehension in relating leader crisis communication to crisis responses and institutional reputation. This study broadens the range of SCCT to higher education institutions by analyzing how leaders respond and communicate during crises.

Academic institutional leaders can benefit from our study in terms of institutional awareness, situational awareness, and stakeholders' awareness (Pfarrer et al., 2017). Academic institutional leaders should be able to assess the problem efficiently and outlay a plan in order to develop the communication that is needed in order to tackle the crisis situation so that the institution can maintain or increase its reputation. There is a competitive advantage in students' viewpoints in tackling crisis situations because students are important stakeholders, and they influence other prospective students and multiple stakeholders via their word of mouth, online ratings, and even social media. Moreover, by communicating the appropriate response strategy, leaders can effectively and efficiently maintain the academic operations.

This study can also help managers and leaders evaluate the crises initially and formulate the most suitable crisis response strategy and crisis response communications. Leaders can get a clear understanding of how to predict students' responses and what corrective actions need to be taken as preventive measures in order to maintain their reputation.

VII. Practical Implications

This study provides practical implications for higher education institution leaders, as well as leaders in other organizations such as non-profit organizations. Communication of a crisis by leaders of an organization should be emotional and rational. (Thelen & Robinson, 2019). It is in the best interest of organizations that leaders are viewed as humane and communicate in a way that demonstrates they comprehend what the students are going through, thus minimizing the possible losses to reputation caused by crises (Thelen & Robinson, 2019). Surveying how students react to communication messages of a crisis made by leaders of the organization during the various phases of a crisis is a crucial resource in assisting leaders to adjust messages of communication as the crisis progresses (Thelen & Robinson, 2019). Apparent and clear-cut leader communications when a crisis has occurred and throughout the crisis is vital to limit damage and, in the end, resolve the crisis (Tetteh, 2020).

Additionally, this study provides a clear understanding of the effective crisis communication strategies required to manage crisis situations. Leaders are able to attend to crisis situations by improving organizational practices, training, and development, and prioritizing the problem situation. Leaders can also educate themselves to make quick decisions regarding the crisis pattern of the situation. This study also helps leaders to improve their cognitive ability and allocentrism (Pfarrer et al.,2017).

Finally, this study creates institutional awareness and crisis situational awareness concerning effective crisis response strategies (Pfarrer et al.,2017) for institutions presidents, deans, and top management. The institution's presidents and deans can assess the problem and outlay a plan in

order to develop the communication to tackle the crisis situation so that institutions can retain their reputation, long-term opportunity and actively maintain students enrollment in the time of crisis event. This is very important to universities' presidents because their ratings are based on student enrollment. Therefore, by preventing the crisis situation, institutions can maintain academic operation as usual.

VIII. Limitations and Future Research Direction

There are limitations to this study that future research can investigate. In this study, we focus on leader crisis response strategies and communication for higher education institutions and its influence on students' satisfaction and perceived reputation. There is a reciprocal relationship between institutions' reputation and students that was not considered in this study. Higher institutions' reputation has a positive reciprocal relationship with students' satisfaction. The relationship is thus that institutional reputation, high or low, affects student's satisfaction. Therefore, a reciprocal or recursive relationship may exist. This relationship is outside of the scope of this study and can lead the way to future research in this area.

Since this study is conceptual in manner, there are possibilities for future research studies. Researchers could use surveys on the views of stakeholders to gauge how well an organization communicated during a crisis situation. Additionally, further research could concentrate on the crisis responses by organizations in higher education institutions. Surveys could be done on deans and department chairs to analyze how deans and faculty felt their institutions responded to the crisis situation.

Furthermore, future research can analyze the relationship of learning from a crisis when the organization's reputation has been influenced, whether it be negatively or positively. When an organization is able to effectively curb reputational damage after a crisis, the organization is likely to be less driven to learn from that crisis, thus escalating the possibility of issues during a future crisis (Pfarrer et al., 2017). Additionally, research has indicated that crises can augment negative emotions, such as resentment or anger, amongst the stakeholders (Mitroff, 2007; Coombs & Holladay, 2005). These negative emotions can affect stakeholders to stall more in their responses to a crisis, concentrating on pursuing justice and allocating fault instead of promoting chances for development (Pfarrer, DeCelles, et al., 2008).

IX. Conclusion

When a crisis happens, there are many complicated challenges that will come up. One such challenge is the challenge of communicating effectively and efficiently. In this study, we focus on how effective and efficient crisis response communication procedures before and during an event are essential to an organization maintaining its reputation with stockholders, specifically, in this case, students. The most suitable response will depend on the crisis and the organization. Organizations must be careful with their crisis response and how they communicate because an organization's reputation can be impacted negatively if the organization does not communicate in the most suitable manner.

In crisis situations, such as the Covid-19 pandemic, it is vital that leaders respond rapidly to the fast alterations of the situation due to changes in the evolving economic and political situation and in public health information (Sutton, Renshaw, & Butts). One of the most important leader roles is to keep students informed, especially during a crisis situation, as the Covid-19 pandemic has demonstrated. Effective leader crisis response has an impact on student satisfaction and their perceptions of institutional reputation. Leaders can foresee how stakeholders will view and respond to crises and to the organization by analyzing the type of crisis and the prior reputation of the organization (Combs, 2016). Prior research has shown that crisis response strategies will impact an organization's reputational assets and influence how stakeholders view the organization and the impact (Combs, 2016). The manner in which stakeholders interact with their

organizations is impacted by reputation, thus it is vital that the organization's reputation is shielded when crises occur (Combs, 2016). If leaders and organizations fail to prepare and efficiently and effectively respond and communicate to crisis situations, the organization will jeopardize their reputation and possibly cause more harm than good. The SCCT model provides a framework of crisis communication, so leaders and organizations can effectively communicate when a crisis has occurred.

References

Ahmed, I., Gul, S., Hayat, U., & Qasim, M. (2001). Service quality, service features and customer complaint handling as the major determinants of customer satisfaction in banking sector: A case study of National Bank of Pakistan.www.wbiconpro.com/5%5B1%5D.ISHFA.pdf (Accessed date 14 Jan 2001)

Anderson, E. W., Fornell, C., & Rust, R. T. (1997). Customer satisfaction, productivity, and profitability: Differences between goods and services. *Marketing Science*, 16(2), 129–145.

Anderson, E. W., & Sullivan, M. W. (1993). The antecedents and consequences of customer satisfaction for firms. *Marketing Science*, 12(2), 125–143. http://dx.doi.org/10.2307/184036.

Allen, M. W., & Caillouet, R. H. (1994). Legitimation endeavors: Impression management strategies used by an organization in crisis. *Communication Monographs*, 61, 44 – 62.

Awang, Z., & Jusoff, K. (2009). The effects of corporate reputation on the competitiveness of Malaysian telecommunication service providers. *International Journal of Business and Management*, 4(5), 173–178.

Benoit, W. L. (1995). *Accounts, Excuses, and Apologies: A Theory of Image Restoration*, State University of New York Press, Albany, NY.

Bradford, J. L., & Garrett, D. E. (1995). The effectiveness of corporate communicative responses to accusations of unethical behavior. *Journal of Business Ethics*, 14, 875 – 892.

Brockner, J.B., & James, E.H. (2008). Toward an understanding of when executives see crisis as opportunity. *Journal of Applied Behavioral Science*, 44(1), 94–115.

Bryson, J. M. (2004). What to do when stakeholders matter: Stakeholder identification analysis techniques. *Public Management Review,* 6, 21 – 53.

Bundy, J., Pfarrer, M. D., Short, C. E., & Coombs, W. T. (2017). Crises and Crisis Management: Integration, Interpretation, and Research Development. *Journal of Management*, 43(6), 1661–1692. DOI: 10.1177/0149206316680030

Cabral, L. M. B. (2012). Living up to expectations: Corporate reputation and sustainable competitive advantage. *Working papers*. New York University, Leonard N. Stern School of Business, Department of Economics.

Carmeli, A., & Tishler, A. (2005). Perceived organizational reputation and organizational performance: An empirical investigation of industrial enterprises. *Corporate Reputation Review,* 8(1), 13 – 30.

Clampitt, P. G., Berk, L. & Williams, M. L. (2002). Leaders as Strategic Communicators. Ivey Business Journal. Retrieved October 2020, from https://iveybusinessjournal.com/publication/leaders-as-strategic-communicators/

Coombs, W.T. (1995). Choosing the right words: The development of guidelines for the selection of the appropriate crisis response strategies. *Management Communication Quarterly,* 8, 447 – 476.

Coombs, W. T. (1998). An analytic framework for crisis situations: Better responses from a better understanding of the situation. *Journal of Public Relations Research,* 10, 177 – 191.

Coombs, W. T. (2006). The protective powers of crisis response strategies: Managing reputational assets during a crisis. *Journal of Promotion Management,* 2, 241 – 259.

Coombs, W. T. (2007). Crisis management and communications. Institute for public relations, 4(5), 6.

Coombs, W. T. (2007). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. *Corporate Reputation Review*, 10(3), 163–176.

Coombs, W. T., & Holladay, S. J. (1996). Communication and attributions in a crisis: An experimental study of crisis communication. *Journal of Public Relations Research,* 8, 279 – 295.

Coombs, W. T., & Holladay, S. J. (2001). An extended examination of the crisis situation: A fusion of the relational management and symbolic approaches. *Journal of Public Relations Research,* 13, 321 – 340.

Coombs, W. T., & Holladay, S. J. (2002). Helping crisis managers protect reputational assets: Initial tests of the situational crisis communication theory. *Management Communication Quarterly*, 16, 165 – 186.

Coombs, W. T., & Holladay, S. J. (2005). Exploratory study of stakeholder emotions: Affect and crisis in N.M. Ashkanasy, W.J. Zerbe and C.E.J. Hartel (eds.), *Research on Emotion in Organizations: Volume 1: The Effect of Affect in Organizational Settings*, Elsevier: New York, pp. 271 – 288.

Deephouse, D. L., & Carter, S. M. (2005). An examination of differences between organizational legitimacy and organizational reputation. *Journal of Management Studies,* 42(2), 329 – 360.

Dowling, G. R. (2001). *Creating corporate reputations*. Oxford University Press: Oxford.

Edmonson, A. C., & Cannon, M. D. (2005). Failing to learn and learning to fail (intelligently): How great organizations put failure to work to improve and innovate. *Long Range Planning Journal*, 38(3), 299–320.

Elsbach, K. D. (2006). *Organizational perception management*, Lawrence Erlbaum, Mahwah, NJ.

Fairhurst, G. T., & Connaughton, S. L. (2014). Leadership: A communicative perspective. Leadership, 10(1), 7–35. doi: 10.1177/1742715013509396.

Finet, D. (1994). Sociopolitical consequences of organizational expression, *Journal of Communication, 44*, 114-131.

Fombrun, C. J. (1996). *Reputation: Realizing Value from the Corporate Image.* Boston: Harvard School Press: Boston, MA.

Fombrun, C. J., & Van Riel, C. B. M. (2004). *Fame & Fortune: How Successful Companies Build Winning Reputations*, Prentice-Hall Financial Times, New York.

Galbreath, J., & Shum, P. (2012). Do customer satisfaction and reputation mediate the CSR–FP Link? Evidence from Australia. *Australian Journal of Management*, 37(2), 211–229.

Gau, J. M., & Brunson, R. K. (2010). Procedural justice and order maintenance policing: A study of inner-city young men's perceptions of police legitimacy. *Justice Quarterly,* 27, 255–279.

Gigliotti, R. (2020). Crisis Leadership and the Higher Education Response to the COVID-19 Outbreak. The Evolllution. Retrieved October, 2020, from https://evolllution.com/managing-institution/operations_efficiency/crisis-leadership-and-the-higher-education-response-to-the-covid-19-outbreak/

Glynn, M. A., Lant, T. K., & Milliken, E. J. (1994). Mapping learning processes in organizations: A multilevel framework linking learning and organizing. *Advances in Managerial Cognition and Organizational Information Processing*, 4, 43–83.

Goldberg, M.E., Hartwick J. (1990). The effects of advertiser reputation and extremity of advertising claim on advertising effectiveness. *Journal of Consumer Research,* 17, 172–179.

Gupta, S. (2002). *Strategic dimensions of corporate social responsibility as sources of competitive advantage via differentiation*. Unpublished Doctoral Dissertation. Temple University. USA.

Hall, R. H. (1977). Organizations, structure and process. Englewood Cliffs, NJ: Prentice Hall.

Herbert, S. (2006). Tangled up in blue: Conflicting paths to police legitimacy. *Theoretical Criminology,* 10(4), 481–504.

Holtom, B., Edmondson, A. C. & Niu, D. (2020). 5 Tips for Communicating with employees during a crisis. Harvard Business Review. Retrieved October, 2020, from https://hbr.org/2020/07/5-tips-for-communicating-with-employees-during-a-crisis

Jacobsen, S. K. (2015). Policing the ivory tower: Students' perceptions of the legitimacy of campus police officers. Deviant Behavior, 36(4), 310-329.

Johansson, C., Miller, V. D., & Hamrin, S. (2014). Conceptualizing communicative leadership- A framework for analyzing and developing leaders' communication competence. *Corporate Communication: An International Journal,* 19(2), 147–165. doi:10.1108/CCIJ-02-2013-0007.

Johansson, C., & Back, E. (2017). Strategic leadership communication for crisis network coordination. *International Journal of Strategic Communication*, 11(4), 324-343.

Kapucu, N., & Ustun, Y. (2018). Collaborative crisis management and leadership in the public sector. *International Journal of Public Administration*, 41(7), 548-561.

Keh, H. T. (2009). Corporate reputation and customer behavioral intentions: The roles of trust, identification and commitment. *Industrial Marketing Management,* 38(7), 732–742.

King, B. G., & Whetten, D. A. (2008). Rethinking the relationship between reputation and legitimacy: A social actor conceptualization. *Corporate Reputation Review*, 11(3), 192-207.

Knight, R. F., & Pretty, D. J. (1999). Corporate catastrophes, stock returns, and trading volume. *Corporate Reputation Review*, 2, 363 – 381.

Leadership communication during Crisis - 4tips. (2020). LSA Global. Retrieved October 2020, from https://lsaglobal.com/blog/leadership-communication-during-crisis/

Marsen, S. (2020). Navigating Crisis: The Role of Communication in Organizational Crisis. *International Journal of Business Communication*, 57(2), 163–175. https://doi.org/10.1177/2329488419882981

Massey, J. E. (2001). Managing organizational legitimacy, *Journal of Business Communication*, 38, 152-182.

Matzler, K., & Hinterhuber, H. H. (1998). How to make product development projects more successful by integrating Kano's model of customer satisfaction into quality function deployment. *Technovation*, 18(1), 25–38.

Mayfield, M., & Mayfield, J. (2004). The effects of leader communication on worker innovation. American Business Review, 22(2), 46.

Millar, D. P., & Heath, R. L. (2003). Reasoned Action in Crisis Communication: An Attribution Theory - Based Approach to Crisis Management. Political Science. doi: 10.4324/9781410609496-12

Mitroff, I. I. 2007. The psychological effects of crises: Deny denial—grieve before a crisis occurs. In Pearson, C. M., Roux-Dufort, C., Clair, J. A. (Eds.), *International handbook of organizational crisis management*, 195-220. Thousand Oaks, CA: Sage

Palacio, B. A., Meneses, B. D., & Perez-Perez, P. J. (2002). The configuration of the university image and its relationship with the satisfaction of students. *Journal of Educational Administration*, 40(5), 486-505.

Parameswaran, R. & Glowacka, A. E. (1995). University image: An information processing perspective. *Journal of Marketing for Higher Education*, 6 (2).

Pearson, C., & Clair, J. A. (1998). Reframing crisis management. *Academy of Management Review*, 23(1), 59–76.

Peters, T., & Austin, N. (1985). A passion for excellence: *The leadership difference*. New York: Random House.

Pfarrer, M. D., DeCelles, K. A., Smith, K. G., Taylor, M. S. 2008. After the fall: Reintegrating the corrupt organization. Academy of Management Review, 33: 730-749

Podolny, J. M. (1994). Market uncertainty and the social character of economic exchange. *Administrative Science Quarterly, 39, 458–483.*

Ramirez, D. E. (2010). ERP crisis management through leadership communication. *International Journal of Management & Information Systems (IJMIS)*, *14*(1).

Reichart, J. (2003). A theoretical exploration of expectational gaps in the corporate issue construct. *Corporate Reputation Review*, 6, 58 – 69.

Schwarz, A. (2008). Covariation-based causal attributions during organizational crises: Suggestions for extending situational crisis communication theory (SCCT). *International Journal of Strategic Communication*, *2*(1), 31-53.

Shamsie, J. (2003). The context of dominance: An industry-driven framework for exploiting reputation. *Strategic Management Journal*, 24(3), 199–215.

Shapiro, C. (1983). Premiums for high quality products as returns to reputations. *Quarterly Journal of Economics*, 98, 659–679.

Sitkin, S. B. (1992). Learning through failure: the strategy of small losses. In M.D. Cohen & L.S. Sproull (Eds.), *Organizational learning* (pp. 541–577). Thousand Oaks, CA: Sage

Sturges, D. L. (1994). Communicating through crisis: A strategy for organizational survival. *Management Communication Quarterly*, 7, 297 – 316.

Sutton J., Renshaw S. L., Butts C. T. (2020) COVID-19: Retransmission of official communications in an emerging pandemic. *PLoS ONE* 15(9): e0238491. doi: 10.1371/journal.pone.0238491

Toquero, C.M. (2020). Challenges and Opportunities for Higher Education amid the Covid-19 Pandemic: The Philippine Context

Tetteh, H. A. (2020). A Leader's Guide to Crisis Communication: Lessons from Ebola for COVID-19, *Military Medicine*, Volume 185, Issue 9-10, pg. e1371–e1375

T' Hart, P., & Sundelius, B. (2013). Crisis management revisited: A new agenda for research, training and capacity building within Europe. *Cooperation and Conflict*, 48(3), 444–461. doi:10.1177/0010836713485711.

Thelen, P. D. & Robinson, K. L. (2019) Crisis Communication in Institutions of Higher Education: Richard Spencer at the University of Florida, *Communication Quarterly*, 67:4, 444-476, DOI: 10.1080/01463373.2019.1616586

Ulmer, R. R. (2001). Effective crisis management through established stakeholder relationships: Malden Mills as a case study. *Management Communication Quarterly*, *14*(4), 590-615.

Ulmer, R. R. (2012). Increasing the Impact of Thought Leadership in Crisis Communication. Management Communication Quarterly, 26(4), 523–542. https://doi.org/10.1177/0893318912461907

Wartick, S. (1992). The relationship between intense media exposure and change in corporate reputation. *Business & Society* 31, 33 – 49.

Weiner, B. (2006). *Social Motivation, Justice, and the Moral Emotions: An Attributional Approach*. Lawrence Erlbaum Associates, Inc., Mahwah, NJ.

Weiss, A. M, Anderson, E, & MacInnis, D. J. (1999). Reputation management as a motivation for sales structure decisions. *Journal of Marketing,* 63, 74–89.

Williams, R. J. (2005). The impact of corporate strategy on a firm's reputation. *Corporate Reputation Review, 8*(3), 187–197.

Wodak, R., Kwon, W., & Clarke, I. (2011). Getting people on board: Discursive leadership for consensus building in team meetings. *Discourse & Society,* 22(5), 592–644. doi:10.1177/0957926511405410.

Wooten, L. P., & James, E. H. (2004). When firms fail to learn: The perpetuation of discrimination in the workplace. *Journal of Management Inquiry*, 13, 23–33.

Wu, F. H. (2017). The crisis of American Higher Education. The American Historian. Retrieved October, 2020, from https://www.oah.org/tah/issues/2017/february/the-crisis-of-american-higher-education/

Capital Punishment: The Roles of Human Freedom, Economic Wealth, and National Culture

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Abstract

The purpose of this study is to explore the relationships of capital punishment, national culture, human freedom, and economic wealth. In this research study, a sample of 70 countries was used that possessed data available for all the variables used in the study. The research questions were tested with hierarchical regression with SPSS, Variance Inflationary Factor (VIF) analysis was used to measure multi-collinearity, and to measure mediation, a Hierarchical Bayesian test was conducted using the Posterior P-Value and indirect effect. The results suggest important direct and indirect roles of different cultural dimensions on human freedom and capital punishment. Capital punishment was directly impacted by culture (Uncertainty Avoidance, Indulgence). Human freedom was indirectly impacted and thus mediated the impact of culture (Long Term Orientation, Power Distance) and economic wealth on capital punishment. These results could have important implications for abolitionists, retentionists, international investors, and future researchers.

Keywords: Capital punishment; national culture; human freedom; economic wealth

I. Introduction

Capital punishment is a highly contentious topic all over the world. Despite the fact that organizations such as Amnesty International strongly oppose capital punishment, very little progress has been made to abolish it. Many nations around the world have already abolished capital punishment and the idea of abolishing it globally has been tabled at the UN. The opposition to capital punishment continues to grow globally, and Rajat Khosla (2020), the senior director of research, policy and advocacy for the UN has stated, "state sponsored executions have no place in the modern world." According to Amnesty International, "Some countries are bucking the trend. Iraq, Saudi Arabia, South Sudan, and Yemen significantly increased executions in 2019 compared to 2018; Bahrain and Bangladesh resumed executions after a one-year hiatus" (Amnesty International 2020). In the United States, the federal government had not used the death penalty for over 17 years, but President Donald Trump's Justice Department resumed federal executions when he entered office. After carrying out an execution shortly before leaving office, President Donald Trump's Justice Department has now executed more prisoners than any other president in the last 120 years (Tarm & Kunzelman 2021).

In a research study published by David Garland (2005) called Capital Punishment and American Culture, he argues that capital punishment in the United States has become a human rights scandal that globally produces anti-American sentiment. That "anti-American sentiment" could be shared with the other countries that still enforce capital punishment. But he dismisses the theory that the United States' culture has anything to do with their enforcement of capital punishment. Garland "want(s) to reject this culturalist version of American exceptionalism, resist the notion that there is something deep, and abiding about American culture that propels its judicial system towards capital punishment" (Garland 2005, p. 347). Nevertheless, no one has

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explored the potential relationships between national cultural dimensions and capital punishment. He does not mention Hofstede's cultural dimensions or compare them among countries to evaluate their impact. Therefore, more research needs to be conducted that thoroughly evaluates the relationship between culture and capital punishment.

In a research study called, Poverty and the Death Penalty the researchers sought to discover if a victim's economic status influenced their likelihood of being sentenced to death. After conducting their research, they were "convinced that murder victims who are poor, regardless of their race, are afforded an unequal, second-class status" (Johnson & Johnson 2001, p. 521). This study indicates that there is a potential relationship between economic status and probability of being sentenced to death. Every year, thousands of people are executed by their respective governments. In 2019, the United States carried out twenty-one executions (Amnesty International 2019). Although it is not limited to just the United States, many other countries carried out executions in 2019. It would be worth investigating if that potential relationship explored by Jeffrey and Colleen Johnson is apparent on the global scale. Regardless, there is limited to no research that explores the direct relationship between a country's economic wealth and their likelihood to execute prisoners.

In a study conducted by David F. Greenberg and Valerie West (2008) the researchers evaluate variables that may contribute to a country having capital punishment. One of the variables that is included in the study is political rights. The political rights score is found using the Freedom House scale which, scores a country on both civil and political rights to give the score. This scoring system means that this political rights variable is very similar to a human freedom variable since human freedom is made up of civil, political, and economic rights. The researchers found that "countries with fewer political rights are more likely to have the death penalty" (Greenberg & West 2008, p. 248). In another study, the researchers evaluate the possible relationships human freedom might share with national culture. A study done by Robert L. Engle and Johanna E. Morse (2019) evaluates the relationship between human freedom and Hofstede's cultural dimensions. The researchers used the same Human Freedom Index, but from 2018. They described the citizens of a country with a high level of human freedom as being able to "learn how to harmoniously live among others, practice freely desired lifestyles, and accept differences" (Engle & Morse 2019, p. 4). After testing the relationship, the researchers found that specific cultural dimensions (PDI, LTO, IVR) had significant relationships with human freedom.

Given the limited research that explores the relationships between capital punishment, human freedom, national culture, and economic wealth, the purpose of this multinational study is to explore these potential relationships. In order to observe whether these antecedents have a significant relationship with a country's likelihood to either practice or not practice capital punishment.

II. Background

Capital Punishment

In this study, Capital Punishment was split into two categories. Using the data made available by the United Nations in 2020, countries were classified as either a country that has capital punishment or a country that does not have capital punishment. As previously mentioned, capital punishment is a very contentious topic globally. Some countries abolished capital punishment decades ago or never had it, while other societies reintegrated it into their law. In today's society, social movements and organizations have pushed hard to have capital punishment outlawed globally. The European Union abolished the death penalty because they deemed it incredibly inhumane (Hood 2001). Claire Finkelstein makes a different argument against capital punishment in her article entitled, "A Contractarian Argument against the Death Penalty." Finkelstein (2006) explains that the argument for capital punishment is flawed. She believes that it is flawed, because each person who accepts the law to be in place would have to imagine themselves a victim of that law. This projection is nearly impossible, and each "agent" as she refers to them in

the study would have to imagine themselves being a victim of capital punishment. In that projection, the individual would not benefit from the law. She suggests that the reason individuals support the law is for the benefit they receive from its possible deterrent effect. Therefore, if they could accurately put themselves in the person's situation at the end of that law, they would most likely not support it.

Those who support the death penalty in countries worldwide would most likely agree that capital punishment helps deter crime. In a study entitled Does Capital Punishment Have a Deterrent Effect? New Evidence from Postmoratorium Panel Data, the researchers explored the idea that capital punishment has a deterrent effect. A deterrent effect is when capital punishment discourages the general public from committing any heinous crimes, because they do not want to be sentenced to death. The researchers found "that the legal change allowing executions beginning in 1977 has been associated with significant reductions in homicide" (Dezhbakhsh, Rubin, & Shepherd 2003, p. 373). In another study conducted by Dezhbakhsh and Shepherd (2006) called The Deterrent Effect of Capital Punishment: Evidence from a Judicial Experiment, they attempt to discover if the deterrent effect is present for all crimes not just murder. The researchers found that "the death penalty does not cause a decrease in property crimes, suggesting that the deterrent effect is not reflecting general trends in crime" (Dezhbakhsh & Shepherd 2006, p. 532). This suggests that while some countries view capital punishment as an inhumane form of punishment, real research indicates it provides some deterrent effect.

National Culture

Professor Geert Hofstede conducted comprehensive multinational research studies on culture. Hofstede (2001) defined culture as "the collective programming of the mind distinguishing the members of one group or category of people from others." Hofstede (2010) differentiated national culture into six dimensions: power distance, masculinity, individualism, long-term orientation, uncertainty avoidance, and indulgence. All six dimensions will be included in this study to evaluate if they significantly impact whether a country has capital punishment or does not have capital punishment.

In a study conducted by Austin Sarat and Christian Boulanger (2005), they evaluate different cultures and examine if culture plays a role in enforcing the death penalty. The researchers did not use Hofstede's cultural dimensions for their definition of culture. Therefore, the researchers did not collect any data or conduct any mathematical analysis to evaluate culture's significance. Instead, the researchers looked at previous research on culture and capital punishment. The research they reviewed evaluates the role of culture in capital punishment for a specific country like the United States. Based on previous research, the researchers argue that culture is influential in a country's likelihood to either have or not have the death penalty. They believe that if abolitionists want to succeed, they first need to know the country they are attempting to have capital punishment abolished in. The relationship between culture and punishment was pondered in a previous study conducted by David Garland. Garland believes that culture and punishment might be connected because punishment "helps shape the overarching culture and contributes to the generation and regeneration of its terms" (Garland, 1990, p. 248). These studies suggest that the relationship between capital punishment and culture needs to be evaluated through a mathematical approach that assesses these findings' validity.

In a book entitled, Cultural Consequences 2nd Edition, Professor Geert Hofstede (2001) argues that culture plays a significant role in social norms. These social norms shape institutions such as government policies and legislation. This, in turn, reinforces and impacts social norms. This circular relationship regarding the government position of capital punishment is being examined in this study. In particular, the role of each of Hofstede's six dimensions are explored as research is silent regarding the role of culture and social norms, specifically regarding capital punishment.

Economic Wealth

In this study, GDP per capita was used as the determinant of a country's level of economic wealth. In a study conducted by David F. Greenberg and Valerie West (2008) the researchers were reviewing variables that could have an impact on a country having or not having capital punishment. They evaluated the relationship of political rights with capital punishment. They also assessed the impact of economic development on a country having or not having capital punishment. The researchers did not use GDP for their study. However, they argued that a country with a high level of economic development will have "greater use of instrumental rationality and the weakening of religious beliefs... fostering acceptance of cultural relativism" (Greenberg & West 2008, p. 311). The researchers ultimately found that "the more developed economies are more likely to have political rights and as a result, are less likely to have capital punishment" (Greenberg & West 2008, p. 331). This study indicates that there is a relationship between economic development and a country's probability of having capital punishment. The researchers used economic development and did not use GDP. This determined that the relationship between GDP and capital punishment requires further research before it is understood.

In another study conducted by Carsten Anckar (2014) called Why Countries Choose the Death Penalty, the researcher investigates the potential homogeneity between countries that either have or do not have the death penalty. One of the variables used by the researcher is size and socioeconomic development. The researchers determined socioeconomic development by comprising GDP per capita and infant mortality rate. The researchers ultimately found that "with regard to GDP per capita... abolitionist countries are much wealthier than countries where death penalty statutes are still in use in some form... retentionist countries are relatively wealthier today than they were in the year 2000 (Anckar 2014, p. 16). This research indicates that there is potentially a link between GDPs per capita and capital punishment. More research needs to be conducted since the research conducted by Anckar does not use GDP per capita as its own variable. Therefore, its effect is not fully understood.

Human Freedom

In this study, human freedom is defined by the creators of Cato's Human Freedom Index, Vazquez and Porcnik. The researchers defined human freedom as "the absence of coercive constraint." (Vasquez & Porcnik, 2019, p. 7). The researchers came up with a numeric value for human freedom by measuring a country on 12 sub-categories scored 1-10 with 1 being the lowest score of that category and 10 being the highest. The final score would be the average of all sub-category scores (Vasquez & Porcnik, 2019).

Amnesty International has described the death penalty as "the ultimate denial of human rights. It is the pre-meditated and cold-blooded killing of a human being by the state. This cruel, inhuman and degrading punishment is done in the name of justice. It violates the right to life as proclaimed in the Universal Declaration of Human Rights" (Amnesty International 2007). Based on this statement, Amnesty International would most likely agree that levels of human freedom would be lower in countries with the death penalty because the death penalty is a "inhuman and degrading punishment". In a research study done by Mathew D. Mathias (2013), the researcher investigates the influence of human rights on the death penalty. He conducts his research across multiple different countries in order to evaluate if there is a relationship between their level of human rights and capital punishment. Mathias revealed "that not only does the human rights regime exert an influence on states' legislative position on the death penalty, but it also deters states' practice of the death penalty as well" (Mathias 2013, p. 1267). This research indicates that there is a potential relationship between human rights and capital punishment. Given that human rights and human freedom are very similar one could hypothesize that human freedom will have a similar relationship. However, little to no research has been done to explore that relationship.

III. Research Questions

Given that there is limited research that explores Hofstede's cultural dimensions, economic wealth, and human freedom in relation to capital punishment these six research questions were developed:

> **RQ1:** To what degree do the six dimensions of national culture impact a country's use of capital punishment?
> **RQ2:** To what degree do the significant dimensions of national culture and human freedom impact a country's use of capital punishment?
> **RQ3:** To what degree do the significant dimensions of national culture together with human freedom and economic wealth impact a country's use of capital punishment?
> **RQ4:** To what degree do the six dimensions of national culture impact human freedom?
> **RQ5:** To what degree do the significant dimensions of national culture and economic wealth impact human freedom?
> **RQ6:** Does human freedom mediate the effect of economic wealth and/or the significant relationships between national culture and capital punishment?

IV. Methodology

Amnesty International data was used for the dependent variable, capital punishment (Accessed September 2020). In order to remain unbiased and independent, Amnesty International conducts this research without financial aid from any country or government. Amnesty International collects their data on this topic from the capital punishment statistics that the UN makes public. Hofstede's six cultural dimensions were used including uncertainty avoidance, power distance, indulgence, long term orientation, individualism, and masculinity. This data was collected from the Hofstede Insights website (Professor Geert Hofstede, 2019). The data was analyzed on a scale of 0 to 100. The higher the score the higher likelihood that the country practiced one of the six dimensions in their culture. Human freedom was collected using Cato's Human Freedom Index (Vasquez & Porcnik, 2019). Countries are measured on 12 sub-categories. The countries are compared on a scale of 0 to 10. The higher the score the higher the human freedom in that country. A country's wealth was measured by GDP/cap/ppp and that data was collected from the CIA World Factbook (Accessed September 2020). GDP per capita was the form of GDP that was used to compare the countries.

In this research study, a sample of 70 countries was used that possessed data available for all the variables used in the study. The research questions were tested with hierarchical regression with SPSS. Variance Inflationary Factor (VIF) analysis was used to measure multi-collinearity. To measure mediation, a Hierarchical Bayesian test was conducted using the Posterior P-Value and indirect effect (Falk & Biesanz, 2016).

V. Results

Table 1: Descriptive Statistics

	Mean	Std. Dev.	N
Capital Punishment (CAP)	.24	.43	70
Individuality (IND)	43.37	23.26	70
Masculinity (MAS)	48.51	19.11	70
Uncertainty Avoidance (UAI)	66.66	22.41	70
Indulgence (IVR)	48.96	22.56	70
Long-Term Orientation (LTO)	42.64	21.97	70
Power Distance (PDI)	60.83	21.75	70
Human Freedom Index (HFI)	7.31	1.12	70
GDP Per Capita (GDP) (in 1000s)	28.92	19.84	70

Table 2: Correlations

	CAP	IND	MAS	UAI	IVR	LTO	PDI	HFI	GDP
CAP	1								
IND	**-.296**	1							
MAS	.101	.138	1						
UAI	**-.285**	**-.203**	.039	1					
IVR	**-.290**	.165	-.066	-.143	1				
LTO	-.075	**.266**	**.211**	-.011	**-.424**	1			
PDI	**.267**	**-.663**	.132	.154	**-.256**	-.018	1		
HFI	**-.435**	**.623**	-.078	-.018	.087	**.000**	**-.557**	1	
GDP	-.157	**.650**	-.008	**-.219**	**.214**	**.357**	**-.546**	**.649**	1

Note: Bold $p<.05$; for abbreviations see Table 1.

Table 3: Regression Models

	Model 1a Std. Beta	Model 1b Std. Beta	Model 1c Std. Beta	Model 1d Std. Beta	Model 2a Std. Beta	Model 2b Std. Beta	Model 2c Std. Beta
PDI	**-.261[1]**	**-.293[1]**	**-.229***	**-.362[3]**	.028	-	-
IND	**.354[2]**	**.357[2]**	**.243***	-	**-.253***	-.111	-
MAS	-.198[1]	-.164*	-.140	-	**.188***	.117	-
LTO	**.441[3]**	**.355[3]**	**.288[2]**	**.290[2]**	**-.221***	-.089	-
UAI	.116	-	-	-	**-.400[3]**	**-.363[3]**	**-.298[2]**
IVR	.162*	-	-	-	**-.393[2]**	**-.339[2]**	**-.329[2]**
HFI	Dep.	Dep.	Dep.	Dep.	-	**-.303[1]**	**-.542[3]**
GDP	-	-	**.262[1]**	**.348[2]**	-	-	.200
CAP	-	-	-	-	Dep.	Dep.	Dep.
R^2	.569	.547	.581	.549	.340	.382	.385
Adj.R^2	.529	.519	.548	.529	.279	.325	.347
ΔR^2	-	-.022	.034	-.032	-	.042	.003
F value	**14.278[3]**	**19.635[3]**	**17.764[3]**	**26.832[3]**	**5.569[3]**	**6.693[3]**	**10.162[3]**

Note: *$p<.10$; [1]$p<.05$; [2]$p<.01$; [3]$p<.001$; for abbreviations see Table 1.

Tables 1 shows the basic descriptive statistics for the independent and dependent variables that were evaluated in the study. Table 2 illustrates the correlations among the variables in the study. Table 3 addresses most of the research questions in the study. In Table 3, Model 2a focuses on RQ1, the results indicate that IND, LTO, UAI, and IVR were significant (positive) predictors and MAS was a significant (negative) predictor of the variance in Capital Punishment (R^2 .340). RQ2 was addressed through Model 2b. The results indicate that human freedom, uncertainty avoidance, and indulgence versus restraint were significant (negative) predictors of the variance in capital punishment (R^2 .382). RQ3 was addressed by Model 2c. The results reveal that human freedom, uncertainty avoidance, and indulgence versus restrain were significant (negative) predictors of the variance in capital punishment (R^2 .385). Models 1a & 1b evaluate RQ4, the results suggest that lower Power distance, higher Individuality and higher Long-Term Orientation were significant predictors of the variance in Human Freedom. RQ5 is evaluated by Models 1c & 1d, which found that lower Power distance, higher Long-Term Orientation, and higher Economic Wealth were significant predictors of the variance in human freedom.

The variance inflationary factor (VIF) was utilized for each of the regression models to measure the degree of multicollinearity between the independent variables. If the degree of multicollinearity is high between the variables, it will be difficult to differentiate the regressions results. The VIF scores of all seven of the models were between 1 and 2 which were less than the suggested score of 5. This indicates that there should be no problems with interpretation of the variables due to multicollinearity (Hair, et al. 2006).

In order to find RQ6, possible indirect effects have to be addressed through the Hierarchical Bayesian Test and the partial posterior p-value analysis. The Hierarchical Bayesian Test was used as opposed to the Monte Carlo method, because Hierarchical Bayesian was found to be more precise for samples of less than 100 and this study includes 70 samples. The partial posterior p-value analysis is used to measure the indirect effect p-value and the Hierarchical Bayesian test is used to find the confidence interval. Falk and Biesanz (2016) developed calculators that are able to find the degree of mediation by conducting the partial posterior probability, and the Hierarchical Bayesian test. Falk and Biesanz believe that these calculators can be used for making inferences about indirect effects in multiple regression models, because they are able to find the partial posterior p-value and the confidence interval of the relationships. The confidence interval and partial posterior p-value indicate whether mediation is occurring or not. When the confidence level does not cross over zero, and the partial posterior p-value is less than .05 then the mediation is significant (Falk & Biesanz, 2016).

Table 4 results indicates that Long-Term Orientation (LTO), Power Distance (PDI), and Economic Wealth (GDP) impact Capital Punishment though the Human Freedom (HFI) mediation variable at a significant level. In all of the confidence intervals zero is not included and the posterior p-values are less than .05. Thus, all of the mediations are significant.

Table 4: Hierarchial Bayesian Test of Indirect Effect and Partial Posterior P-value Analysis (Significant only Indicated)

Settings & Results	LTO>HFI*>CAP	PDI>HFI*>CAP	GDP>HFI*>CAP
Computational Accuracy Setting	Excellent	excellent	excellent
Confidence Interval Setting (%)	.95	.95	.95
Confidence Interval	.0003, .0050	-.0059, -.0005	-.0088, -.0016
Partial posterior p-value	.0016	.0006	.0009

Note: Mediator variable; for abbreviations see Table 1.

Figure 1: Capital Punishment Model Significant Results
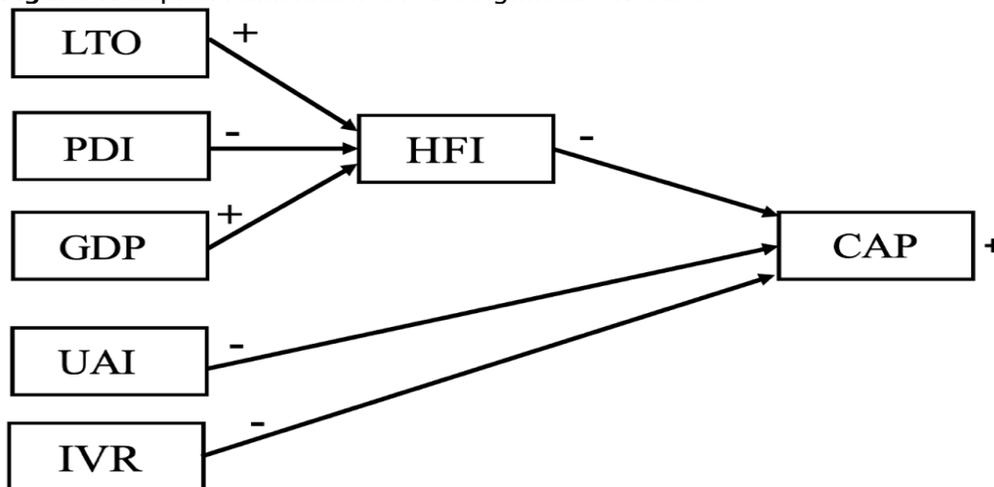
VI. Discussion

The results of this study suggest that the three antecedents (culture, human freedom, economic wealth) used in this model play significant roles with regards to capital punishment in sample countries. As seen in Figure 1, two cultural dimensions, uncertainty avoidance and indulgence, have direct impacts on capital punishment. The cultural dimensions of long-term orientation, power distance, and economic wealth have significant impacts on human freedom. This in turn impacts capital punishment. Human freedom acts as a mediator between culture, economic wealth, and capital punishment.

Opposition to capital punishment has grown recently; some countries have reinstituted or increased capital punishment. Many countries and individuals view the death penalty as an inhumane form of punishment (Hood 2001) while others still support it. This indicates that the current strategies to abolish capital punishment have not been entirely successful. Thus, these results could have very important implications for abolitionists. As indicated in Figure 1, human freedom and culture both are significant factors in explaining whether a country will have capital punishment or not. Abolitionists should consider these factors when they are trying to abolish capital punishment. They should specifically focus on raising the levels of human freedom, uncertainty avoidance, and indulgence within society. After raising these levels, abolitionists may have more success in having the law abolished. On the other hand, these findings have implications for retentionists who hope to keep capital punishment within their societies. Retentionists should look to lower the levels of human freedom, uncertainty avoidance, and indulgence within the society.

These results have very important implications for future capital punishment researchers. The results show that four of Hofstede's six dimensions were significant in explaining the variance of capital punishment. Furthermore, the results indicate the likelihood of a country having or not having capital punishment is influenced by national culture. This is crucial because culture's impact on capital punishment cannot be ignored by future research regarding capital punishment. More research needs to be conducted on this relationship, but this study illustrates that there is definitely a relationship worthy of exploration.

Additionally, it is worth noting that human freedom explains a large percent of the variance in capital punishment. These results suggest that human freedom has a significant impact on the likelihood of a country having capital punishment. Much like national culture, the significance of human freedom in capital punishment cannot be ignored in future studies. However, Cato's Human Freedom Index is such a large index with many subcategories, so it is difficult to decipher what factor of human freedom is most significant. Therefore, significantly more research needs

to be done regarding this relationship in order to explain what part of human freedom is most significant in explaining the variance of capital punishment.

Human freedom mediates the effect of long-term orientation, power distance, and economic wealth. This mediation suggests that culture and economic wealth make an impact in explaining a country's level of human freedom and probability of having or not having capital punishment. Future research should further explore the relationships between human freedom and the significant antecedents to uncover their impact on the variance of capital punishment.

These results could also have potential implications for international investors and traders. In a study done by Colin M. Barry, K. Chad Clay and Michael E. Flynn (2013), the researchers attempt to uncover what role human rights play in foreign direct investment. They ultimately found that countries with higher levels of human rights have greater inflows of foreign direct investment. Countries with low levels of human freedom have much lower levels of inflows from foreign direct investment, because investors do not want their reputations to suffer by investing in a country that has poor human rights records. Human freedom and human rights are basically one in the same, since Cato's Human Freedom index accounts for human rights. This is illustrated in my study that countries with lower levels of human freedom have a higher probability of having capital punishment. Consequently, future research should look into the potential relationship between capital punishment and foreign direct investment.

It is important to note that this study does have important implications, but it also has limitations. For example, this study is limited by the number of variables that are not included within the study. While these variables explain 38.5 percent of the variance in capital punishment, 61.5 percent of the variance is unexplained. Future research should aim to uncover what other variables, not in this study, explain that large percentage of the variance that cannot be explained. Previous studies have posed that other variables like religion and education might play a role in the probability of a society having the death penalty (Greenberg & West 2008; Britt 1998). However, the research done by Garland, West, Britt, and myself is not enough research regarding this topic. More still needs to be done to uncover all of the relationships with capital punishment. This study is limited by the sample size of 70 countries. Since the sample size is not incredibly large it is not an accurate depicter of what GDP/cap/ppp is. The median GDP/cap/ppp (CIA World Factbook, accessed September 2020) is approximately USD$15,000. However, the mean for the 70 countries used in this sample is USD$28,920. This suggests that data was not available for all countries. The sample size of 70 countries had a GDP per capita average that was skewed higher than the actual average.

In closing, more research needs to be conducted on these relationships to have a better understanding of why certain countries support or oppose the death penalty.

References

Anckar, C. (2014). Why Countries Choose the Death Penalty. *The Brown Journal of World Affairs, 21*(1), 7-25. Retrieved February 1st, 2021, from http://www.jstor.org/stable/24591027

Amnesty International (2019). Amnesty International Global Report: *Death Sentences and Executions 2019*. Retrieved August 30th, 2020, from https://www.amnestyusa.org/wp-content/uploads/2020/03/Amnesty-Death-Sentences-and-Executions-2019.pdf

Amnesty International (2007). UN Adopts Landmark Decision on Global Moratorium on Executions. Retrieved August 30th, 2020, from https://www.amnesty.org/en/press-releases/2007/11/un-adopts-landmark-decision-global-moratorium-executions-20071115/

Amnesty International (2020). UN: Opposition to the Death Penalty Continues to Grow. Retrieved February 1st, 2021, from https://www.amnesty.org/en/latest/news/2020/12/un-opposition-to-the-death-penalty-continues-to-grow/

Barry, C., Clay, K., & Flynn, M. (2013). Avoiding the Spotlight: Human Rights Shaming and Foreign Direct   Investment. *International Studies Quarterly, 57*(3), 532-544. Retrieved February 16, 2021, from   http://www.jstor.org/stable/24017922

Biesanz, J., Falk, C. & Savalei, V. (2010). Assessing mediational models: Testing and interval estimation for indirect effects. *Multivariate Behavioral Research,* 45, 661-701.

Britt, C.L. (1998). Race, Religion, and Support for the Death Penalty: A Research Note. Justice Quarterly   15: 175-191. Retrieved   January   10th,   2021,   from https://www.tandfonline.com/doi/pdf/10.1080/07418829800093681

Central Intelligence Agency (2020). *The World Factbook*. Retrieved August 30th, 2020, from https://www.cia.gov/the-world-factbook/

Dezhbakhsh, H., Rubin, P., & Shepherd, J. (2003). Does Capital Punishment Have a Deterrent Effect? New Evidence from Postmoratorium Panel Data. *American Law and Economics Review, 5*(2), 344-376.   Retrieved   January   10th,   2021,   from http://www.jstor.org/stable/42705435

Dezhbakhsh, H., & Shepherd, J. (2006), The Deterrent Effect of Capital Punishment: Evidence from a "Judicial Experiment". Economic Inquiry, 44: 512-535. Retrieved January 10th, 2021, from https://www.sfu.ca/~allen/deter.pdf

Finkelstein, C (2006). *A Contractarian Argument against the Death Penalty,* New York, University Law Review 81,   no.   4.   Retrieved   January   11th,   2021,   from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=347323

Garland, D. (1990). *Punishment and Modern Society: A Study in Social Theory,* Oxford, Clarendon Press

Garland, D. (2005). Capital punishment and American culture. Punishment & Society, 7(4), 347–376.   Retrieved January 11th, 2021, from https://doi.org/10.1177/1462474505057097

Greenberg, D., & West, V. (2008). Siting the Death Penalty Internationally. *Law & Social Inquiry, 33*(2), 295 343.   Retrieved   February   2nd,   2021,   from http://www.jstor.org/stable/20108763

Hair, J., Black, W., Babin, B., Anderson, R. & Tatham, R. (2006). *Multivariate Data Analysis (6th ed.)*, Upper Saddle River, Pearson Prentice Hall.

Hofstede Insights (n.d.). (2020). Retrieved August 30th, 2020, from https://www.hofstede-insights.com/country-comparison/

Hofstede, G. (2001). *Culture's Consequences (2nd ed.)*, Thousand Oaks, Sage

Hofstede, G., Hofstede G.J., Minkov, M. (2010). *Cultures and Organizations*, New York, McGraw Hill

Hood, R. (2001). Capital Punishment: A Global Perspective. Punishment & Society, 3(3), 331–354. Retrieved December 30th, 2020, from https://doi.org/10.1177/1462474501003003001

Johnson, J., & Johnson, C. (2001). Poverty and the Death Penalty. *Journal of Economic Issues, 35*(2), 517-523.   Retrieved   February   1st,   2021,   from http://www.jstor.org/stable/4227684

Mathias, M. (2013). The Sacralization of the Individual: Human Rights and the Abolition of the Death   Penalty. *American Journal of Sociology, 118*(5), 1246-1283. Retrieved February 1st, 2021, from https://www.journals.uchicago.edu/doi/10.1086/669507

Sarat, A.D., & Boulanger, C. (2005*). The Cultural Lives of Capital Punishment: Comparative Perspectives,* Stanford, Stanford University Press

Tarm, M., & Kunzelman, M. (2021, January 15). Trump Administration Carries Out 13th and Final Execution. Retrieved February 3rd, 2021, from https://apnews.com/article/donald-trump-wildlife-coronavirus-pandemic-crime-terre-haute-28e44cc5c026dc16472751bbde0ead50

Vasquez, I. & Porcnik, T. (2019). The Human Freedom Index. *Cato Institute, the Fraser Institute, and the Friedrich Naumann Foundation for Freedom*. Retrieved August 30th, 2020, from https://www.cato.org/sites/cato.org/files/human-freedom-index-files/cato-human-freedom-index-update-3.pdf

Inflation, Interest Rate, and Firm Efficiency: The Impact of EPU

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Abstract

This study investigates the effect of inflation and interest rate on firm efficiency while exploring the role of policy uncertainty. Not a misnomer, macroeconomic conditions matter, and their impact on business strategy are inherently observed directly or indirectly. Yet, there is still a dearth of literature relating inflation and interest rate through the moderating effect of policy uncertainty on firm efficiency. With a sample of 92,293 observations from 12,207 US firms, I find that inflation positively affects firm efficiency, and interest rate negatively affects firm efficiency. Similarly, the effects are amplified through the moderating effect of policy uncertainty for inflation and interest rate. Further examination of the moderating impact finds a positive directionality for both macroeconomic conditions for larger firms, firms that pay dividends, firms with a higher cost of goods and services and higher sales, and firms located in the Midwest region. The results are robust to firm-year effects and clustering approaches.

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Chapter II: Bank Holding Company Lobbying Activity upon Regulation and its Impact upon Non-Traditional Revenue

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Abstract

Large U.S. based bank holding companies exert their influence at every step in the legislative process where financial regulatory reforms are enacted into law, such as the Dodd-Frank Act, and of the promulgation process of creating its regulations. We investigate two questions. First, we ask if large bank holding companies, upon facing salient regulation, frequently lobby regulators or ex-post lobby in an attempt to have their opinions and arguments heard with the goal of favorable regulatory change. We further investigate if banks that lobby financial regulatory agencies will be cited and published in the final regulation. We do so, while taking advantage of an original collection of political and financial quarterly data from 2003 to 2018. This includes three forms of bank political participation. The use and application of this novel data when tested using robust panel data models, allowed to make several important observations. We ascertained that a BHC that participates in commenting upon proposed rules will be more successful at having its view mentioned in the final regulation, ensuring that at the very least its opinion has been heard. Next, we found that by using a well-informed revolving door lobbyist, increases probability of having the BHC's comment worded into the final regulation will increase. In the end, our empirical findings offer support that BHCs may lobby regulators to preserve gains in all important revenue sources or to increase potentially risky non-traditional revenue streams.

The Nature of the Problem

As a reaction to the financial crisis of 2007-2009, the Dodd Frank Act brought about significant changes to banking regulation. Key elements of this act included macro and micro prudential regulatory reform in order to prevent the near collapse of the U.S. economy and related global financial markets. The Act also mandated the creation of a number of new financial regulatory agencies (Copeland, 2010; Webel, 2017). These changes could lead to highly complex, costly, and burdensome regulation, making it nearly impossible for a large number of banks to compete efficiently.

Lobbying, however, does not end when Congress passes the final bills. Large bank holding companies continue to lobby, and perform extremely well, past the congressional bill stage. Firms and individuals do not just accept new regulations as the regulatory agency proposes. For bank regulation, such the Dodd Frank Act, bank holding companies (BHCs) frequently lobby the regulatory agency in an attempt to have their opinions and arguments heard and to encourage favorable changes to the regulation. They exert their influence at every step in the legislative process where financial regulatory reforms are enacted into law, such as the Dodd-Frank Act, and of the promulgation process of creating its regulations.[2]

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[2] It is important to note that before, during, and after bill passage, lobbyists working for large banks outnumbered congressional members by a ratio of 20 to 1. Citigroup, Wells Fargo, and J.P. Morgan spent a collective $116 million in lobbying U.S. Congress in 2010 - 2012. While lobbying financial regulatory agencies, the same three BHCs spent a collective $84.5 million from 2010-2012 (Rivlin, 2013; Lipton and Protess, 2013).

However, risk taking behavior on the part of BHCs and inadvertent risk incentives, by the same regulatory reform and bank regulations, remain in the years following reform (Bank of International Settlements, 2019). The ability of BHCs to influence banking and financial regulations draws attention to an inequality of representation that exists in the rulemaking process in the U.S. government and financial regulatory agencies (Barth, Prabha, Apanard and Lu, 2013; Igan and Lambert, 2019). Large organizations, such as businesses and specifically large BHCs, are a dominant, well-organized force that lobby regulators during the promulgation process. This is especially the case with salient and novel regulation, which carries the potential to greatly impede bank operations, revenues and profit.

It is in this setting that a bank lobbies to present its point of view and not to just accept the new regulation as the regulatory agency proposes. The relationship between large BHC and bank regulator from the perspective of the regulator is one of information asymmetry and externalities, where communication plays a vital role in the formulation of proper regulation. With that said, there is no one perfect regulation, as such, but providing information to regulators upon proposal of rules is essential to a well-functioning and competitive banking industry.

BHCs normally communicate their preferences using at least three unique methods under the auspices of ex-post lobbying, or lobbying during the rule making stage, in order for the argument to be worded into final regulation in their favor. The unique methods BHCs employ include ex-post lobbying, the formation of persuasive comments, the oral presentation of arguments and the use of revolving door lobbyists.

Large bank holding companies (BHCs) lobby federal financial regulatory agencies of the United States government during the rulemaking process, which is known by the term *ex-post lobbying*. Nearly 50% of all lobbying takes place ex-post or after bill passage, in contrast to lobbying Congress, ex-ante or before passage. Congress mandates a regulatory agency with promulgating, and at times enforcing various provisions of a law.

Commenting activity upon proposed rulemaking is just one of several instruments used in lobbying, simultaneously or at different stages of policy making. It may involve only a written comment or an oral presentation at a meeting with regulators or both. Comments by BHC lobbyists upon proposed and final regulations are a form of ex-post lobbying. When a bank is cited in a final regulation in the U.S. Federal Register, it is an indication that the bank has offered a substantive and informative argument in its comment. Banks that are successful in being cited also tend to be successful in maintaining or increasing non-traditional income. The citation indicates that it is probable their opinion has been heard, and regulatory relief could follow.

A revolving door lobbyist, hereafter, "RDL", is a trusted lobbyist who previously worked in an official capacity for a financial regulatory agency or in a different governmental capacity. They may be a highly knowledgeable individual or one who maintains a network of contacts within these agencies, but currently represents a bank or BHC. As an example, a recent paper finds that among the nearly 3,000 firms that lobbied the U.S. Securities and Exchange Commission on one of the Dodd-Frank related proposed regulations, at least 88 of these firms employed a former SEC regulator. Moreover, large banks will often hire an RDL from an outside lobbying firm, if not on staff, when expertise and/or technical knowledge is required to defeat a proposed regulation that threatens key revenue sources (Ban and You, 2019; Shive and Forster, 2014).

The primary objective of this study is to investigate if BHCs, upon facing salient regulation, frequently lobby regulators or ex-post lobby in an attempt to have their opinions and arguments heard with the goal of favorable regulatory change. A second objective of this paper explores whether banks that lobby financial regulatory agencies will be cited and published in the final regulation. Coordinated ex-post lobbying efforts, including the use of revolving door lobbyists, will allow BHCs to continue or increase those revenues that may be at risk, non-traditional revenue sources.

We illustrate several findings. First, a BHC makes use of multiple mechanisms of influence while lobbying regulators. A BHC that participates in commenting upon proposed rules will be more successful at having its view mentioned in the final regulation, ensuring that at the very least its opinion has been heard. Second, we find that upon hiring a revolving door lobbyist, externally or internally, who is highly knowledgeable and well connected, the probability of having the BHC's comment worded into the final regulation will increase (Bertrand, Bombardini, and

Trebbi, 2011; Ban and You, 2019). Therefore, a 1% increase in the use of revolving door lobbyists by a BHC leads to an 8.7% increase in the number of citations of a firm's comment in the related final regulation. The third finding is that a 1% increase in the lobbying of regulators by a BHC will positively and significantly increase that BHC's non-traditional revenues by 1.48%. [3]

The contributions of our research are many. First, this research involves only large BHCs and is one of the first studies to do so.[4] The majority of regulatory lobbying studies focus upon broad swaths of industries and interest groups. The second contribution is that these findings have advanced the knowledge of how the multiple mechanisms of influence upon regulators and regulation, may further impact the revenues for BHCs. The third contribution includes an original data collection that combines multiple political and financial data sources, inclusive of nine financial regulatory agencies.

Literature Review and Hypothesis Development

The focus of this study is on one specific highly regulated industry, bank holding companies, which tend to be large, have numerous resources, and are highly complex. We build upon lobbying of regulation by further analyzing the impact of being awarded or afforded a final citation and its effect upon a BHC's non-traditional revenue. Over the last two decades, there have been vast improvements in the regulatory lobbying literature concerning the understanding of how frequent firms lobby, who they lobby, and how the lobbying is organized.

Ex-post Lobbying

To facilitate intense ex-post lobbying of regulators, congressional members vaguely word laws on purpose, which allows large BHCs to further their influence (You, 2017). Interest groups and banks devote much of their resources toward influencing the entire spectrum of policy-making, not just the U.S. Congress.[5] A regulatory agency must take into consideration and review all comments that are deemed "substantive," and all agencies must integrate parts of comments into the final regulation (Carey, 2013, Rashin, 2019).

Lobbyists, through their representation, often provide valuable information to the regulators. This helps strike a balance between regulation that functions for industry yet meets the needs of other key participants, including the public (Igan and Lambert, 2019; Rashin, 2019).[6] Through tracking comments on proposed regulation and meetings by specific interest groups with regulators, certain authors are able to identify if an opinion was heard and acknowledged (Ban and You, 2019, p.5).[7]

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[3] The following is a brief outline to our research findings and the accompanying tables. The regression results found in Table 7 to 9, relate to our principle findings and main discussion section 2.4.1. These tables are found on pages 22-25. Figure 1, on page 28, illustrates the influence of ex-post lobbying upon non-traditional revenue. We also include a data appendix section 2.6., which begins on page 31. The reader will find Table 3, Descriptive Raw Statistics, as well as Table 4, which relates to the pairwise correlation matrix. Table 5 and Table 6 encompass the regression results of our control variable that related to Equation 2.1 and Equation 2.2. Table 10 comprises a Negative Binomial estimation regression of Equation 1 for robustness purposes. In addition, Table 11 consists of a Pooled OLS estimation model regression of Equation 2, again, for robustness purposes.

[4] Bank holding companies serve as the unit of analysis in this study for a number of reasons: First, these firms play a crucial economic function and policy role in the United States and globally. BHCs generate income from bank and non-bank sources. Further, these revenue sources cross a number of industries, as such, they are regulated by multiple U.S. financial regulatory agencies. Finally, these banks are resilient and maintain sufficient assets and resources to lobby extensively.

[5] According to the Administrative Procedure Act of 1946 (APA), Section 553, part C, "After notice required by this section, the agency shall give interested persons an opportunity to participate in the rule making through submission of written data, views, or arguments with or without opportunity for oral presentation" (Rashin, 2019, p. 8).

[6] It is important to be able to ascertain whether an argument has been incorporated into the final form of regulation, with the appropriate transmission of information, and made on behalf of solely the corporate interests or if it is being produced with the public's interest at heart. This is similar to the discussion of informational lobbying versus regulatory capture (Grossman and Helpman, 2001; Igan and Lambert, 2019; Rashin, 2019).

[7] Ban and You (2019) find that first, those Congressional members who comment and have the capacity to discipline an agency are often cited in final regulations. Second, they find firms that lobby both U.S. Congress and regulatory agencies will be more likely to have their opinion acknowledged in the final form of a SEC regulation.

Barriers to entry exist in regulatory lobbying, where firms continue to lobby once they have begun the process (Drutman 2015, De Figueiredo and Richter, 2014). When facing regulation that threatens important resources, large firms, including large BHCs, will lobby with a high propensity and intensity (Libgober and Carpenter, 2018, Rashin, 2019; Ban and You, 2019).

A fundamental objective of this paper is to determine if increases in a BHC's lobbying upon regulation and financial regulatory agencies leads agencies to acknowledge the opinion of the commenting BHC in the final regulation.

A number of other points lend support. First, a significant correlation exists between the frequency of commenting by firms on proposed regulation and actual changes in the final version of the regulation (Golden, 1998; Yackee and Yackee, 2006; Haeder and Yackee, 2015). Next, the more often comments include new information, data, and industry specific jargon in a concise manner, the more frequently the firms' views are then incorporated into a final regulation (Rashin, 2019, p. 28). Another point is the strong relationship between the number of lobbying report submissions and the number of meetings with the SEC, which are highly associated with the citations in the SEC's final rule (Ban and You, 2019).

A number of recent advances in the literature of ex-post lobbying lend a certain degree of strength to my first argument and its direction. In a recent paper, the application of advanced algorithms for purposes of content analysis is used to identify if a commenter's arguments and preferences have been included in any changes to a final regulation when compared to its proposed form (Rashin, 2019).

In a subsequent advance, Libgober and Carpenter (2018) make use of the stock market intra-day price reactions of commenting firms. By applying event study methods, they isolate and observe significant excess returns for those firms that comment upon proposed regulation and also have their preferences included in the final regulation. Stock price reactions of the commenting firms, upon the release of the final regulations, are then compared to those firms who abstain from commenting. Further, the finalized regulations of the Dodd Frank Act are observed by highly informed and vigilant investors. The effect of commenting, overall, for these publicly traded financial firms results in approximately $3.2 to $7.8 billion dollars in excess market returns (Libgober and Carpenter, 2018). While this is an indirect measure, their method does speak to the influence of large firms that commented upon 22 proposed-final rule pairs as promulgated by the U.S. Federal Reserve.

Lobbying of a regulatory agency upon a final regulation, does not always lead to the agency acknowledging an opinion or comment by a bank. There exists evidence that stands contrary to this paper's first argument. In a random sample, Golden (1998) applies content analysis to analyze 10 proposed regulations, from notice of proposed rulemaking and receipt of comments, to final regulation and publication in the Federal Register. She finds only 8 of the 10 proposed regulations are changed following comments. However, only one proposed regulation, underwent significant change, while others underwent minor changes of little substance. Golden (1996) notes that the one regulation which was changed significantly, was most likely owed to private interest groups forming a united front in their objections to the rule.[8] When comparing findings by Golden (1996) and a more recent study by West (2004), each author arrives at similar conclusions, yet for different underlying reasons. Both authors determine that while private interest group, may often frequently comment upon proposed regulation. They further find that this will not guarantee an acknowledgement of a firm's opinion in the final form of the regulation or a change to a final regulation. West (2004) relies upon interviews as a primary source, complemented by an examination of 42 proposed to final regulations. Moreover, he notes that of the 16 regulations that were amended before producing the final regulations. Only 5 of the 16 were changed in a significant manner. Those five regulations are more than likely changed, in

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[8] Golden (1998) mentions that there exists a dearth in public participation in the commenting stage that follows that follows the notice of proposed rulemaking process. Moreover, she notes the agencies might have made further significant changes, had the private interest groups been united in their objections or concerns. West (2004) notes the difficulty "for a person with cursory understanding" in distinguishing changes between proposed and final regulation, in part, due to the highly technical nature of agency regulations and the issues at stake (West 2004, p. 71).

part, due to comments by private interest groups, and in other part, due to political interference by elected officials.

The mixed results, in particular, the findings of Golden (1998) and West (2004) are likely owed to different methods applied by authors when analyzing and attributing changes to final rules by specific interest groups, given the related comments upon proposed regulation. Some of these methods used by past authors include interviews, human coding, and content analysis (Ban and You, 2019).

A further concept that stands contrary to the first argument is that if a large resourceful firm or BHC finds a proposed regulation as salient or unfavorable, they may apply several alternative techniques in order to influence the outcome of a rule. A few of these include applying intense congressional oversight of a regulatory agency, ensuring lengthy confirmation battles for agency leadership, and inundating an agency with comments, as they legally must review all comments received (McGarity, 2012; Rashin, 2019).

The above points in support and contrary to this study's first argument lead us to a testable hypothesis.

> **Hypothesis 2.1 (H2.1):** In securing a citation in a final rule of a U.S. Federal financial regulatory agency, large BHCs will perform ex-post lobbying of regulators in the form of commenting during promulgation.

Revolving Door Lobbyists

The second argument posits large BHCs that actively comment and are successful in forming a persuasive argument for the regulator will be cited in a final regulation. Further, through coordinated ex-post lobbying efforts, this citation will allow BHCs to continue or increase non-traditional revenue sources.

The first point of support for the above argument contends that BHCs will apply lobbying in a well-coordinated effort at influential stages of the promulgation process, depending upon the topic's level of salience. The methods employed combine various forms of lobbying, including lobbying congress, the use of revolving door lobbyists, and the disbursement of campaign contributions (Ban and You, 2019).

There are several key stages within the rule promulgation process, where the influence of lobbying tends to have much success. Lobbying during on the record and "off the record" meetings heavily influences the content of a proposed rule and possibly blocks a regulation from the regulatory agenda (Yackee, 2011; Krawiec, 2013). Another stage utilized by BHCs is when rules are deemed to be "economically significant." These significant rules must undergo a review process by the Office of Information and Regulatory Affairs (OIRA) in this next key stage, allowing more opportunities for industry to meet with regulators (Steinzor, 2012, Haeder and Yackee, 2015).

The second point of support is the use of revolving door lobbyists (RDL) increases a BHC's possibility of a favorable outcome, when lobbying regulation (Ban and You, 2019). If the topic is complex or politically salient, BHCs will find it advantageous to hire an external revolving door lobbyist to compose comments or to represent a bank's interests.

The revolving door lobbyists play a key role by using their policy expertise or their valuable connections, acting as key negotiators in a meeting, or composing a comment before finalizing a regulation (Bertrand, Bombardini, and Trebbi, 2011; Vidal, Draca, and Fons-Rosen 2012). In a recent study, it was found that the firms that hire former SEC regulators to represent their interests through meetings or comments increase their chances of the firm being cited in a final regulation (Ban and You, 2019, p.5).

> **Hypothesis 2.2 (H2.2):** The use of a revolving door lobbyist by a BHC to lobby regulation leads to the likelihood of an increase in citations and/or an increase in non-traditional revenue streams.

Non-Traditional Revenues

The lobbying of financial regulatory agencies by BHCs is an important element of this investigation, yet, just as crucial is studying the impact of this activity by BHCs upon bank revenue, specifically non-traditional revenue. One reason BHCs lobby is that they find non-traditional revenues valuable and those revenues act as a hedge against market interest rate movement. The traditional intermediation model that relies substantially upon interest income, such as deposit taking and lending, further provides banks with capital to generate non-interest income. Non-traditional revenue allows large BHCs to further diversify their revenue streams, especially in periods of low or volatile interest rates. For example, these low interest rates, typical of post-crisis years, "induce" banks to shift some of their activities from interest generating to fee-based and trading, as their net interest margins tend to compress (Brei et al., 2019).

Another associated reason is that they complement traditional revenue sources. While the shift toward non-traditional revenues began more than twenty years ago, their ability to allow for diversification and complement traditional revenues still remains. For example, some non-traditional revenue sources can be less sensitive to overall business conditions than traditional revenues (Bernanke and Kuttner, 2005; Borio, Brei, and Gambacorta, 2019). For example, a number of non-traditional, non-interest revenues, including insurance and investment banking, are not directly exposed to macro-economic conditions, such as the interest rate. This is in contrast to traditional banking revenue, which consists of net-interest revenue. Traditional intermediation revenue can be highly variable at times due to its relation with interest rate movement (DeYoung and Roland, 2001; Bernanke and Kuttner, 2005; Brunnermeier et al., 2019).

Further, in a universal banking model, similar to many BHCs, relationship banking is often combined with transactional based revenue activities. Having both types of revenue under one roof allows a bank to expand product and service lines, leading to increased cross-selling opportunities (Stiroh, 2002; Ghosh, 2020). Negative or weakly correlated revenues may strengthen the large BHCs' benefit of a diversified portfolio of both types of income sources.

Several examples are provided, illustrating how lobbying upon regulatory measures, by delivering persuasive comments to regulators and successfully being cited in a final regulation, allowed the BHCs to gain a degree of regulatory relief and/or concessions. In turn, this allowed the BHCs to maintain, adapt, or increase non-traditional revenues.

For example, the Durbin Amendment, which passed with the Dodd Frank Act on July 21, 2010, posed a great threat to fee incomes for large BHCs. While the ex-post lobbying efforts by the banks, including comments and meetings, was not a complete success, it managed to mitigate substantial potential damage and risk posed to their fee incomes. Banks faced a reduction in interchange fees that they charged merchants from approximately 44 cents to the Federal Reserve mandated 21 cents (Mukharlyamov and Sarin, 2019).

Through persuasive comments, meetings, and use of formers regulators in their lobbying efforts, the banks managed to maintain a 1% compensation on each transaction for costs owed to anti-fraud provisions and a more flexible, less costly approach to the application of the anti-fraud provisions. The Federal Reserve's interim rule represented preservation of a policy win, specifically for card issuing banks such as American Express and Capital One (U.S. Federal Reserve, 2011; Libgober and Carpenter, 2019, p. 21).

The Volcker Rule, Section 619 of the Dodd Frank Act of 2010, through its key provisions, sets out to limit proprietary trading and restricts the banks' ability to work with certain institutions such as hedge funds. The proposed rule was released on November 7, 2011, by the U.S. Federal Reserve. Following comments received from Goldman Sachs and Morgan Stanley, among numerous others, it was clear the proposed version of the regulation would impede normal trading functions, such as market making and hedging, and substantially reduce liquidity. The final rule was released by the Federal Reserve on December 10, 2013. Upon analyzing the differences in the proposed and the final regulation, two major victories for large BHCs are found in the inclusion of permissible market making activities and the elimination of Appendix B from the final rule. Appendix B sought to clarify what is considered appropriate market making activity. In 2015, the final regulation was approved by five financial regulatory agencies and began its

implementation stage, while still providing an extension period for banks to exit illiquid investments. Moreover, banks continued to lobby regulators and managed to roll back or extend implementation on other key provisions (Gelzinis, 2018).

Contrary to the above points of support, there are other means, apart from lobbying, in which BHCs maintain or increase their non-traditional revenue sources, including lobbying for exemptions and the practice of regulatory arbitrage. BHCs may lobby for preferential discretionary treatment under the FDIC's Prompt Correction Action Guidelines (Ignatowski, Korte, and Werger, 2014; Igan and Lambert, 2019). BHCs have previously employed regulatory arbitrage to circumvent U.S. regulatory capital requirements, in order to continue derivative trading activities (Acharya, Schnabl, and Suarez, 2013).

> **Hypothesis 2.3 (H2.3):** Together with ex-post lobbying, citations of a BHC in an agency's final rule, following a lobbyist visitation of comment, allows BHCs to maintain or increase non-traditional revenue streams.

In conclusion, I build upon the recent advances of two streams of literature that concern the following: the banking industry and the bank holding companies and lobbying of federal financial regulatory agencies. I address the impact of lobbying upon regulation and its effect on firm revenue as a natural extension of previous studies from these two literature streams. Specifically, this paper investigates one highly regulated industry, bank holding companies, and the impact of lobbying financial regulators upon non-traditional, non-interest revenue sources over the span of 15 years. Yet to be addressed by other authors, we investigate the effect of lobbying of regulation upon non-traditional revenues of BHCs to fill this gap.

Methodology and Data

Sample Attributes

A comprehensive sample of bank holding companies is included in this study using the Federal Reserve's Board of Governors National Information Center - URL: https://www.ffiec.gov/nicpubweb/nicweb/HCSGreaterThan10B.aspx . The FR Y-9C Federal Reserve forms list the quarterly income and expenses of BHCs in interest and non-interest revenue format. This serves as a primary resource for BHC accounting and financial information. The purpose behind the selection of this sample is based on the idea that larger BHCs tend to lobby and comment more (Brandon and Padovani, 2018; Ban and You, 2019; De Figueiroda and Richter, 2014).

As the bank holding companies sampled were chosen according to our design and taken from the U.S. Federal Reserve website, specifically from the Federal Financial Institutions Examination Council's (FFIEC) Peer groups One and Nine. In addition to the choice of peer group, there are two noteworthy changes that take place to the main sample. The sample originally began with 82 BHCs of both foreign and domestic origin, that consisted of a number of smaller BHCs with less than $25 billion in consolidated total assets from first quarter 2003 to first quarter, 2018.

The first sample change resulted in a reduction to 51 BHCs, with the requirement that each BHC have assets of greater than $25 billion in the first quarter of 2003, lobby U.S. Congress or U.S. Federal regulatory agencies, and trade publicly for at least three quarters of the sample time of this study. The BHCs that did not meet the asset size requirements were excluded. It has been found that larger banks and bank holding companies, as measured in total assets, have the resources to maintain complex product offerings, such as those found in non-traditional revenue sources (Copeland, 2010; Claessens, Dell'Ariccia, Igan, and Laeven, 2010, Apergis, 2014). This is one of the main justifications for increasing the asset size requirement for those BHCs in the quarterly sample.

Table 1: Description of Variables (Equation 1)

Equation 1

$$Citations_{i,t} = B_0 + B_1 Ln(1 + Ex - postLobby)_{i,t-1} + B_2 Comments_{i,t-1} + \delta_1 RevolvingDoorLobbyist_{i,t-1} + \phi_C X_{i,t-1} + v_i + v_t + \varepsilon_{i,t}$$

Variables	Variable definitions
Citations	Recognition of a BHC through citation or mention of name in a final regulatory ruling, as having contributed a comment of substance to a proposed ruling. The federal regulatory agency mentions the BHC's comment in a finalized form of regulation in the U.S. Federal Register. Citations represented the number of mentions for a BHC commenting, across not one rule but multiple rules, originally within a quarter and then dropped to a yearly mean for firm final rule citations.
Ex-post Lobbying	The lobbying of a regulatory agency by a BHC after a bill passes final vote stage in the U.S. Senate. The lobbying is related to a specific regulation that is being promulgated by a key financial regulatory body. The ex-post lobbying may take multiple forms, including meeting and comments and the use of revolving door lobbyists.
Comments	The letters or statements of opinion of a BHC relating to specific proposed regulation following a solicitation of comment period by the regulatory agency. Positions and attendees of meetings are duly noted and set equal to a comment letter for the purpose of this study.
Revolving Door Lobbyist	Indicator variable: A lobbyist who previously worked in an official capacity for a financial regulatory agency, or in a different governmental capacity, yet currently represents a bank or BHC. Frequently this individual maintains a network of contacts within these agencies or is highly specialized in their knowledge banking and investment banking products and services. This is a dummy Variable with a "1" indicating the person is an RDL and "0" if they are not an RDL.
Ln (Total Assets)	Control variable: total assets is calculated as the natural logarithm of assets, unadjusted for inflation. It is the only control variable orthagonalized due to its high correlation with other control variables.
Tier One Leverage	Control variable: Measures a bank's level of capital adequacy by applying the ratio of core capital to its total assets, i.e. Tier 1 capital to a bank's total consolidated assets. Tier 1 capital is a bank's common equity, retained earnings, reserves, and certain instruments with discretionary dividends and no maturity.
Total Loans to Total Assets	Control variable: The BHC's total loans outstanding as a percentage of total assets.
Share of Deposit Funding	Control variable: The non-interest bearing domestic deposits divided by the total of non-interest and interest bearing deposits, including money market funds, i.e. the share of deposits in deposits and money market funding.
Profitability	Control variable: return on equity serves as a proxy for BHC profitability. It equals the ratio of net income or loss and is divided by a firm's total holding company equity capital.
Expected Credit Risk	Control variable: provision for loan and lease losses divided by total assets.
Non-Interest Income Share	Control variable: the BHC's share of non-interest income divided by total net operating revenue.
Annual Asset Growth	Control variable: the BHC's current year's rate minus its previous year's growth rate divided by the previous year's growth rate for total asset growth rate.

The second sample change took place through reduction in frequency of the sample observation. The sample was further reduced from BHC-quarter or quarterly to BHC-year or annual observation. This is primarily owed to the high number of observations with zero comment activity at the quarterly level and with banks of total asset size below \$25 billion. The decision was made to reduce the sample from quarterly to annually, in an attempt to further normalize the distribution of comments, citation, and ex-post lobbying variables and increase significance upon key determinant variables. The sample reduction results in a list of BHCs that lobby regulators more frequently than smaller ones (De Figueiredo and Richter, 2014; You, 2017; Ban and You, 2019). This left only three BHCs that did not lobby: Sterling Bank, AmSouth Bank, and Comerica.

Variables

To control for effects upon bank performance, Equations 1 and 2 include control variables that also affect performance, valuation, profitability, leverage, and risk. A vector $(\phi_C X_{i,t-1})$ (+/-) of control variables includes the following: bank (v_i) (+) and year (v_t) (+), fixed effects, and the residual error term ($\varepsilon_{i,t}$) (-/+). The control variables first include a proxy for BHC size, total assets (natural logarithm of total assets), non-interest income share (total non-interest income to total operating income), level of BHC capitalization also serving as a regulatory capital measure (tier one leverage ratio), asset mix (total loans to assets ratio) and share of deposit funding structure (total deposits out of the sum of deposits - money market funding), profitability (return on equity), annualized growth in total assets, and expected credit risk (loan loss provision to total assets).[9]

Equation 1 examines if multiple forms of ex-post lobbying lead to a higher probability of a regulatory agency citing a BHC's comment in a final regulation. The dependent variable, Citations ($Citations_{i,t}$), also measures the number of citations that integrate substantive comments from BHCs in a final regulation. Comments ($Comments_{i,t-1}$) (+) represents comments on specific proposed regulations composed by BHC representatives and delivered to the financial regulatory agencies. The websites of a number of financial regulatory agencies and the U.S. Federal Register serve as sources for these citations of firm comments in the finalized regulation. Independent variables are, from left to right, the Constant (B_0) (+) and the Ex-post Lobbying variable (*Ex-postlobby$_{i,t-1}$*) (+). Ex-post lobbying signifies the lobbying of a regulatory agency by a BHC after a bill passes the final vote stage in the Senate. The lobbying is related to a specific regulation that is being promulgated by a financial regulatory body. The ex-post lobbying may take multiple forms, including comments and the use of revolving door lobbyists. This examination follows the methodology of You (2014) and Ban and You (2019) in calculating these variables. In this equation, Revolving Door Lobbyist ($Revolvingdoorlobbyist_{i,t-1}$) (+) is treated as dummy variable which will equal "1", if an RDL is used as a lobbyist by a BHC, and if not, "0."

Equation 2 begins with the dependent variable BHC Non-traditional Revenue ($Non-TraditionalRevenue_{i,t}$) for a BHC *i* during time *t*. The right side of the equation comprises the constant (γ_0), which precedes the variable Ex-post Lobbying (*Ex-postlobby$_{i,t-1}$*). Ex-post lobbying is described in the previous paragraph. All remaining variables and expected signs are described in the previous two paragraphs. A complete description and definition of each variable may be found in Tables 1 and 2.

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[9] The expected coefficient signs emanate from papers from which this chapter builds. Specifically, this paper refers to the works of Beck and De Jonghe (2013) and De Jonghe, Diepstraten, Schepens (2015), Copeland (2012), Ban and You (2019), and You (2014, 2017).

Table 2: Description of Variables (Equation 2)

Equation 2
$Non-TraditionalRevenue_{i,t} = \gamma_0 + \gamma_1 Ln(1 + Ex-postLobby)_{i,t-1} + \gamma_2 Citations_{i,t-1} + \delta_1 RevolvingDoorLobbyist_{i,t-1} + \phi_C X_{i,t-1} + \upsilon_i + \upsilon_t + \varepsilon_{i,t}$

Variables	Variable definitions
Non-traditional Revenue	Dependent variable: this category includes trading revenues, investment banking and underwriting of securities, fees and commissions, venture capital revenues, insurance commissions and fees, and interest income from trading assets, less interest expenses.
Citations	Recognition of a BHC through citation or mention of its name in a final regulatory ruling, as having contributed a comment of substance to a proposed ruling. The federal regulatory agency mentions the BHC's comment in a finalized form of regulation in the U.S. Federal Register.
Ex-post Lobbying	The lobbying of a regulatory agency by a BHC after a bill passes final vote stage in the U.S. Senate. The lobbying is related to a specific regulation that is being promulgated by a key financial regulatory body.
Revolving Door Lobbyist	Indicator variable: A lobbyist, representing a bank or BHC, who previously worked in an official capacity for a financial regulatory agency, or in a different governmental capacity, and maintains a network of contacts within these agencies. This is a dummy variable with a "1" indicating the person is an RDL, and "0" if they are not an RDL.
Ln (Total Assets)	Control variable: total assets is calculated as the natural logarithm of assets, unadjusted for inflation. It is the only control variable orthagonalized due to high correlation with other control variables.
Tier One Leverage	Control variable: measures a bank's level of capital adequacy by applying the ratio of core capital to its total assets, i.e. Tier 1 capital to a bank's total consolidated assets. Tier 1 capital is a bank's common equity, retained earnings, reserves, and certain instruments with discretionary dividends and no maturity.
Total Loans to Total Assets	Control variable: The BHC's total loans outstanding as a percentage of total assets.
Share of Deposit Funding	Control variable: The non-interest bearing domestic deposits divided by the total of non-interest and interest bearing deposits, including money market funds, i.e. the share of deposits in deposits and money market funding.
Profitability	Control variable: return on equity serves as a proxy for BHC profitability. It equals the ratio of net income or loss and is divided by a firm's total holding company equity capital.
Expected Credit Risk	Control variable: provision for loan and lease losses divided by total assets.
Non-Interest Income Share	Control variable: The BHC's share of non-interest income divided by total net operating revenue.
Annual Asset Growth	Control variable: The BHC's current year's rate minus its previous year's growth rate, divided by the previous year's growth rate, for total asset growth rate.

Data and Equations

Data Collection: Ex-Post Lobbying, Revolving Door Lobbyists, Comments, Citations

The combination of unique lobbying activity reports of BHCs with other forms of ex-post lobbying, including the commenting activity across nine financial regulatory agencies, takes place across several stages. The first step involves matching congressional activity, including the more

controversial enacted bills and the final vote date for each enacted bill, with BHC lobbying activity. The final vote date serves the purpose of determining when ex-post lobbying or lobbying after bill passage begins (You, 2014). In the end, the number of bills collected from www.congress.gov website totaled 3,174. The congressional activity including only bills enacted into law and vote date corresponds to the 108th – 111th sessions of the U.S. Congress (2003 to 2018).

The next step in the first stage involves merging all congressional bill and vote data with BHC ex-post lobbying and revolving door lobbyist data to form a large SQL relational database. The Center for Responsive Politics (CRP), www.opensecrets.org, serves as the source for all BHC related ex-post lobbying data. By merging this data, the author can identify all sample BHC lobbying activity and related expenditures.

The second stage involves collecting and matching BHC comment and meeting activity on proposed regulations and any citation of the BHC in the related final regulation, together with BHC ex-post lobbying and congressional data in the same quarter and year. In a further step, the comment upon proposed regulation and the related final regulation are then queried for the name of BHCs used in this study. All comment letter and meeting data between BHC representatives and regulators are collected and sourced from one of five major regulatory agencies and four additional agencies.[10] Aside from each U.S. financial regulatory agency website, further sources for comment, meeting, and regulation data include www.regulations.gov and the U.S. Federal Register.

Several tools are instrumental in identifying and matching BHC names within related financial agency regulation. The author applies Natural language processing (NLP) and Python related algorithms, including fuzzy logic matching and NLP shallow parsing or "text chunking" (Abney, 1991). These non-trivial algorithms are used in identifying commenter names and citations of BHC comments within a final regulation. In the end, the proposed and final regulations consisted of 180 web parsed pairs of proposed and final regulation.

From Interest and Non-Interest to Traditional and Non-Traditional BHC Activity

The author uses the FR Y-9 format to divide revenue data into three categories: traditional, non-traditional, and securitization. Copeland (2012) constructs these categories so that any new form of revenue earned falls into either securitization or non-traditional revenues. The Federal Reserve requires BHCs to report, using the FR Y-9 forms yearly, while the FR Y-9C is done on a quarterly basis. The FR-Y-9 forms display the categories of interest and non-interest revenues and expenses. This analysis applies and builds upon the taxonomy of Copeland (2012). The author begins by translating interest and non-interest revenue into the three categories of traditional, securitization, and non-traditional revenues, where the latter serves as a key explanatory variable in this study. The non-traditional revenue category includes trading revenues, investment banking and underwriting of securities fees and commissions, venture capital revenues, insurance commissions, and fees and interest income from trading assets less interest expenses (Copeland (2012).[11]

Equations

In order to examine Hypothesis 2.1 and 2.2 we use Equation 1. Further, in order to test Hypothesis 2.2 and 2.3, Equation 2 is put forth.

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[10] The five primary financial regulators, include the U.S. Securities Exchange Commission, the U.S. Commodities Futures Trading Commission, the U.S. Federal Deposit Insurance Corporation, the Federal Reserve and the U.S. Department of Treasury. The four additional agencies are the U.S. Consumer Financial Protection Bureau, U.S. Office of Comptroller of Currency, U.S. Office of Thrift Supervision and Federal Financial Institutions Examination Council.

[11] In the final category, "interest income from trading assets, the interest expense term is equal to the fraction of interest income from trading assets to total interest income, multiplied by total interest expense, assuming all interest expenses are proportionally divided across interest income revenue sources" (Copeland, 2012, p. 92).

$$Citations_{i,t} = B_0 + B_1 Ln(1 + Ex - postlobby)_{i,t-1} + B_2 Comments_{i,t-1} + \qquad (1)$$
$$\delta_1 RDL_{i,t-1} + \phi_C X_{i,t-1} + \upsilon_i + \nu_t + \varepsilon_{i,t}$$

$$Non - traditionalRevenue_{i,t} = \gamma_0 + \gamma_1 Ln(1 + Ex - postlobby)_{i,t-1} + \qquad (2)$$
$$\gamma_2 Citation_{i,t-1} + \delta_1 RDL_{i,t-1} + \phi_C X_{i,t-1} + \upsilon_i + \nu_t + \varepsilon_{i,t}$$

Methodology

Choice of Estimators

The structure of the data includes 51 unique BHCs across 15 years from 2003 to 2018. This leads one to determine if and what type of panel data estimation procedure is appropriate. The objective of Equation 1 is to study the effect of three determinant variables—revolving door lobbyist, ex-post lobbying, and citations upon the non-traditional revenue of each bank holding company across time—while controlling for time invariants and differences between BHCs. Fixed effects is chosen as the primary estimation model, as the assumptions for random effects are stringent. Further, I estimate using the Breusch Pagan Lagrange multiplier, in addition to the Hausman estimation procedure, while seeking the more appropriate estimation model. Pooled OLS, which allows for between and within estimation, is included for robust perspective.

Given that there exists a large number of zero observations for the comment and citation variables, the results in Regression Equations 1 and 2 were left skewed at "0" in the original quarterly dataset, which continued into the annual sample. It was decided then to transform at least one variable. Taking the natural log of (1 + ex-post lobbying), assisted to a certain degree in normalizing the variables distribution.

Descriptive Statistics

Preliminary descriptive results from Table 3 demonstrate similar results with respect to comment letters and citations. Just as previously found, similar to Ban and You (2019) and Carpenter and Libgober (2019), citations of BHCs clearly outnumber comments by BHCs upon related proposed regulations. Further inspection leads one to believe that these are also highly salient regulations that potentially impact and restrict important revenue from sources such as trading, investment banking, and securitization. The correlation illustrated in Table 4 between comments and citations is somewhat high, at 0.44. Summary results indicate an annual maximum of 111 BHC final citations, with a minimum of 0 and a standard deviation of approximately 9 citations, while comments has an annual range from a minimum of 0 to a maximum of 21 with a standard deviation of approximately 3. The number of BHCs that were cited in the final rule form of regulation by agencies clearly are similar to the results for firms of larger asset size. Ex-post lobbying has a low level of correlation with citations, at 0.05, and 0.08 with comments and 0.129 with non-traditional revenues. While I transform all non-traditional revenue using the natural log, the raw non-traditional revenue variable has a mean value of $3,654,232,000, with a standard deviation of $7,984,043,000 and a minimum of $4,201,000 with a maximum value of $62,000,000,000. A strong relationship exists between ex-post lobbying and its effect upon the dependent variable citations in Equation 1. The same is true of the relationship between ex-post lobbying the dependent variable non-traditional revenue in Equation 2. Table 3 includes descriptive statistics, while Table 4 includes the correlation matrix. Both tables are located in the data appendix.

Robustness Measures

All independent and control variables in Equations 1 and 2 were lagged by one period with the intent to prevent reverse causality. As the total assets' variable is highly correlated with both independent and control variables, this is transformed and orthogonalized. As a final step to ensure the integrity of the panel data, in Equation 1 we apply bank-fixed effects, while employing year dummy variables in the Tobit model estimation, in essence applying both firm and year fixed effects. The bank-fixed effects control for unobserved heterogeneity across BHCs, such as bank level strategy, managerial talent, and CEO compensation. Year fixed effects, in the form of dummy variables, control for changes in the political, regulatory, and institutional environments over the time span of 2003 to 2018. In the end, we applied bank and year fixed effects to both Equations 1 and 2, in addition to robust clustered standard errors at the BHC level.

Table 7: Regression Equation 1. Chapter 2.

Dependent Variable: Citations

$$Citation_{i,t} = B_0 + B_1 Ln(1 + Ex - postlobby)_{i,t-1} + B_2 Comments_{i,t-1} + \delta_1 RDL_{i,t-1} + \phi_C X_{i,t-1} + v_i + v_t + \varepsilon_{i,t}$$

Variables	Tobit
Ex-post Lobbying	0.809***
	(0.283)
Comments	1.798***
	(0.440)
Revolving Door Lobbyist	8.791***
	(3.093)
Ln (Total Assets)	2.698**
	(1.116)
Tier One Leverage	-0.967**
	(0.442)
Total Loans to Total Assets	5.758
	(7.375)
Share of Deposit Funding	-16.41**
	(6.897)
Profitability	23.22
	(24.32)
Expected Credit Risk	-2.855
	(243.1)
Non-Interest Income Share	7.605
	(5.669)
Annual Asset Growth	-2.607
	(2.760)
Constant	-23.05***
	(6.550)
BHC Fixed Effects	Yes
Year Fixed Effects	Yes
Observations	468
Number of Bank Holding Companies	51

Robust standard errors appear in parentheses *** p<0.01, ** p<0.05, * p<0.1. Each independent and control variable was lagged by one period in an attempt to mitigate for reverse causality. Due to high correlation of total assets with other variables, it was orthogonalized. To further normalize for the effect of total assets, we applied a natural log transformation. Before performing regression analysis, as noted in the text, the frequency of observations is reduced from quarterly to yearly, which changed the number of BHCs in sample from 82 to 51. In addition, all BHCs that had total assets of below $25,000,000,000 during the first quarter of 2003 were removed. The author applied two types of regression models as a robust measure of examination. The dependent variable, Citations, is censored at the left-hand side by zero. In this table, Table 7, the author applied a Tobit model using Maximum Likelihood Estimation with clustered errors at BHC level. Several forms of this regression model were performed that include bank and year fixed effects. As a robustness measure, Table 10, incorporates a Negative Binomial model using random effects estimation, that is found in the data appendix section 2.6.

Initial Regressions – Controls

Table 8: Regression Equation 2. Chapter 2.

Dependent Variable: Non-traditional revenue

$$Non-TraditionalRevenue_{i,t}$$
$$= \gamma_0 + \gamma_1 Ln(1+Ex-postLobby)_{i,t-1} + \gamma_2 Citations_{i,t-1} + \delta_1 RevolvingDoorLobbyist_{i,t-1} + \phi_C X_{i,t-1} + \upsilon_i$$
$$+ \upsilon_t + \varepsilon_{i,t}$$

Variables	Fixed Effects
Citations	0.002
	(0.003)
Ex-post Lobbying	0.015***
	(0.005)
Revolving Door Lobbyist	0.0319
	(0.059)
Ln (Total Assets)	0.0488
	(0.072)
Tier One Leverage	6.68e-05
	(0.000)
Total Loans to Total Assets	-1.492***
	(0.467)
Share of Deposit Funding	-0.897**
	(0.365)
Profitability	0.505
	(0.396)
Expected Credit Risk	13.85**
	(6.676)
Non-Interest Income Share	0.313***
	(0.117)
Annual Asset Growth	0.215***
	(0.061)
Constant	14.16***
	(0.292)
BHC Fixed Effects	Yes
Year Fixed Effects	Yes
Observations	467
R-squared	0.129
Number of Bank Holding Companies	51

Robust standard errors appear in parentheses *** p<0.01, ** p<0.05, * p<0.1. Each independent and control variable was lagged by one period in an attempt to mitigate for reverse causality. Due to high correlation of total assets with other variables, it was orthogonalized. To further normalize for the effect of total assets, we applied a natural log transformation. Before performing regression analysis, as noted in the text, the frequency of observations is reduced from quarterly to yearly, which changed the number of BHCs in sample from 82 to 51. In addition, all BHCs that had total assets of below $25,000,000,000 during the first quarter of 2003 were removed. A primary interest is to study the effects of the hypothesized variables across time. As the main regression model for Equation 2, makes use of within estimators, we applied a robust fixed effects panel data regression model using 51 BHCs from years 2003 to 2018. Further, in Table 11 in the data appendix section, the author includes a Pooled Ordinary Least Squares regression model as a robust and secondary treatment of the panel data.

Upon examining the control variable vector in Equations 1 and 2, found in Tables 5 and 6, the author finds overall that these variables remain statistically significant and consistent with theory.[12] Several variables within each regression lost significance in the control panel, as the data is transformed from quarterly to annually.

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[12] Table 5 and Table 6 illustrate the control variable regressions for equations 1and 2, which are found in the Data Appendix, Section 2.6.

Table 9: Regression Equation 1. Chapter 2.

Equation 1. Dependent variable: Citations

$$Citation_{i,t} = B_0 + B_1 Ln(1 + Ex-postlobby)_{i,t-1} + B_2 Comments_{i,t-1} + \delta_1 RDL_{i,t-1} + \phi_C X_{i,t-1} + \upsilon_i + \nu_t + \varepsilon_{i,t}$$

Variables	Tobit
Ex-post Lobbying	0.504**
	(0.244)
Comments	0.852**
	(0.391)
Revolving Door Lobbyist	9.292***
	(3.371)
Ln (Total Assets)	4.349***
	(1.284)
Tier One Leverage	-1.860***
	(0.712)
Total Loans to Total Assets	6.100
	(8.995)
Share of Deposit Funding	-18.60***
	(6.847)
Profitability	34.02
	(28.23)
Expected Credit Risk	323.2
	(380.2)
Non-Interest Income Share	9.262
	(6.341)
Annual Asset Growth	-3.012
	(3.602)
YR1	-
YR2	-
YR3	2.337
	(9.391)
YR4	1.216
	(9.933)
YR5	14.54*
	(8.360)
YR6	9.525
	(8.332)
YR7	18.87**
	(7.798)
YR8	7.045
	(8.753)
YR9	8.895
	(7.553)
YR10	26.35***
	(8.845)
YR11	24.72***
	(9.368)
YR12	27.40***
	(8.835)
YR13	17.50***
	(6.048)
YR14	14.04***
	(5.067)
YR15	17.53***
	(6.170)
YR16	-
Constant	-29.60***
	(8.860)
BHC Fixed Effects	Yes
Year Fixed Effects	Yes
Observations	468
Number of Bank Holding Companies	51

Robust standard errors appear in parentheses *** p<0.01, ** p<0.05, * p<0.1. Each independent and control variable was lagged by one period in an attempt to mitigate for reverse causality. Due to high correlation of total assets with other variables, it was orthogonalized. To further normalize for the effect of total assets, we applied a natural log transformation. Before performing regression analysis, as noted in the text, the frequency of observations is reduced

from quarterly to yearly, which changed the number of BHCs in sample from 82 to 51. In addition, all BHCs that had total assets of below $25,000,000,000 during the first quarter of 2003 were removed. The author applied two types of regression models. The dependent variable, Citations, is censored at the left-hand side by zero. First, we used a Tobit model using Maximum Likelihood estimation with clustered errors at BHC level. a negative binomial model using random effects estimation. In this table, Table 9, a similar iteration of Equation 1 incorporates the Fixed Effects Tobit application, while using year dummy variables. In Table 10, due to the dependent variable, Citations, which acts as a count variable, the author applied a Negative Binomial model using random effects estimation. The latter application acts as a robustness measure.

Bank lobbying may lead to riskier banking practices, including holding riskier loan portfolios (Igan and Lambert, 2019). In the end, both regressions of the control variables upon both dependent variables do indeed illustrate the impact upon several aspects of bank performance. This begins to suggest a picture of large BHCs that lobby. A number of these banks lobby often, maintain larger non-traditional revenue sources, and pose higher risk as a result of higher leverage, loan loss provision, and liquidity levels (Gibson and Padovani, 2011; Igan and Lambert, 2019).[13]

Discussion of Results

The purpose of Equation 1, found in Table 7, is to examine the propensity of a BHC to lobby regulators, as reported in U.S. Congressional and financial regulatory reporting, and to comment on proposed regulation with the intent to have the BHC's argument cited in a final form of a regulation. Citation of a BHC's comment on a proposed regulation in its related final regulation demonstrates that at the very least, the opinion of the BHC is heard (Ban and You, 2019; Haeder and Yackee, 2015; Rashin, 2019). Equation 1 demonstrates a strong and positive relation of revolving door lobbyists, ex-post lobbying, and comments upon being cited in a final form of a regulation, i.e. citation. Each coefficient on the three independent variables illustrates a positive and significance level of $P < 0.01$. For a 1% increase in ex-post lobbying, the BHC will see an increase in the number of citations by an amount of 0.008 citations. To reiterate, correlation levels are fairly low, yet the correlation between comments and citations is at 0.44. This evidence leads me to accept Hypothesis 2.1. Found in Table 10, of the Data Appendix, this paper further includes a negative binomial regression model, similar to Ban and You (2019), for purposes of robustness. Table 10 demonstrates similar results for Equation 7, illustrating a positive strong relationship between ex-post lobbying, the dependent variable and the number of citations. The dependent variable, citations, is a count variable, and the model estimates are consistent with the Tobit model applied in Equation 1. Table 9, which also includes Equation 1 regressions using Tobit and MLS estimation, further demonstrates the application of a fixed effects model, yet using year level dummy variables to enhance the robustness of estimates.[14]

It is evident the important role which the revolving door lobbyist plays in lobbying campaigns for large BHCs. As illustrated in Equation 1, Table 9, the use of a revolving door lobbyist by a BHC may indeed lead to a final rule citation and perhaps a favorable change in final regulation. There is no guarantee that any accompanying rule change will be affirmative, but it is the larger institutions, such as BHCs, that are able to obtain favorable rule change (Libgober and Carpenter, 2018; Rashin, 2019). In interpreting the regression coefficients in Equation 1, we find for a 1% increase in the use of revolving door lobbyists by BHCs leads to an increase of .087% in the number of citations of a firm's comment(s) that are mentioned in the related final regulation. Furthermore, as a natural extension, results from equation 2 lend an amount of credence to how BHCs use revolving door lobbyists as an instrument of influence, together or separately, with other mechanisms of influence. The coefficient for revolving door lobbyist in Equation 2 using

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[13] A common theme before and during the 2007-2009 financial crisis is maturity mismatch. If there is a change in the short-term funding available for highly leveraged banks, they tend to encounter liquidity crises. This is due in great part to the majority of large banks that frequently hold long-term, illiquid assets, financed by short-term liabilities (Adrian and Shin, 2008, p.11).

[14] We include a Pooled OLS model of regression for Equation 2. This table is included for robustness measures and is found at the end of the Data Appendix.

the application of a fixed effects panel data model is not found to be significant. For robustness purposes, the pooled OLS regression of Equation 2 demonstrates a significant and positive relation between revolving door lobbyist and non-traditional revenue at the 10% level. Moreover, the correlation coefficients between revolving door lobbyist and citations, from Equation 1, and non-traditional revenue from Equation 2 demonstrate significance below a 5% level, as found in Table 4. The overall evidence leads me to accept Hypothesis 2.2, where the use of a revolving door lobbyist leads to an increase in a BHC's citations or an increase in non-traditional revenues or both.

The objective of Equation 2 is to explore the use of multiple forms of ex-post lobbying and if having a BHC's comment cited in a final regulation leads to an increase in non-traditional revenue. Equation 2 is located in Table 8. While the citations variable shows no significance in the pooled OLS regression, the panel data fixed effects model demonstrates a significant relation for ex-post lobbying. For A 1% increase in ex-post lobbying, we find a 0.0148% increase in non-traditional revenue.

The results of Equations 1 and 2 lead to partial evidence for accepting Hypothesis 2.3. While we are quite cautious, the evidence seems to indicate the examination of BHC participation in the regulatory promulgation process is progressing in the correct direction.

While we applied the pooled OLS regression as a robustness measure, I do believe there is partial evidence for the validity of these hypotheses using this set of panel data. The entry and exit of BHCs is quite common for a number of reasons. These reasons can include: a BHC that enters or exits the sample due to the renaming of the bank, the BHC falling below the original consolidated asset value of $10 billion, the BHC undergoing a merger, or an acquisition that changes its charter. Whatever the reason, or reasons may be, the panel is unbalanced, leading several BHCs to exist within sample only for a portion of 2003 to 2018. Wooldridge (2010) notes that a pooled OLS is employed when one selects a different sample for the period of the panel data, which may lead to partial validity of the pooled OLS estimates applied in this paper.

Figure 1: Estimated Impact of BHC Ex-post Lobbying upon Non-traditional Revenue using a 95% Confidence Interval
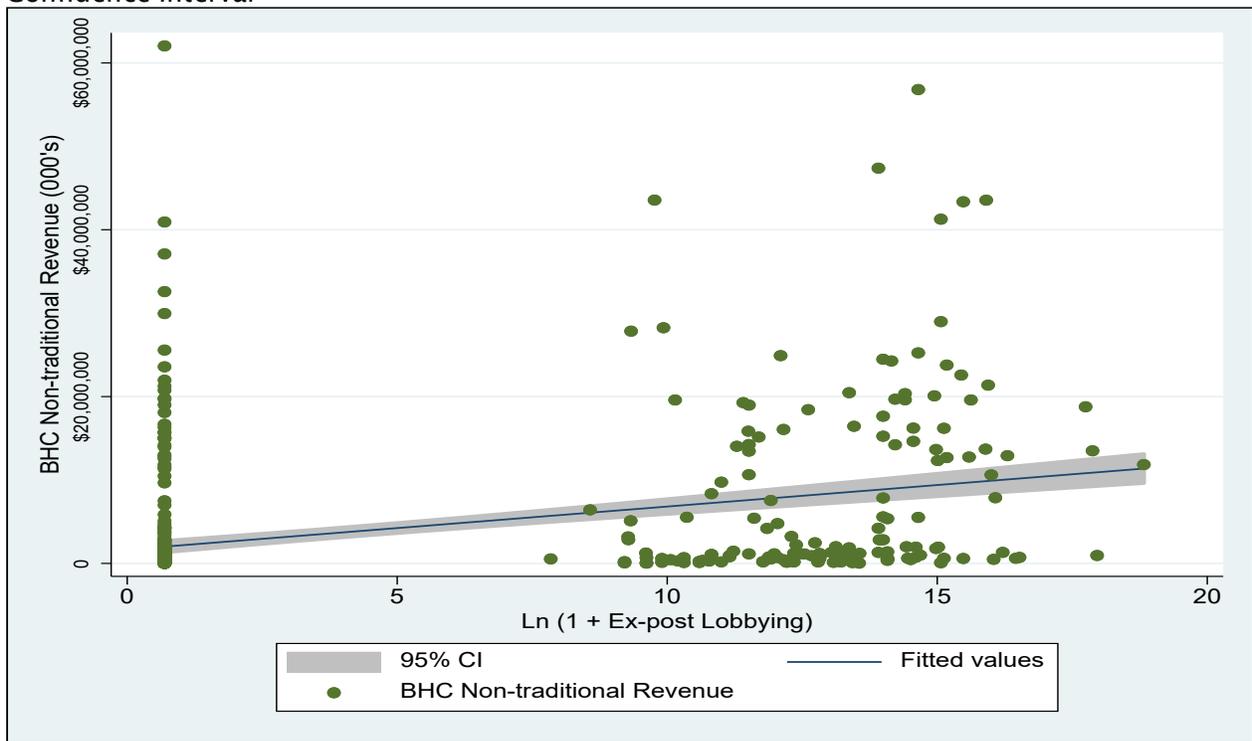
Conclusion

The first contribution of this research emanates from its unique focus and perspective. A majority of the recent studies within this literature stream of lobbying upon regulation has analyzed a broad spectrum of firm types and industry sectors. This paper takes a narrower approach by focusing on one unique interest group, bank holding companies. The first research question that this paper poses is what is the propensity of a bank holding company to lobby financial regulators and what do they stand to gain? We find that increasing the propensity of comments and the hiring of a former agency official while lobbying the regulator leads to a higher likelihood of having the BHC's opinion heard and their stance mentioned in the final regulation.

The second research question that this paper asks is: does the various forms of lobbying a regulator or being cited in a final regulation following a visitation or comment lead to a change in the non-traditional revenue of a BHC? Following an examination of lobbying of the U.S. Congress by BHCs, Brandon and Padovani (2011, 2018) identify a need for future research into other forms of political participation. Therefore, another contribution this research provides is to fill a part of this gap in the literature by answering this second research question. There exists a positive relationship which points to an increase in ex-post lobbying of a BHC that leads to an increase of BHC's total non-traditional revenue based on regression results. In addition, an increase exists in the hiring of a revolving door lobbyist that will subsequently result in a rise of non-traditional revenues. While the citation variable in the regression of Equation 2 is insignificant, it still remains positive. Moreover, this paper finds a significant relationship between BHCs that comment upon citations in Equation 1. These findings are in keeping with recent research. We confirm that BHCs may lobby regulators to preserve gains in all important revenue sources or to increase potentially risky non-traditional revenue streams.

The final contribution of this research is the creation of an original data set. Spanning the years 2003 to 2018, the financial and political activity of each sample BHC is identified on a quarterly basis. The SQL database combines three forms of BHC political participation: lobbying, both ex-ante, or before passage; and ex-post, revolving door lobbyists; and regulations across nine financial regulatory agencies. The use of unique natural language processing matching algorithms identify which banks are mentioned in each of 180 web-parsed pairs of proposed and final form regulations.

Limitations and Implications for Future Research

The sample included in this chapter involves 51 bank holding companies. One potential limitation relates to the sample size of this study and the related comment and citation activity of BHCs. When comparing the 51 BHCs to the samples of several recent papers, a large difference in sample size is apparent. This could be one potential reason for the large number of zero observations. Just as previous studies have illustrated, market share and asset size matter when commenting and being cited in a final rule.

Another limitation relates to meeting data in the wake of the Dodd Frank reform and formulation of related proposed rules. While all data on commenting is available from 2003 to 2018, meeting data was not. Meeting data is quite helpful in identifying and determining parties represented on both sides.

The implications of the evidence presented in this paper are wide ranging, touching upon banking, finance, and rulemaking bodies of literature. Two important areas of future study are implicated by this research. The first area involves whether and when the commenting of a BHC leads to a favorable rule change and if this leads to regulatory relief. Another important area that warrants more investigation is the impact of a rule change due to regulatory lobbying on the specific components of non-traditional and traditional revenue.

Large bank holding companies will and are always adapting to the present and future regulatory landscape.

References

Acharya, V. V., Schnabl, P., & Suarez, G. (2013). Securitization without risk transfer. *Journal of Financial economics*, *107*(3), 515-536.

Apergis, N. (2014). The long-term role of non-traditional banking in profitability and risk profiles: Evidence from a panel of US banking institutions. *Journal of International Money and Finance*, *45*, 61-73.

Ban, P., & You, H. Y. (2019). Presence and influence in lobbying: Evidence from Dodd-Frank. *Business and Politics*, *21*(2), 267-295.

Beck, T., & De Jonghe, O. (2013). *Lending concentration, bank performance and systemic risk: exploring cross-country variation*. The World Bank.

Bertrand, M., Bombardini, M., & Trebbi, F. (2011). Is it whom you know or what you know. *An empirical assessment of the lobbying process*, 3885-3920.

Bank for International Settlements (2018). Structural changes in banking after the crisis. Report prepared by a Working Group established by the Committee on the Global Financial System. Claudia Buch (Deutsche Bundesbank) and B Gerard Dages (Federal Reserve Bank of New York), Chairs. *CGFS Papers, No. 60*, 24 January 2018.

Brei, M., Borio, C., & Gambacorta, L. (2019). Bank intermediation activity in a low-interest-rate environment. *Economic Notes*, e12164.

Copeland, A. (2012). Evolution and heterogeneity among larger bank holding companies: 1994 to 2010. *Federal Reserve Bank of New York Economic Policy Review*, *18*(2), 83-93.

De Figueiredo, J. M., & Richter, B. K. (2014). Advancing the empirical research on lobbying. *Annual review of political science*, *17*, 163-185.

De Jonghe, O., Diepstraten, M., & Schepens, G. (2015). Banks' size, scope and systemic risk: What role for conflicts of interest? *Journal of Banking & Finance*, *61*, S3-S13.

Ghosh, A. (2019). Discerning the impact of disaggregated non-interest income activities on bank risk and profits in the post-Gramm-Leach-Bliley Act era. *Journal of Economics and Business*, 105874.

Padovani, M., & Gibson, R. (2011). The Determinants of Banks' Lobbying Activities. *Swiss Finance Institute Research Paper*, (11-56), 1-4.

Gibson, R., Odabasioglu, A., & Padovani, M. (2018). The Determinants of Banks' Lobbying Activities before and during the 2007-2009 financial crisis. *Available at SSRN 1785435*.

Haubrich, J. G., & Young, T. (2019). Trends in the Noninterest Income of Banks. *Economic Commentary*, (2019-14).

Igan, D., & Lambert, T. (2018). Bank lobbying: Regulatory capture and beyond. *Available at SSRN 3128829*.Igan and Lambert, 2018.

Igan, D. O., & Lambert, T. (2019). *Bank lobbying: regulatory capture and beyond* (No. 19/171). International Monetary Fund.

Libgober, B., & Carpenter, D. (2018). What's at Stake in Rulemaking? Financial Market Evidence for Banks' Influence on Administrative Agencies. *Center for the Study of Democratic Politics, Princeton University*.

Rashin, S. D. (2020). *Essays on Private Influence on the Policymaking Process* (Doctoral dissertation, New York University).

Yackee, J. W., & Yackee, S. W. (2006). A bias towards business? Assessing interest group influence on the US bureaucracy. *The Journal of Politics*, *68*(1), 128-139.

You, H. Y. (2017). Ex post lobbying. *The Journal of Politics*, *79*(4), 1162-1176.

Appendix

Table 3: Descriptive Raw Statistics

Variable	Number of observations	Mean	Maximum	Minimum	Standard deviation	Fifth percentile
Non-traditional Revenue	592	$3,654,232	$62,000,000	$4,201	$7,984,043	$42,848
Citations	599	2.26	111.00	0.00	8.67	0.00
Comments	599	1.27	21.00	0.00	2.71	0.00
Ex-post Lobbying	598	3.34	18.83	0.00	5.78	0.00
Revolving Door Lobbyist	599	0.50	1.00	0.00	0.50	0.00
Total Assets	592	$335,000,000	$2,610,000,000	$15,50,340	$545,000,000	$12,700,000
Tier One Leverage	573	11.13	878.92	-2.12	38.91	5.12
Total Loans to Total Assets	592	0.52	0.83	0.02	0.22	0.08
Share of deposit funding	588	0.23	0.89	0.00	0.17	0.00
Profitability	591	0.05	0.67	-0.54	0.07	-0.04
Expected Credit Risk	592	0.00	0.04	0.00	0.01	0.00
Non-Interest Income Share	592	0.50	4.36	0.07	0.28	0.20
Annual Asset Growth	540	0.03	4.21	-1.00	0.41	-0.66

Note: Dollar figures are in the thousands(000's) based upon the reporting figures drawn from the Federal U.S. Reserve's FR-Y-9-C quarterly reporting of Bank Holding Companies.

Table 4: Pairwise Correlation Matrix

	Citations	Comments	Non-traditional Revenue	Total Assets	Tier One Leverage	Total Loans to Total Assets	Share of Deposit Funding	Profitability	Expected Credit Risk	Non-Interest Income Share	Ex-post Lobbying	Revolving Door Lobbyist
Citations	1.000											
Comments	0.447*	1.000										
Non-traditional Revenue	0.386*	0.456*	1.000									
Total Assets	0.346*	0.581*	0.659*	1.000								
Tier One Leverage	-0.022	-0.031	-0.046	-0.049	1.000							
Total Loans to Total Assets	-0.195*	-0.273*	-0.425*	-0.304*	0.029	1.000						
Share of Deposit Funding	-0.044	0.078	-0.127	0.095*	-0.057	-0.161*	1.000					
Profitability	0.025	0.000	0.056	0.002	0.003	-0.012	0.075	1.000				
Expected Credit Risk	-0.022	-0.032	-0.078	-0.034	-0.008	0.348*	-0.220*	-0.348*	1.000			
Non-Interest Income Share	-0.108	0.117*	0.181*	0.059	0.056	-0.545	-0.011	0.049	-0.160*	1.000		
Ex-post Lobbying	0.052	0.083*	0.122*	0.245*	-0.004	-0.027	0.022	0.006	0.030	-0.024	1.000	
Revolving Door Lobbyist	0.189*	0.259*	0.305*	0.291*	0.035	-0.295*	0.031	0.032	0.054	-0.250*	0.121*	1.000

Note: Dollar figures are in the thousands(000's) based upon the reporting figures drawn from the Federal U.S. Reserve's FR-Y-9-C quarterly reporting of Bank Holding Companies.

Table 5: Regression Equation 1. Control Variable only.

Dependent Variable: Citations

$$Citation_{i,t} = B_0 + \phi_C X_{i,t-1} + v_i + v_t + \varepsilon_{i,t}$$

Variables	Tobit
Ln (Total Assets)	8.694***
	(1.912)
Tier One Leverage	-0.711
	(0.508)
Total Loans to Total Assets	-7.828
	(9.249)
Share of Deposit Funding	-17.87**
	(7.785)
Profitability	41.23
	(28.57)
Expected Credit Risk	516.7**
	(259.6)
Non-Interest Income Share	10.35
	(7.182)
Annual Asset Growth	-3.020
	(3.440)
Constant	-11.49
	(7.417)
BHC Fixed Effects	Yes
Year Fixed Effects	Yes
Observations	468
Number of Bank Holding Companies	51

Robust standard errors appear in parentheses *** p<0.01, ** p<0.05, * p<0.1. Each independent and control variable was lagged by one period in an attempt to mitigate for reverse causality. Due to high correlation of total assets with other variables, it was orthogonalized. To further normalize for the effect of total assets, we applied a natural log transformation. Before performing regression analysis, as noted in the text, the frequency of observations is reduced from quarterly to yearly, which changed the number of BHCs in sample from 82 to 51. In addition, all BHCs that had total assets of below $25,000,000,000 during the first quarter of 2003 were removed. The dependent variable, Citations, is censored at the left-hand side by zero. In the main regression, in Table 7, we performed a Fixed Effects Tobit model using Maximum Likelihood estimation with clustered errors at BHC level. Therefore, in this table, Table 5, we applied a similar, yet different strategy, regressing only controls variables upon the dependent variable, Citations, using the Fixed Effects Tobit model. The coefficient estimates are consistent with theory.

Table 6: Regression Equation 2. Control Variable only.

Dependent Variable: Non-traditional Revenue

$$Non-TraditionalRevenue_{i,t} = \gamma_0 + \phi_C X_{i,t-1} + v_i + v_t + \varepsilon_{i,t}$$

Variables	Fixed Effects
Ln (Total Assets)	0.115*
	(0.070)
Tier One Leverage	0.000
	(0.000)
Total Loans to Total Assets	-1.551***
	(0.466)
Share of Deposit Funding	-0.786**
	(0.365)
Profitability	0.613
	(0.397)
Expected Credit Risk	19.55***
	(6.446)
Non-Interest Income Share	0.291**
	(0.118)
Annual Asset Growth	0.207***
	(0.062)
Constant	14.23***
	(0.291)
BHC Fixed Effects	Yes
Year Fixed Effects	Yes
Observations	467
R-squared	0.105
Number of bank holding companies	51

Standard errors appear in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Each independent and control variable was lagged by one period in an attempt to mitigate for reverse causality. Due to high correlation of Total Assets with other variables, this variable was orthogonalized. To further normalize for the effect of total assets, the author applies a natural log transformation. Before performing regression analysis, for several reasons mentioned in the text, frequency of observations was reduced from quarterly to yearly, which in turn changed the number of BHCs in the sample from 82 to 51. Further, all BHCs that had total assets of below $25,000,000(000's) during the first quarter

of 2003 were removed. Of primary interest is to study the effects of the hypothesized variables across time. In this table, Table 6, while using within estimators, we applied a robust fixed effects model. This table demonstrates a control variable regression, where the estimates are consistent with theory.

Table 10: Regression Equation 1. Chapter 2. Robustness Model
Dependent Variable: Citations

$$Citation_{i,t} = B_0 + B_1 Ln(1 + Ex - postlobby)_{i,t-1} + B_2 Comments_{i,t-1} + \delta_1 RDL_{i,t-1} + \phi_C X_{i,t-1} + v_i + v_t + \varepsilon_{i,t}$$

Variables	Negative Binomial
Ex-post Lobbying	0.051***
	(0.018)
Comments	0.112***
	(0.020)
Revolving Door Lobbyist	0.866***
	(0.263)
Ln (Total Assets)	0.342***
	(0.096)
Tier One Leverage	-0.086*
	(0.048)
Total Loans to Total Assets	1.323*
	(0.710)
Share of Deposit Funding	-1.240*
	(0.688)
Profitability	1.895
	(1.406)
Expected Credit Risk	3.873
	(21.88)
Non-Interest Income Share	0.613**
	(0.307)
Annual Asset Growth	-0.122
	(0.333)
Constant	-3.348***
	(0.524)
BHC Fixed Effects	Yes
Year Fixed Effects	Yes
Observations	468
Number of Bank Holding Companies	51

Robust standard errors appear in parentheses *** p<0.01, ** p<0.05, * p<0.1. Each independent and control variable was lagged by one period in an attempt to mitigate for reverse causality. Due to high correlation of total assets with other variables, it was orthogonalized. To further normalize for the effect of total assets, we applied a natural log transformation. Before performing regression analysis, as noted in the text, the frequency of observations was reduced from quarterly to yearly, which changed the number of BHCs in sample from 82 to 51. In addition, all BHCs that had total assets of below $25,000,000,000 during the first quarter of 2003 were removed. The dependent variable, Citations, is censored at the left-hand side by zero. In Table 10, due to this dependent variable, that acts as a count variable, the author applied a Negative Binomial model using random effects estimation. The model is used as a robustness measure.

Table 11: Regression Equation 2. Chapter 2. Robustness Model.

Dependent Variable: Non-traditional revenue

$$Non-TraditionalRevenue_{i,t}$$
$$= \gamma_0 + \gamma_1 Ln(1+Ex-postLobby)_{i,t-1} + \gamma_2 Citations_{i,t-1} + \delta_1 RevolvingDoorLobbyist_{i,t-1} + \phi_C X_{i,t-1} + \upsilon_i$$
$$+ \nu_t + \varepsilon_{i,t}$$

Variables	Pooled OLS
Citations	0.001
	(0.007)
Ex-post Lobbying	0.014
	(0.011)
Revolving Door Lobbyist	0.384*
	(0.205)
Ln (Total Assets)	1.075***
	(0.010)
Tier One Leverage	-0.003***
	(0.001)
Total Loans to Total Assets	-1.740**
	(0.761)
Share of Deposit Funding	-1.017
	(0.696)
Profitability	2.868**
	(1.386)
Expected Credit Risk	7.023
	(19.69)
Non-Interest Income Share	0.560
	(0.679)
Annual Asset Growth	0.118
	(0.204)
Constant	13.92***
	(0.691)
BHC Fixed Effects	Yes
Year Fixed Effects	Yes
Observations	467
R-squared	0.663
Number of Bank Holding Companies	51

Robust standard errors appear in parentheses *** p<0.01, ** p<0.05, * p<0.1. Each independent and control variable was lagged by one period in an attempt to mitigate for reverse causality. Due to high correlation of total assets with other variables, it was orthogonalized. To further normalize for the effect of total assets, we applied a natural log transformation. Before performing regression analysis, as noted in the text, the frequency of observations is reduced from quarterly to yearly, which changed the number of BHCs in sample from 82 to 51. In addition, all BHCs that had total assets of below $25,000,000,000 during the first quarter of 2003 were removed. A primary interest is to study the effects of the hypothesized variables across time. In this table, Table 11, the author includes a Pooled Ordinary Least Squares regression as a robust and secondary treatment of the panel data found in Equation 2.

Impacto del comercio digital en México ante el COVID-19

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Resumen

Por medio de esta investigación se aborda el tema del impacto que ha ocasionado el comercio digital (e-commerce) en el último año. Todo parte ante el inicio de la pandemia de covid-19, ya que muchas tiendas físicas se vieron obligadas a cerrar sus establecimientos de manera temporal, por lo que la población opto por realizar compras en línea a través de las plataformas más populares, para adquirir diversos productos que se ajustaran a sus necesidades.

El objetivo es saber cuál ha sido el impacto que tiene actualmente el comercio digital en las plataformas más populares, en cuanto al número de ventas de cada compañía, el alcance de personas y empresas que han optado por ellas, los ingresos obtenidos, y los productos que fueron mas adquiridos.

Se obtuvieron esos datos, a través del resultado de una investigación, adquiriendo información de diversas fuentes como noticias, revistas e informes estadísticos verídicos que nos brindaron la información mas oportuna y actualizada hasta el momento. Mediante los resultados se pudo observar que en efecto las ventas de las plataformas analizadas como Mercado Libre, Amazon y Shein tuvieron un gran crecimiento en el ultimo año, para ello se graficaron los ingresos que obtuvo cada una de las plataformas antes mencionadas. El uso de estas aplicaciones se disparo hasta el 40% aproximadamente, lo que en nuestro país genero crecimientos de hasta el 300%. Además, Mercado libre y Amazon registraron importantes porcentajes de crecimiento de empresas que realizan sus ventas a través de ellos, la primera de ellas registro un 57% y la segunda 60%. Y Shein es una plataforma única que incluso genera sus propios productos, colocándose como la tienda de ropa online número uno en México.

Los productos más comprados al principio de la pandemia en nuestro país fueron artículos de higiene y protección, como cubrebocas, gel antibacterial, toallas desinfectantes, aerosoles, guantes, caretas, etc. Pero conforme siguió el año las compras mas usuales fueron de variedad de los productos electrónicos y ropa, aumentando hasta un poco mas del 10% la frecuencia de venta de estos.

Así que, concluimos que en efecto el comercio digital genero mas ganancias de las que solía tener antes de que se presentara la pandemia, pero tanto las empresas como la población tuvieron que pasar por un proceso de modernización, debido a que las empresas realizaron cambios en sus estructuras al incorporarse a las plataformas digitales para poder seguir vendiendo sus productos y la población tuvo que aprender a utilizar la tecnología para realizar compras en línea y adquirir lo que necesitaban, además de que tuvieron que confiar en que los productos le llegaran en buen estado hasta sus hogares.

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Efectos de la pandemia por el virus SARS-CoV-2 en las MIPYMES en Mexico a nivel nacional y en el sector privado y paraestatal

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Antecedentes

En México, y en el resto del mundo, se está viviendo una pandemia a causa del virus SARS-CoV-2, lo que no solo ha traído una ola de contagios y penosas defunciones, también fue un gran golpe a la economía; durante el 2019 ya se presentaba un estado de estancamiento en la economía al reportar una tasa de crecimiento anual de -0.025%, durante el 2020, un año lleno de incertidumbre y miedo, el crecimiento económico cayo a una cifra histórica de -8.325% anual, cifras nunca antes vistas desde la crisis económica del 2008, cuyos efectos se pueden ver en la tasa de crecimiento anual del 2009 que fue de -5.3%, o desde la crisis acaecida en la gran depresión en 1932. Dejando a un lado la tendencia que se tiene de una caída del PIB un año después del inicio de cada nuevo ciclo presidencial, las cifras son bastantes desalentadoras. Afortunadamente, México se mantiene en pie reacio, y logra reactivar su economía a pesar de los ciclos recesivos, casi de un año para otro; lo que significaría que quizá esta vez no será la excepción; como fue en el 2010, donde la tasa de crecimiento paso de su punto de -5.3% en el año anterior a llegar a 5.1%. De este modo la economía podrá recuperarse con el tiempo y reposicionarse, sin embargo, los ingresos que no se generaron, los empleos que se perdieron, la lentitud del nacimiento de nuevas empresas para generar más empleos se ralentizo, todo eso no se podrá recuperar ya.

Resumen

Con el afán de analizar los efectos que tuvo la pandemia del COVID-19, se estudiara las implicaciones que tuvo en las MIPYMES, sus repercusiones en la muerte y ralentización de los nacimientos de empresas, y el saldo resultante, su efecto en el número de empleos perdidos, entre aquellos que se extinguieron con la salida de las empresas del mercado y la entrada de nuevas empresas en condiciones desfavorables; además de asociar los efectos en este grupo de empresas a las cuentas nacionales, en especial los efecto en el Producto Interno Bruto y en el porcentaje estimado del crecimiento económico del 2020.

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I. Introducción

Ante una pandemia, la población reacciona de manera adversa, el miedo que genera las pérdidas humanas, el ambiente de incertidumbre, y la espera de que las cosas mejoren, se transforma con el tiempo en desconfianza y miedo. Esta atmosfera de inestabilidad se filtra hacia la economía, y pronto el sistema económico también enferma. Los consumidores, en momentos de desconcierto, se vuelve cada vez más selectivos en el uso de su dinero, mientras que las empresas se ven frente a un cuadro desalentador, donde deberán decidir si mantenerse en pie hasta después de la pandemia o desistir y salir del mercado. Dicho esto, la presente investigación pretende responder a cuál fue el caso de las micro, pequeñas y medianas empresas en México durante la pandemia, considerando datos que comprenda el periodo de enero a diciembre del 2020, y datos anteriores a este año; para así, comparar cifras e identificar los efectos positivos y/o negativos en la economía, traducido en empleos, porcentaje de representatividad de empleados en las MIPYMES en relación al total de la fuerza laboral, número de empresas existentes, producción generada, impacto en el crecimiento económico, y cambios en los porcentajes de representatividad en el total de empresas del país.

II. Metodología

La investigación se sustentará de manera documental, y empleando bases de datos principalmente de INEGI, y recopilando datos no registrados en ninguna base, de comunicados oficiales en el boletín de INEGI. Las principales bases de datos empleadas serán: el Censo Económico 2004, 2009, 2014, 2019; el Estudio Demográfico de Negocios (EDN) 2012, 2020; el Directorio Estadístico Nacional de Unidades Económicas (DENUE) noviembre 2020; la Encuesta Nacional sobre Productividad de las Micro, Pequeñas y Medianas Empresas (ENAPROCE) 2015, 2018; y del Banco de Indicadores. Las cifras serán sujetas a análisis de variaciones entre años, tasas de crecimientos, comparación mediante razones, porcentajes, tabulación y graficación de cifras.

Los datos anteriores al 2020, periodo de análisis de esta investigación, será tratado a forma de información histórica, y como punto de partida en el razonamiento de la tendencia de los datos antes de la pandemia, una estimación hipotética de los datos de que hubiera sido de seguir con esa misma tendencia, y la contrastación con la información del periodo estudiado.

Para homogeneizar los datos trabajados, se considerará de manera parcial en la clasificación por número de trabajadores de las empresas como micro, pequeñas, medianas y grandes, esta última considerada como referencia en las comparaciones que se realizara con el total del universo de empresas, empleados, producción y peso en el mercado nacional, con base a la Ley para el Desarrollo de las Competitividad de la Micro, Pequeña y Mediana Empresa vigente al 2019, que es la siguiente:

Tabla 1: Estratificación por número de trabajadores

Sector/Tamaño	Industria	Comercio	Servicios
Micro	0-10	0-10	0-10
Pequeña	11-50	11-30	11-50
Mediana	51-250	31-100	51-100

Fuente: Ley para el Desarrollo de la Competitividad de la Micro, Pequeña y Mediana Empresa.

Debido a que en la mayoría de las bases de datos no se tiene la división entre sectores y tamaño de la empresa, indicando el número de empresas pertenecientes a los sectores en base al número de trabajadores; en cambio, solo se clasifican según el número de trabajadores o personal, es decir, que usan la clasificación indicada por la Ley de Desarrollo de MIPYMES, pero parcialmente. Considerando así la división de las empresas de la siguiente manera:

Tabla 2: Clasificación empleada

Tamaño	Número de trabajadores
Micro	0 a 10
Pequeña	11 a 50
Mediana	51 a 250
Grandes	251 o más

Fuente: De elaboración propia.

III. Resultados

En el Estudio Demográfico de los Negocios (EDN), que abarca todo el 2019 y de enero a septiembre del 2020, donde se analiza el número de establecimientos micro, pequeños y medianos que realizan su actividad económica en un lugar con instalaciones fijas, semifijas o en vivienda excluye a los negocios grandes, y a aquellos dedicados a la agricultura, cría y explotaciones de animales, aprovechamiento forestal, pesca y caza, construcción, servicios financieros y de seguros, corporativos y actividades legislativas, gubernamentales, de impartición de justicia y de organismos internacionales y extraterritoriales, muestra que: durante este periodo, el número de establecimientos MIPYMES, que inicialmente era de 4 millones 857 mil 007, paso a ser 4 millones 465 mil 593. Esto debido a la salida o muerte de 1 millón 010 mil 857 establecimientos, y la entrada o nacimiento de 619 mil 443 establecimientos, generando un saldo de -391 mil 414 establecimiento MIPYMES en la economía, es decir una disminución del 8.0588%. Lo que individualmente se traduciría en una disminución de los establecimientos de microempresas del 8.3343%, pasando de ser 4 millones 690 mil 539 a 4 millones 329 mil 687, una saldo de -360 mil 852 (nacimientos 614 mil 766, muertes 975 mil 619). Mientras que para los establecimiento de las pequeñas y medianas empresas, hubo una disminución -18.3590%. siendo al inicio 166 mil 468 establecimientos y al final del periodo 135 mil 906, una diferencia de 30 mil 562, al haber nacido 4 mil 677 establecimiento y muertos 35 mil 239.

Tabla 3: Número de empresas o unidades económicas, y establecimientos, en base a los sectores privado y paraestatal por tamaño de empresa, 2008 a 2018

Datos del 2018	Número de empleados	Número de empresas	%	Número de establecimientos	%
	TOTALES	4,616,864	100.0000	4,800,157	100.0000
MICRO	0 a 10	4,431,221	95.9790	4,432,500	92.3407
PEQUEÑA	11 a 50	147,438	3.1935	158,962	3.3116
MEDIANA	51 a 250	27,985	0.6061	63,850	1.3302
GRANDE	251 o más	10,220	0.2214	144,845	3.0175
Datos del 2013	Número de empleados	Número de empresas	%	Número de establecimientos	%
	TOTALES	4,105,267	100.0000	4,230,745	100.0000
MICRO	0 a 10	3,954,892	96.3370	3,956,015	93.5063
PEQUEÑA	11 a 50	120,318	2.9308	128,340	3.0335
MEDIANA	51 a 250	22,838	0.5563	48,238	1.1402
GRANDE	251 o más	7,219	0.1758	98,152	2.3200
Datos del 2008	Número de empleados	Número de empresas	%	Número de establecimientos	%
	TOTALES	3,627,059	100.0000	3,724,019	100.0000
MICRO	0 a 10	3,472,155	95.7292	3,473,715	93.2787
PEQUEÑA	11 a 50	125,376	3.4567	135,089	3.6275
MEDIANA	51 a 250	22,999	0.6341	45,164	1.2128
GRANDE	251 o más	6,529	0.1800	70,051	1.8811

Fuente: De elaboración propia, en base a datos del Censo Económico 2009, 2014 y 2019, INEGI.

El número de establecimiento totales, incluyendo los de empresas grandes, no está registrado en la base de datos, por ello y para poder hacer una comparación con el universo total de establecimiento de ese año, se estimará mediante las cifras históricas y partiendo del dato más reciente, correspondiente al Censo Económico del 2009, 2014, 2019, en base a el número de establecimientos de las unidades económicas o empresas en el sector privado y paraestatal. En el censo se registraron los siguientes datos.

El número de empresas del 2019 y el 2020, no se encuentra en las bases de datos del Estudio de Demografía de los Negocios; en cambio está registrado el número de negocios al inicio y final del 2020.

Tabla 4: Número de establecimientos, en base a los sectores privado y paraestatal por tamaño de empresa, en el 2019 y 2020

Datos del 2020	Número de empleados	Número de establecimientos	%
	TOTALES	4,518,535	100.0000%
MICRO	0 a 10	4,329,687	95.8206%
PYME	11 a 50	135,906	3.0077%
	51 a 250		
GRANDE	251 o más	52,942	1.1717%
Datos del 2019	Número de empleados	Número de establecimientos	%
	TOTALES	4,929,367	100.0000%
MICRO	0 a 10	4,690,539	95.1550%
PYME	11 a 50	166,468	3.3771%
	51 a 250		
GRANDE	251 o más	72,359	1.4679%

Fuente: De elaboración propia, en base al Estudio de Demografía del 2020.

La última información relacionada al número de establecimientos, data del 2003; donde solo se trata el número de unidades económicas o número de empresas, para poder hacer el comparativo con el número de establecimientos en el sector privado y paraestatal por tamaño de empresa con el resto de los años, se hizo una estimación en base a las proporciones del número de empresas con el número de establecimientos de los datos oficiales.

Tabla 5: Estimacion del numero de empresas o unidades económicas, y establecimientos, en base a los sectores privado y paraestatal por tamaño de empresa, en 2003

Datos del 2003	Número de empleados	Número de empresas	%	Número de establecimientos	%
	TOTALES	3,005,157.00	100.00	3,114,667.77	100.00
MICRO	0 a 10	2,853,291.00	94.95	2,854,586.31	92.37
PEQUEÑA	11 a 50	118,085.00	3.93	128,617.52	4.16
MEDIANA	51 a 250	27,073.00	0.90	57,106.19	1.85
GRANDE	251 o más	6,708.00	0.22	74,357.75	2.41

Fuente: De elaboración propia.

Para hacer la estimación del número de establecimientos de empresas grandes en el 2019 y en el 2020, consideraremos su crecimiento en número de establecimiento y en el porcentaje en relación con el total de establecimientos.

Tabla 6: Variaciones y tasas de crecimiento, del número total de establecimientos en base a los sectores privado y paraestatal por tamaño de empresa, 2003 a 2020

Años	Variación del número total de establecimientos	Tasa de crecimiento por año	Tasa de crecimiento por año
2003-2008	609,351	19.56%	3.9128%
2008-2013	506,726	13.61%	2.7214%
2013-2018	569,412	13.46%	2.6918%
Estimación 2018-2019	129,210	2.69%	2.6918%
Estimación 2019-2020	-410,832	-8.33%	-8.3344%

Fuente: Elaboración propia.

Se consideró para los estimados del número de establecimientos del 2019, la tasa de crecimiento entre el 2013 al 2018 entre el número de años, es decir, 13.4589% entre 5 años; y para el número total de establecimientos del 2020, la tasa de disminución del número de establecimientos de microempresas, al cubrir del 92 al 93% del número total de establecimientos de todos los tamaños.

Una vez estimados tanto el número total de establecimientos, como el número por tipo de empresa según su tamaño. Se estimó la siguiente tabla:

Tabla 7: Estimación proporciones del número de establecimiento por tamaño de empresa en total de establecimientos en base a los sectores privado y paraestatal por tamaño de empresa

AÑOS	2020	2019	2018	2013	2008	2003
TOTAL	100%	100%	100%	100%	100%	100%
MICRO	95.821%	95.155%	92.341%	93.506%	93.279%	91.650%
PEQUEÑA	3.008%	3.377%	3.312%	3.034%	3.628%	4.129%
MEDIANA			1.330%	1.140%	1.213%	1.833%
GRANDE	1.172%	1.468%	3.018%	2.320%	1.881%	2.387%

Fuente: Elaboración propia.

Las secciones estimadas corresponden al de los años del 2009 y 2020, a falta de datos analizables. No se pudo obtener la proporción estimada de las pequeñas y medianas empresas individualmente, debido a se encontraban datos suficiente para ello, y que la clasificación de los datos era diferente a la que se empleó en el resto de los datos tratados; al considerar diferentes cantidades de personas empleadas como medida de clasificación.

Tabla 8: Estratificación por número de trabajadores

Sector/Tamaño	Industria	Comercio	Servicios
Micro	0-10	0-10	0-10
Pequeñas y Medianas	11-250	11-100	11-100

Fuente: Síntesis metodológica, Estudio de la Demográfica de los Negocios 2020

Los Censos Económicos, y la información contenida en el Banco de Indicadores de INEGI sobre el total de establecimientos.

Tabla 9: Número total de establecimientos a nivel nacional (universo total), de 1998 a 2019

AÑO	TOTAL, NACIONAL
2019	6,373,168.51
2018	6,044,821.00
2014	5,654,014.38
2013	5,250,285.86
2009	5,144,056.00
2008	4,724,892.00
2004	4,290,108.00
2003	3,983,662.00
1998	3,900,619.00

Fuente: Elaboración propia, en base a datos de los Censos Económicos 2004, 2009, 2014 y 2019, y el Banco de Indicadores (Total de establecimientos. Universo total (Establecimientos), 2019)

Según el Directorio Estadístico Nacional de Unidades Económicas, actualizado a noviembre del 2020, el número total de establecimientos se registró de la siguiente manera:

Tabla 10: Número de establecimientos a nivel nacional (universo total) según el tamaño de la empresa, 2020

Tamaño	Número de establecimientos
Micro	5,177,076.00
Pequeña	300,421.00
Mediana	55,158.00
Grandes	14,010.00
TOTAL	5,546,665.00

Fuente: Elaboración propia, en base a información del DENUE 2020

Contrastando los datos registrados en el Censo económico y los datos más recientes contenidos en el DENUE, se estimó las tasas de crecimiento del número total de establecimientos en el tiempo:

Tabla 11: Variaciones en el número total de establecimientos a nivel nacional (universo total), y tasa de crecimiento del número total de establecimientos, de 1998 a 2020

Años	Variaciones en el número de negocios	Crecimiento promedio por año del número de negocios	Tasa de crecimiento por año
1998-2004	389,489.00	77,897.80	1.81575%
2004-2009	853,948.00	170,789.60	3.32013%
2009-2014	509,958.38	101,991.68	1.80388%
20014-2019	719,154.13	143,830.83	2.25682%
2019-2020	-826,503.51	-826,503.51	-14.90091%

Fuente: Elaboración propia, en base a los Censos Económicos 2004, 2009, 2014 y 2019, y del Banco de Indicadores (Total de establecimientos. Universo total (Establecimientos), 2019)

De este modo se denota, que de haber seguido el crecimiento del número de los negocios al ritmo que se veía en anteriores años, esperaba para el 2020 un crecimiento de al menos el 2% sobre el total de establecimientos (una cifra estimada de alrededor de 6 millones 500 mil establecimientos a nivel nacional); en cambio hubo una caída en el número total de

establecimiento de más de 800 mil establecimientos, una disminución de casi 15% en el número total de establecimientos del país.

De manera individual, por tipo de empresa según su tamaño, las variaciones y cambios porcentuales del número total de establecimientos en el país, se aprecia en la siguiente tabla:

Tabla 12: Número de establecimientos a nivel nacional (universo total), por tipo de empresa según su tamaño, y número de personal ocupado. De 1998 a 2019

Datos 2019	Número de empleados	Número de establecimientos	%	Personal ocupado	%
	TOTALES	6,373,169	100.0000%	36,038,272	100.0000%
MICRO	0 a 10	5,991,827	94.0165%	13,336,507	37.0065%
PEQUEÑA	11 a 50	311,348	4.8853%	6,394,256	17.7430%
MEDIANA	51 a 250	56,140	0.8809%	5,809,716	16.1210%
GRANDE	251 o más	13,854	0.2174%	10,497,792	29.1296%
Datos 2014	Número de empleados	Número de establecimientos	%	Personal ocupado	%
	TOTALES	5,654,014	100.000%	29,642,421	100.0000%
MICRO	0 a 10	5,332,788	94.319%	11,529,011	38.8936%
PEQUEÑA	11 a 50	263,041	4.652%	5,482,040	18.4939%
MEDIANA	51 a 250	47,724	0.844%	4,922,985	16.6079%
GRANDE	251 o más	10,461	0.185%	7,708,385	26.0046%
Datos 2009	Número de empleados	Número de establecimientos	%	Personal ocupado	%
	TOTALES	5,144,056	100.000%	27,727,406	100.0000%
MICRO	0 a 10	4,877,070	94.810%	11,673,646	42.1015%
PEQUEÑA	11 a 50	214,956	4.179%	4,434,010	15.9914%
MEDIANA	51 a 250	42,415	0.825%	4,356,330	15.7113%
GRANDE	251 o más	9,615	0.187%	7,263,420	26.1958%
Datos 2003	Número de establecimientos				
	TOTALES	3,983,662.00			
Datos 1998	Número de empleados Número de establecimientos				
	TOTALES	3,900,619.00			

Fuente: Elaboración propia, en base a los Censos Económicos 2004, 2009, 2014 y 2019, y del Banco de Indicadores (Total de establecimientos. Universo total (Establecimientos), 2019)

Se observa que antes de la pandemia, las prospectivas que se podían hacer eran, que el número de establecimientos a nivel nacional podría tener un crecimiento cercano al 2%, y en el sector privado y paraestatal cercano al 2.7%; es decir, que de haber continuado la tendencia que se llevaba el aumento en el número de establecimientos de la nación para el 2020 podría haber sido de aproximadamente 127 mil 463 establecimientos, y podría haber aumentado aproximadamente 133 mil 093 establecimientos a el sector privado y paraestatal, con respecto al valor de establecimientos del 2019. Así teniendo para el 2020 aproximadamente 6 millones 500 mil 631 establecimientos a nivel nacional, y 5 millones 062 mil 459 establecimientos en el sector privado y paraestatal. En cambio, las cifras resultantes para el 2020, corresponden a 5,177,076.00 establecimientos a nivel nacional y 4,518,535 en el sector privado y paraestatal.

En el análisis del número de empleados o personal ocupado tanto para el sector privado y paraestatal, como a nivel nacional, se registró la información de las bases de datos en la siguiente tabla:

Tabla 13: Personal ocupado a nivel nacional (universo total), PIB corriente anual base 2013, y valor agregado bruto, por tipo de empresa según su tamaño. De 2003 a 2019

Datos 2019	Número de empleados	Personal ocupado	%	PIB Corriente Anual, Base 2013	Valor Agregado Bruto
	TOTALES	36,038,272	100.0000%		
MICRO	0 a 10	13,336,507	37.0065%		
PEQUEÑA	11 a 50	6,394,256	17.7430%	$18,509,944.92	$17,690,674.17
MEDIANA	51 a 250	5,809,716	16.1210%		
GRANDE	251 o más	10,497,792	29.1296%		
Datos 2014	Número de empleados	Personal ocupado	%	PIB Corriente Anual, base 2013	Valor agregado bruto
	TOTALES	29,642,421	100.0000%		
MICRO	0 a 10	11,529,011	38.8936%		
PEQUEÑA	11 a 50	5,482,040	18.4939%	$16,741,050.00	$16,067,157.79
MEDIANA	51 a 250	4,922,985	16.6079%		
GRANDE	251 o más	7,708,385	26.0046%		
Datos 2009	Número de empleados	Personal ocupado	%	PIB Corriente Anual, base 2013	Valor agregado bruto
	TOTALES	27,727,406	100.0000%		
MICRO	0 a 10	11,673,646	42.1015%		
PEQUEÑA	11 a 50	4,434,010	15.9914%	$13,999,009.27	$13,440,135.50
MEDIANA	51 a 250	4,356,330	15.7113%		
GRANDE	251 o más	7,263,420	26.1958%		
Datos 2003	Personal ocupado			PIB Corriente Anual, base 2013	Valor agregado bruto
	TOTALES	23,197,214.00		$13,061,718.52	$12,559,105.17

Fuente: De elaboración propia, en base a los Censos Económicos 2003, 2009, 2014, y 2019; INEGI. Sistema de Cuentas Nacionales de México. Producto Interno Bruto Trimestral. Año Base 2013. Del 2003 al 2019.

La relación del número de personal ocupado de las MIPYMES con relación al número total de ocupados en todas las empresas mantiene una proporción a nivel nacional mayor al 70%, en promedio de 72.89%; y para el sector privado y paraestatal se ve un comportamiento diferente al mostrado a nivel nacional que es más constante, la porción del personal ocupado en las micro, pequeñas y medianas empresas en este segundo análisis varia del 71.01% en el 2003, a 57.28% para el 2018, esto debido a un aumento en el número de establecimientos de las empresas grandes y con ello un aumento en la demanda de empleados en este tipo de empresas, acaparando con cada año un mayor porcentaje del empelo total registrado, lo que no necesariamente es negativo, debido a que significa una mayor fuente de empleos, mas estables, con mayor probabilidad de mantenerse vivos en el mercado en el largo plazo, con prestaciones que una empresa grande puede ofrecer y acumulación de capital que escale la productividad de la nación. De haber mantenido el ritmo de crecimiento de establecimiento a nivel nacional (del 2%) que llevaban las empresas, el número de personal ocupado hubiera alcanzado en el 2020, considerando una paridad estimada de 5.65468 personas ocupadas por establecimiento, generando un total de 720 mil 762 puestos ocupados, en términos acumulativos 36 millones 759 mil 034 puestos ocupados. Del mismo modo, de haber mantenido un crecimiento de los establecimientos en el sector privado y paraestatal de 2.7%, el número del personal ocupado, considerando una paridad estimada de 5.65250 personas ocupadas por establecimiento, habría alcanzado los 28 millones 615 mil 594 puestos ocupados, significando un aumento de 1 millón 482 mil 667 personas ocupadas.

Tabla 14: Personal ocupado total y producción bruta total, en base a los sectores privado y paraestatal por tamaño de empresa, 2003 a 2018

Datos 2018	Número de empleados	PERSONAL OCUPADO TOTAL		PRODUCCIÓN BRUTA TOTAL	
		Número de personas	Porcentaje	Miles de pesos	Porcentaje
	TOTALES	27,132,927	100.0000	22,212,249.976	100.0000
MICRO	0 a 10	9,505,171	35.0319	1,850,472.450	8.3309
PEQUEÑA	11 a 50	3,018,308	11.1242	1,447,039.956	6.5146
MEDIANA	51 a 250	3,019,406	11.1282	2,617,112.984	11.7823
GRANDE	251 o más	11,590,042	42.7158	16,297,624.586	73.3722
Datos 2013	Número de empleados	PERSONAL OCUPADO TOTAL		PRODUCCIÓN BRUTA TOTAL	
		Número de personas	Porcentaje	Miles de pesos	Porcentaje
	TOTALES	21,576,358	100.0000	13,984,313,218	100.0000
MICRO	0 a 10	8,225,452	38.1225	1,134,695,711	8.1141
PEQUEÑA	11 a 50	2,510,768	11.6367	906,393,934	6.4815
MEDIANA	51 a 250	2,438,003	11.2994	1,536,203,520	10.9852
GRANDE	251 o más	8,402,135	38.9414	10,407,020,053	74.4192
Datos 2008	Número de empleados	PERSONAL OCUPADO TOTAL		PRODUCCIÓN BRUTA TOTAL	
		Número de personas	Porcentaje	Miles de pesos	Porcentaje
	TOTALES	20,116,834	100.0000	10,998,426,457	100.0000
MICRO	0 a 10	8,134,476	40.4400	753,114,448	6.8500
PEQUEÑA	11 a 50	2,533,889	12.6000	703,470,917	6.4000
MEDIANA	51 a 250	2,371,104	11.7900	1,410,999,290	12.8300
GRANDE	251 o más	7,077,365	35.1800	8,130,841,802	73.9300
Datos 2003	Número de empleados	PERSONAL OCUPADO TOTAL		PRODUCCIÓN BRUTA TOTAL	
		Número de personas	Porcentaje	Miles de pesos	Porcentaje
	TOTALES	16,239,536.00	100.0000	6,317,178,777.00	100.0000
MICRO	0 a 10	6,224,965.00	38.3322	732,760,139.00	11.5995
PEQUEÑA	11 a 50	2,478,964.00	15.2650	703,324,300.00	11.1335
MEDIANA	51 a 250	2,828,306.00	17.4162	1,093,869,266.00	17.3158
GRANDE	251 o más	4,707,301.00	28.9867	3,787,225,072.00	59.9512

Fuente: De elaboración propia, en base a los Censos Económicos 2003, 2008, 2013 y 2018.

Sin embargo, tras el azote de una pandemia, no hubo un crecimiento de los establecimientos ni del número de personal ocupado, sino todo lo contrario; no hay cifras sobre el saldo resultante de número de empleados al final del 2020, solo una estimación de la población económicamente activa ocupada para en el primer trimestre del 2020, pero aun así INEGI no exhorta la difusión de los datos; por ello, mediante las cifras del número de establecimientos registrados antes y después de la pandemia, se estimara la disminución del número de personal ocupado a nivel nacional y en el sector privado y paraestatal. Con la disminución de 826 mil 504 establecimientos a nivel nacional, y empleando la paridad de 5.65468 personal ocupado por establecimiento, el número de personal que se estima que disminuyo fue de 4 millones 673 mil 620. Usando el mismo análisis en el sector privado y paraestatal, haciendo disminuido de 410 mil 832

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establecimientos, lo que representaría empleando la paridad de 5.65250 personas ocupadas por establecimiento, se estima representa una disminución de 2 millones 322 mil 231.

La relación entre el personal ocupado en las MIPYMES y su peso con respecto al total de la población económicamente activa ocupada de la población de 15 años o mayores según condición de actividad y disponibilidad a nivel nacional, indica un porcentaje de representatividad del 45.8672% en el 2019, al comparar 36 millones 038 mil 272 personas ocupadas a nivel nacional, según el Censo Económico del 2019, con 55 millones 686 mil 450 ocupados de la población económicamente activa, registrada en el cuarto trimestre del 2019, en la Encuesta Nacional de Ocupación y Empleo 2020. Debido a que dichos datos analizados, son los únicos que coinciden en años y periodo de información, con respecto al tipo de análisis pretendido, es el único punto de comparación que se puede hacer.

Finalmente, el impacto en la producción generada de las MIPYMES en términos de Producción Bruta Total se analizo mediante la siguiente tabla:

Tabla 15: Producción bruta total de las MIPYMES, con respecto al total del sector privado y paraestatal 2003 a 2018

Año	Miles de pesos	Total, sector privado y paraestatal	Porcentaje del total
Datos 2003	$ 2,529,953,705	$ 6,317,178,777	40.0488%
Datos 2008	$ 2,867,584,655	$ 10,998,426,457	26.0727%
Datos 2013	$ 3,577,293,165	$ 13,984,313,218	25.5808%
Datos 2018	$ 5,914,625,390	$ 22,212,249,980	26.6278%

Fuente: De elaboración propia, en base a los Censos Económicos del 2003, 2008, 2013 y 2018.

Se puede observar que el porcentaje de representatividad sobre la producción bruta total, disminuyo para el 2008, debido a la misma razón por la que disminuyo en la porción del personal ocupado por las MIPYMES en el sector privado y paraestatal, un aumento en la producción de las empresas grandes.

IV. Conclusión

Después de hacer la presente revisión y análisis sobre el número de establecimientos, número de empresas, personal ocupado, producción bruta total, y perspectiva en la población económicamente activa a nivel nacional y en el sector privado y paraestatal, podemos llegar a diversas asunciones. Primeramente, es notable que mucha de la información tratada debió ser estimada, debido a la falta de datos puntuales empleadas en esta investigación, el mismo hecho de la pandemia entorpeció la captura de registros, además de que muchas bases de datos trabajan con periodos largos de datos acumulados y estaban faltos de especificación en los suscitado por cada año considerado. Y como segunda resolución esta que, efectivamente la pandemia trajo un efecto negativo en el número total de empresas y establecimientos, el problema de identificar esto, es estimar las magnitudes de esos efectos reflejados en cambios en el PIB o el desempleo resulta complicado a falta de información clara y contrastable, sin embargo, es innegable que la pandemia impacto negativamente en estos aspectos. Las empresas que se vieron afectadas mayormente fueron las de tamaño micro, debido a ser empresas poco robustas con poca resistencia ante las crisis, y en términos de número de empleados ocupados quien se vio mas afectada fueron las empresas de tamaño grande, precisamente debido a que requieren mucha mano de obra para mantener su enorme producción, y de verse detenidas sus actividades esa capacidad desperdiciada se traduce en cierre de establecimientos, paro en los trabajadores,

y despidos. Los números mostraban un escenario prospero en el crecimiento de la economía, sobre todo en aquella de gran capacidad como son las empresas de gran tamaño; sin embargo, un suceso inesperado y de las magnitudes, como fue la pandemia, hecho abajo el escenario positivo al que se dirigía el país. Los mexicanos ya han demostrado ser capaces de volverse a levantar, y esta vez más fuertes y preparados para futuros traspiés.

Referencias

CÁMARA DE DIPUTADOS DEL H. CONGRESO DE LA UNIÓN;. (30 de Diciembre de 2002). LEY PARA EL DESARROLLO DE LA COMPETITIVIDAD DE LA MICRO, PEQUEÑA Y MEDIANA EMPRESA. Obtenido de Diario Oficial: http://www.diputados.gob.mx/LeyesBiblio/pdf/247_130819.pdf

INEGI. (2012). Estudio sobre la Demografía de los Negocios (EDN) 2012. Obtenido de INEGI: https://www.inegi.org.mx/programas/edn/2012/

INEGI. (2015). Encuesta Nacional sobre Productividad y Competitividad de las Micro, Pequeñas y Medianas Empresas (ENAPROCE) 2015. Obtenido de INEGI: https://www.inegi.org.mx/programas/enaproce/2015/

INEGI. (2018). Encuesta Nacional sobre Productividad y Competitividad de las Micro, Pequeñas y Medianas Empresas (ENAPROCE) 2018. Obtenido de INEGI: https://www.inegi.org.mx/programas/enaproce/2018/

INEGI. (2019). Estados Unidos Mexicanos. Obtenido de Bando de Indicadores. Empleo y ocupación.: https://www.inegi.org.mx/app/indicadores/?fbclid=IwAR0BavtTyhbIZCK_VBYgqbKfJB-IWmas5Kxc54fhSyINohg4f_C-z17IR6Y

INEGI. (Noviembre de 2020). Directorio Estadístico Nacional de Unidades Económicas . Obtenido de DENUE: https://www.inegi.org.mx/rnm/index.php/catalog/587/related_materials?idPro=

INEGI. (2020). Estudio sobre la Demografía de los Negocios (EDN) 2020. Obtenido de INEGI: https://www.inegi.org.mx/programas/edn/2020/

INEGI. (2020). Estudio sobre la demografía de los negocios 2020 Síntesis metodológica. Obtenido de INEGI: https://www.inegi.org.mx/contenidos/productos/prod_serv/contenidos/espanol/bvinegi/productos/nueva_estruc/702825197421.pdf

INEGI. (19 de Mayo de 2020). Ocupación. Obtenido de INEGI: https://www.inegi.org.mx/app/tabulados/default.html?nc=603

INEGI. (19 de Mayo de 2020). Ocupación. Población de 15 años y más según condición de actividad y disponibilidad, nacional trimestral. Obtenido de INEGI: https://www.inegi.org.mx/app/tabulados/default.html?nc=603

INEGI. (29 de Enero de 2021). PIB y cuentas nacionales. Por actividad económica. Obtenido de INEGI: https://www.inegi.org.mx/temas/pib/

INEGI; Secretaría de Economía; AMSDE. (2018). Encuesta Nacional sobre Productividad y Competitividad de las Micro, Pequeñas y Medianas Empresas (ENAPROCE) 2018. Obtenido de ENAPROCE: https://www.inegi.org.mx/contenidos/programas/enaproce/2018/doc/enaproce2018pres.pdf

Instituto Nacional de Estadística, G. e. (1999). Censo Económico 1999. Obtenido de INEGI: https://www.inegi.org.mx/programas/ce/1999/#Documentacion

Instituto Nacional de Estadística, G. e. (2004). Censo Económico 2004. Obtenido de INEGI: https://www.inegi.org.mx/programas/ce/2004/

Instituto Nacional de Estadística, G. e. (2009). Censo Económico 2009. Obtenido de INEGI: https://www.inegi.org.mx/programas/ce/2009/

Instituto Nacional de Estadística, G. e. (2014). Censo Económico 2014. Obtenido de INEGI: https://www.inegi.org.mx/programas/ce/2014/

Instituto Nacional de Estadística, G. e. (2019). Censo Económico 2019. Obtenido de INEGI: https://www.inegi.org.mx/programas/ce/2019/

Apéndice

Anexo 1: Grafico, tasa de crecimiento anual del PIB real, base 2013, y estimaciones 2020

TASA CRECIMIENTO ANUAL PIB, BASE 2013
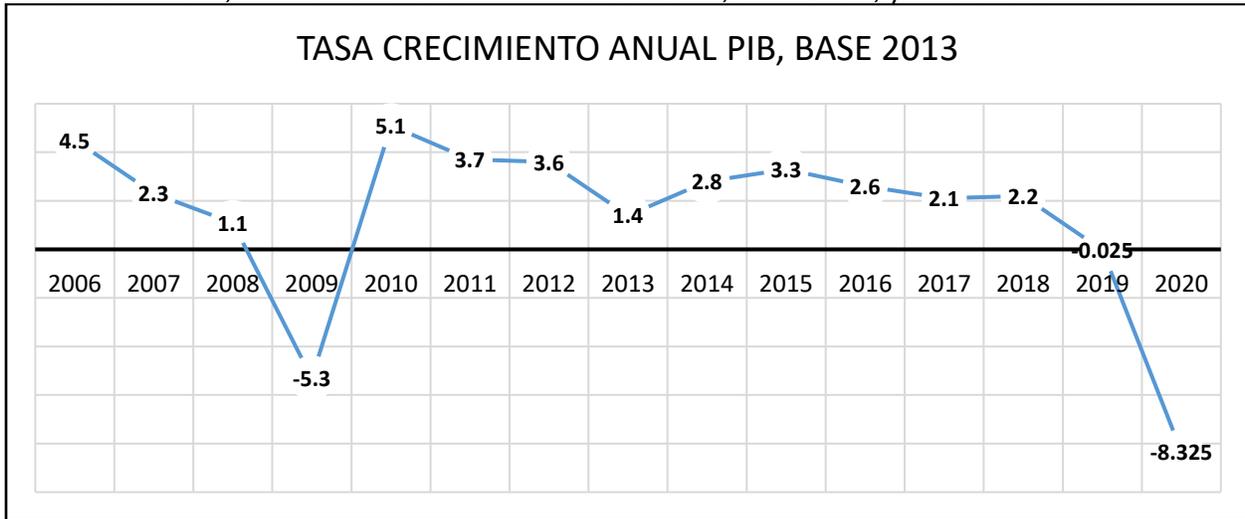
Change in Consumer Behavior Due to the Pandemic Caused By COVID-19

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I. Introduction

This research refers to an issue that has caused a great impact in the current business environment. The issue to be addressed is about the change that arose in consumers due to the virus that appeared in China with the name of COVID-19 that was reported for the first time on Tuesday, January 7, 2020, and which by means of of international travelers arrived in Mexico on February 27, 2020. This virus caused a pandemic where, for people's safety, it is recommended to go out as little as possible to avoid getting Covid-19.

With this research, we hope to know the positions taken by consumers because of the pandemic and if this change is true, or if the pandemic did not affect their judgment when making decisions to purchase goods and services.

II. Development of Methodologies

The methodology to be used to obtain the results will be carried out through surveys carried out by virtual means due to the current health situation in the country. The questions used in the survey will be open and closed, including multiple choice, dichotomy and demographic questions.

III. General Purpose

Publicize the impact that the pandemic situation in Mexico due to COVID 19 on consumers and if it is generating a change when making their purchase decision.

IV. Specific Objectives

Obtain consumer responses through online surveys and collect them in an organized manner.

You make a graphic model of the results obtained in which the outcome of the investigation can be clearly shown.

Obtain and write the conclusions of the investigation.

V. Results

The questions that were asked in the survey were the following with their respective answers.

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It was done through ww.Survio.com with the following link:
https://www.survio.com/survey/d/I9R7Q9M4X6L5U8H9U

Results of the 13 questions to 20 respondents: the number in parentheses is the number of people who chose that option.

1. Gender:
a) Woman. (13) B) man. (7)

2. What is your age? (wide range)
a) Less than 18. (2)
b) 18 years to 24 years. (10)
c) 25 years to 34 years. (2)
d) 35 years to 44 years. (3)
e) 45 years to 54 years. (3)
f) More than 54 years. (0)

3. What was your employment situation before the pandemic? a) With employment.
a) Unemployed. (3)
b) Self-employed worker. (1)
c) Student. (6)
d) With employment. (10)

4. What is your current employment situation?
a) With employment. (9)
b) Unemployed. (2)
c) Self-employed worker. (4)
d) Student. (5)

5. At the beginning of the current pandemic situation the country is going through, do you consider that the frequency with which you visited commercial places decreased?
a) Yes. (20)
b) No.

6. During the course of the pandemic, did you noticeably decrease your purchase volume compared to before this situation occurred?
a) Yes. (16)
b) No. (4)

7. If your answer was "yes", select the option for which you consider that this decrease. (If it is, do not select the "N / A" option).
a) Unemployment.
b) I prefer to save in case I get sick. (3)
c) Decrease in salary. (3)
d) Why I prefer not to have social contact. (3)
e) Why do I consider that the costs of goods and services increased. (3)
f) N / A. (4)

8. Even though we know that the hygiene and health process to be able to enter commercial places is necessary and indispensable. Does it seem tedious or irritating to have to wear a mask all the time and have to go through a protocol every time you enter a commercial place?
a) Yes. (10)
b) No. (10)

9. Do you consider that having to go through the aforementioned protocol reduces your desire to attend these sites?
a) Yes. (12)
b) No. (8)

10. Before the pandemic, you used to shop:
a) Online. (2)
b) In supermarkets or shopping centers. (18)
c) Sites where there is self service.

11. Before the pandemic, you preferred to go to places:
a) Attendees. (12)
b) Few crowded. (8)
c) That handles order services.

12. Currently, you prefer to make your purchases in:
a) Online. (9)
b) In supermarkets or shopping centers. (9)
c) Sites where there is self service. (2)

13. You now prefer to go to places:
a) Attendees.
b) Few crowded. (16)
c) That handles order services. (4)

VI. Conclusions

Based on the results obtained from the surveyed consumers, there was a real change in consumer purchasing decisions during the pandemic.

We observe that the pandemic apparently did not affect the employment situation of the majority of respondents, therefore, we rule out that it is one of the main reasons for the change.

It can be seen that at the beginning of this contingency situation 100% of consumers decreased the frequency with which they visited commercial places and 80% of them significantly decreased their volume of purchases since this situation began and this mainly due to the fact that most prefer not to have social contact, avoiding crowded places. 90% of people who previously preferred to go to shopping centers or supermarkets fell to 45%, reaching a tie with online purchases where previously only 10% made their purchases through this means. In addition to considering that the costs of goods and services increased, they were affected by a decrease in salary and prefer to save in case they get sick.

On the other hand, 40% of them consider that going through the health protocol reduces their desire to attend commercial places.

La evolución de los negocios en tiempos de pandemia

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Resumen

Viktor Frankl estaba convencido de que "el ser humano es producto de sus decisiones más que de sus condiciones". Afirmaba que cuando un ser humano no cree en este derecho de decidir, le está cediendo su poder a la otra persona o a las circunstancias. Deja que las cosas controlen y dominen sus conductas. Frankl creía firmemente en el siguiente principio: "Si no actúas como piensas, terminarás pensando como actúas. Al final eres cualquier persona menos la persona que tu haz anhelado ser, ya que te transformas en lo que sucede, no en lo que tú quieres ser". Esta conducta es fundamental para quién está inmerso en los negocios, no solo las marcas grandes hicieron estrategias para mejorar sus condiciones, la pandemia es una transformación a una vida muy distinta a la que teníamos. No podemos dejarnos a que las circunstancias cambien el objetivo.

La innovación no es opcional, es necesaria para todos. Cómo seres humanos nuestra historia está marcada por innovarnos y acoplarnos a las situaciones externas a las que hemos atravesado. Y los negocios a través de una pandemia no es la excepción. Esta pandemia nos deja muchas lecciones de negocios.

Actualmente en toda empresa, grande o pequeña se encuentra entre los empleados Google, ya es tan importante su presencia como el vendedor que tiene contacto con el cliente. E importante también en estos cambios de revolución son las redes sociales para comercializar y vender productos, así como las aplicaciones de tráfico y comercialización de artículos para buscar lo que necesitamos como consumidores. Ahora el hábito del consumidor se convirtió en hacernos la compra más fácil al facilitarnos el método de entrega, modificar el proceso de pago, enamorarnos con un producto con un storytelling que nos genere emociones profundas que nos hagan voltear a ver lo que nos ofrecen dentro de este mar de competencia.

La presente investigación tiene como objetivo analizar el comportamiento y casos aplicados de estrategias ante el COVID-19, tanto empresas grandes, como micro y pequeñas empresas, la innovación y la creatividad no es exclusiva, como tampoco lo es esta contingencia sanitaria. Se realizó una pequeña muestra también a empresas locales sobre sus modificaciones a las necesidades del mercado y la demanda actual.

The present research aims to analyze the behavior and applied cases of strategies in the face of COVID-19, both large companies, as well as micro and small companies, innovation and creativity is not exclusive, nor is this health contingency. A small sample was also made to local companies about their modifications to the market needs and current demand.

Palabras Clave: Innovación; negocios; COVID-19; pandemia; empresas grandes; micro y pequeñas empresas

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Abstract

Viktor Frankl was convinced that "the human being is the product of his decisions rather than of his conditions." He affirmed that when a human being does not believe in this right to decide, he is yielding his power to the other person or to circumstances. Let things control and dominate your behaviors. Frankl firmly believed in the following principle: "If you don't act like you think, you will end up thinking like you act. In the end, you are anyone except the person you have longed to be, since you become what happens, not what you want to be". This behavior is essential for those who are immersed in business, not only did the big brands make strategies to improve their conditions, the pandemic is a transformation to a life very different from the one we had. We cannot be left to circumstances to change the objective.

Innovation is not optional, it is necessary for everyone. As human beings, our history is marked by innovating and adapting to the external situations that we have been through. And business through a pandemic is no exception. This pandemic leaves us many business lessons.

Currently in any company, large or small, it is among Google employees, its presence is as important as the seller who has contact with the customer. And also important in these changes of revolution are social networks to market and sell products, as well as traffic and article marketing applications to find what we need as consumers. Now the consumer's habit became to make the purchase easier for us by facilitating the delivery method, modifying the payment process, falling in love with a product with a storytelling that generates deep emotions that make us turn to see what they offer us within this sea of competition.

Keywords: Innovation; business; COVID-19; pandemic; large companies; micro and small companies

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Impacto de la pandemia en las Pymes e implementación de medidas Administrativas: Mexico

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Resumen

La pandemia del SARS- COVID-19, ha situado a las empresas de todo el mundo, en un entorno económico difícil de sortear, no importando el tamaño de las organizaciones, por ende, han buscado como sobrevivir en el mercado, en diferentes países están siendo apoyadas por los gobiernos, sin embargo, en México la situación es más caótica, al no tener apoyos como nunca antes imaginado, solo un crédito para las Pymes, que no logra apalancarse financieramente, y con el tiempo transcurrido estas han abandonado el mercado, sin embargo, para algunas empresas han recurrido a técnicas administrativas a implementar, renovarse, rehacerse, reinventándose, una de estas técnicas es la reingeniería aplicada a las organizaciones, en esta investigación se expone como una de tantas sugerencias para que sobrevivan estas empresas. La metodología utilizada es mixta, transversal, documental y de campo.

Palabras clave: Reingeniería; herramientas; técnica; pandemia

Abstract

The SARS-COVID-19 pandemic has placed companies around the world in an economic environment difficult to overcome. Regardless of the size of the organizations, therefore, they have sought to survive in the market, in different countries they are being supported by governments; however, in Mexico the situation is more chaotic, as there is no support, only a loan for SMEs, which they cannot leverage themselves. Financially, and over time they have left the market. However, for some companies they have resorted to administrative techniques to implement, renew, remake, or reinvent themselves. One of these techniques is reengineering applied to organizations. In this research, we explore it as one of many suggestions for these

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companies to survive. The methodology used is mixed, using transversal, documentary and field methods.

Impacto en la calidad de vida de las personas con discapacidad en tiempos de pandemia

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I. Introducción

Las personas con discapacidad conforman uno de los grupos más marginados del mundo. Esas personas presentan peores resultados sanitarios, obtienen resultados académicos inferiores, participan menos en la economía y registran tasas de pobreza más altas que las personas sin discapacidades.

Actualmente la discapacidad se considera de importancia para generar derechos humanos. Los obstáculos que presentan en su vida diaria se pueden superar si los gobiernos, las organizaciones no gubernamentales, los profesionales y las personas con discapacidad y sus familias trabajan en colaboración.

II. Antecedentes

A lo largo de los años, la discapacidad ha sido motivo de un trato especial a quienes la padecían. El trato discriminatorio fue predominante hacía ellos. Con el paso de los años se fue creando conciencia y respeto, dándoles un trato digno, derechos que los protegieran y les concedieran oportunidades.

Para la segunda mitad del siglo XX se empezaron con los avances sobre la materia de concientizar primeramente en la esfera internacional impulsados por organismos internacionales como la Organización de la Naciones Unidad (ONU), la Organización Mundial de la Salud (OMS)[2] y la Organización Internacional del Trabajo. Los primeros antecedentes jurídicos sobre la discapacidad se dieron en materia de Derechos Humanos, específicamente el primero lo constituyó la Declaración Universal de Derechos Humanos de 10 de diciembre de 1948. Se fueron incluyendo:

- Declaración de los Derechos de Deficiente Mental de la ONU 1971.
- Declaración de los Derechos del Minusválido de 1975.
- Carta de los 80 de Rehabilitación Internacional.
- Programación de Acción Mundial para las Personas con Discapacidad de la ONU en 1982 y

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[2] La Organización Mundial de la Salud es el organismo de la Organización de las Naciones Unidas especializado en gestionar políticas de prevención, promoción e intervención a nivel mundial en la salud.

- Normas Uniformes de Igualdad de Oportunidades para las Personas con Discapacidad de la ONU aprobadas en 1992.

Tras el paso de una pandemia mundial la calidad de vida de las personas discapacitadas se vio afectada.

La OMS tuvo noticia por primera vez de la existencia de este nuevo virus el 31 de diciembre de 2019, al ser informada de un grupo de casos de «neumonía vírica» que se habían declarado en Wuhan (República Popular China).[3]

El 10 de enero, la OMS publicó información sobre cómo hacer un seguimiento de los casos, tratar a los pacientes, prevenir futuras transmisiones en establecimientos de atención sanitaria, disponer de suministros necesarios e informar a la población sobre el 2019-nCoV.

El primer caso de COVID-19 se detectó en México el 27 de febrero de 2020.

III. Objetivos

A través de la recolección y análisis de la información encontrada sobre personas discapacitadas tras el paso del COVID-19, interpretaremos para la concientización de la participación social, cultural y política dentro de la sociedad, así como sus derechos y las oportunidades que se les brindan.

Derechos de personas discapacitadas

En todo el mundo existen más de mil millones de personas con discapacidad, lo que representa aproximadamente 15% de la población mundial[4]. Esta cifra sigue aumentando debido al envejecimiento de la población y a las enfermedades crónico-degenerativas.

La Convención sobre los Derechos de las Personas con Discapacidad aprobada por la Resolución A/RES/61/106[5], el 13 de diciembre de 2006. Este ordenamiento es el primer tratado en materia de derechos humanos del siglo XXI y también el firmado con mayor celeridad en la historia de la ONU.

Su propósito, contenido en el artículo 1, es "promover, proteger y asegurar el goce pleno en condiciones de igualdad de todos los derechos humanos y libertades fundamentales por todas las personas con discapacidad, y promover el respeto de su dignidad inherente". Los Estados adquieren la obligación de promover, proteger y garantizar el disfrute pleno de los derechos civiles, políticos, económicos, sociales, culturales y ambientales a las personas con discapacidad, mediante los ajustes razonables y la accesibilidad necesaria para lograrlo.

El Estado mexicano firmó la Convención el 30 de marzo de 2007 y la ratificó el 17 de diciembre del mismo año, adquiriendo el compromiso de respetar, reconocer y garantizar los principios y derechos en ella contenidos. Convirtiéndose así en parte de los Estados comprometidos a proteger y promover los derechos y la dignidad de las personas con discapacidad

A partir de la reforma constitucional en materia de derechos humanos publicada en el Diario Oficial de la Federación el 10 de junio de 2011, la Convención sobre los Derechos de las Personas con Discapacidad adquiere observancia obligatoria por las autoridades en los distintos ámbitos y órdenes de gobierno. Por ello, los Estados no pueden, bajo pretexto de la aplicación de su derecho interno, vulnerar derechos contenidos en la Convención, en virtud de que su jerarquía es superior a la de las leyes federales y locales.

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[3] Información básica sobre COVID-19: https://www.who.int/es/news-room/q-a-detail/coronavirus-disease-covid-19
[4] De acuerdo con el último informe realizado por la Organización Mundial de la Salud y el Banco Mundial
5 Ninguna persona con discapacidad, independientemente de cuál sea su lugar de residencia o su modalidad de convivencia, será objeto de injerencias arbitrarias o ilegales en su vida privada, familia, hogar, correspondencia o cualquier otro tipo.

Las personas con discapacidad como sujetos de derechos La Convención sobre los Derechos de las Personas con Discapacidad es un instrumento jurídico.[6]

Principales derechos de las personas con discapacidad (CNDH)

La perspectiva de derechos humanos obliga a considerar a las personas con discapacidad como seres humanos que requieren que se realicen ajustes específicos para disfrutar de todos los bienes y servicios públicos y privados, por ejemplo, crecer dentro de una familia; asistir a la escuela y convivir con sus compañeros, y trabajar y participar en la vida pública y política del país.

La Convención sobre los Derechos de las Personas con Discapacidad establece los siguientes principios rectores para los Estados parte:

Artículo 3:

a) El respeto de la dignidad, la autonomía individual, incluida la libertad de tomar las propias decisiones, y la independencia de las personas.
b) La no discriminación.
c) La participación e inclusión plenas y efectivas en la sociedad.
d) El respeto por la diferencia y la aceptación de las personas con discapacidad como parte de la diversidad y la condición humanas.
e) La igualdad de oportunidades.
f) La accesibilidad.
g) La igualdad entre el hombre y la mujer.
h) El respeto a la evolución de las facultades de los niños y las niñas con discapacidad y de su derecho a preservar su identidad.

En el marco de esta Convención, los Estados Parte se comprometen a asegurar y promover el pleno ejercicio de todos los derechos y libertades fundamentales, tales como:

- Igualdad y no discriminación (artículo 5)
- Accesibilidad (artículo 9)
- A la vida (artículo 10)
- Situaciones de riesgo y emergencia humanitaria (artículo 11)
- Igual reconocimiento como persona ante la ley (artículo 12)
- Acceso a la justicia (artículo 13)
- Libertad y seguridad de la persona (artículo 14)
- Protección contra la tortura y otros tratos degradantes (artículo 15)
- Protección contra la explotación, la violencia y el abuso (artículo 16)
- Integridad personal (artículo 17)
- Libertad de desplazamiento y nacionalidad (artículo 18)
- Inclusión en la comunidad (artículo 19)
- Movilidad personal (artículo 20)
- Libertad de expresión y acceso a la información (artículo 21)
- Respeto a la privacidad (artículo 22)
- Respeto del hogar y de la familia (artículo 23).
- Educación (artículo 24)
- Salud (artículo 25)
- Habilitación y rehabilitación (artículo 26)
- Trabajo y empleo (artículo 27)
- Nivel de vida adecuado y protección social (artículo 28)

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[6] El objetivo principal de este instrumento jurídico internacional es cambiar el paradigma del trato asistencialista a las personas con discapacidad, permitiendo que puedan desarrollarse en igualdad de condiciones, tanto exigiendo sus derechos como cumpliendo sus obligaciones como parte de la sociedad.

- Participación en la vida política y pública (artículo 29)
- Participación cultural, recreativa y deportiva (artículo 30)

Actividad socioeconómica

De acuerdo con el Consejo Nacional para Prevenir La Discriminación sólo 25% de las personas con discapacidad con una ocupación económica tiene contrato y sólo 27% cuenta con prestaciones médicas. A nivel nacional, las cifras son 40% y 43%, respectivamente (CONAPRED, 2018)

Según la Encuesta Nacional sobre Discriminación 2017, todavía persisten numerosos prejuicios y actitudes discriminatorias hacia las personas con discapacidad. Una de cada cuatro personas en el país (25%) considera que "son de poca ayuda en el trabajo", y una proporción similar (26%) estaría poco o nada de acuerdo en que alguien de este grupo social ocupe la Presidencia de la República (CONAPRED, 2018)

La mitad (49.4%) de las personas con discapacidad vive en situación de pobreza: 39.4% vive en pobreza moderada, mientras que 10% está en pobreza extrema (CONEVAL, 2017)

La mayoría de los hogares que tienen personas con discapacidad está en los deciles de ingreso más bajos. Hasta 45% de los ingresos de esos hogares proviene de transferencias oficiales (54.7% del total) y de otro tipo (INEGI, 2012)

Los hogares que tienen personas con discapacidad gastan más en alimentos, vivienda y cuidados de la salud que el resto. Dicho gasto puede ser hasta tres veces más alto que en hogares sin personas con discapacidad (INEGI, 2012)

Mientras que la asistencia a la escuela es casi universal en los niveles básicos (97%), entre las personas con discapacidad el porcentaje cae a 80%. Conforme pasa el tiempo, sólo el 28% de este sector se incorpora a la educación media superior y superior (CONAPRED, 2018)

Mientras más de seis de cada diez personas sin discapacidad se ocupan en alguna actividad económica, sólo alrededor de una de cada diez personas con discapacidad cognitiva o mental está ocupada (Solís, 2017)

Sólo 25% de las personas con discapacidad con una ocupación económica tiene contrato y sólo 27% cuenta con prestaciones médicas. A nivel nacional, las cifras son 40% y 43%, respectivamente (CONAPRED, 2018)

Las personas sin discapacidad pueden llegar a ganar hasta 151% más que las personas con discapacidad, dependiendo del tipo de discapacidad del que se trate (Solís, 2017)

Las personas dedican en promedio 26.17 horas por semana al cuidado de personas con algún tipo de discapacidad sin recibir pago. La desventaja es muy clara en el caso de las mujeres, las cuales dedican 19.9 horas frente a 7,8 de los hombres (INEGI, 2015)

Como ha afectado la pandemia a su salud y vida económica

Las personas con discapacidad enfrentan mayores barreras específicas de sus vidas cotidianas, restricciones que los obligan a permanecer en su hogar que no cuentan con las medidas necesarias para satisfacer sus necesidades.

En cuanto mayor es la edad, mayor es la dificultad en la vida de las personas discapacitadas. Toda consecuencia que ha ido trayendo el COVID-19 implica retrocesos en los avances de inclusión social. El impacto que sufre este grupo de personas es que enfrenta más desigualdades en su entorno al tener acceso a la salud, puede aumentar la discriminación a servicios médicos o de salud. Todo esto refleja que, en ocasiones, médicos emiten prejuicios contra las personas discapacitadas con respecto a su calidad de vida y su valor social. Existen casos donde se les excluye a la repartición de recursos por el simple hecho de que ''tienen grandes necesidades de apoyo'' para la vida diaria o ''fragilidad'. Las personas con discapacidad y sus respectivas familias tienden a ser presionados dentro del sistema de salud para que renuncien a procedimientos o medidas de reanimación. Algunas prácticas promisorias que se han ido desarrollando por diferentes organizaciones como la Bioética de la República de San Marino donde los Lineamientos

de triage en casos de COVID-19 se prohíbe la discriminación basada en la discapacidad ya que puede ser tomado como acto inaceptable donde violan los derechos humanos de la persona.

Respecto al impacto que ha causado el COVID-19 en el trabajo es, que tienen menos probabilidades de conseguir empleo o estar en ello, o bien, emplean de forma informal y esto provoca que no tengan acceso al seguro social como otras personas. Tienden a tener una reducción en la capacidad de recuperación económica, desde otra perspectiva es que al estar en sus hogares no cuentan con los recursos necesarios y esto genera que tengan más riesgos de perder su empleo o que sus ingresos disminuyan. La falta del ingreso indica una carga desproporcional para las personas con discapacidad y sus respectivos hogares toman gastos adicionales relacionados con la discapacidad, tienen que adaptar su espacio, tener dispositivos de asistencia o servicios específicos.

IV. Resultados

Como medida de fortalecimiento a la economía popular ante la emergencia sanitaria que representa el Covid-19, el presidente de México, Andrés Manuel López Obrador, dispuso realizar la dispersión de los recursos de la Pensión para el Bienestar de las Personas Adultas Mayores y de las Personas con Discapacidad, quienes están recibiendo el pago correspondiente a los bimestres marzo-abril y mayo-junio de 2020, es decir 5 mil 240 pesos en total.

El contenido de la nota, producida por la Oficina de País para México y Cuba de la Organización Internacional del Trabajo (OIT), es el fruto de varios meses de constante monitoreo del impacto del COVID-19 en el contexto laboral mexicano e incluye análisis de los datos provenientes de fuentes oficiales, así como de las medidas tomadas para mitigar este impacto. Entre los principales hallazgos y proyecciones de esta nota técnica, que ha usado como fuente principal de su análisis datos provenientes de la ENOE (Encuesta Nacional de Ocupación y Empleo) y de la ETOE (Encuesta Telefónica de Ocupación y Empleo) del INEGI, se encuentran:

- Una tasa estimada del 11,7% de desempleo de la Población Económicamente Activa (PEA) para el final del 2020, lo que equivaldría a aproximadamente 6 millones de personas.
- El 44% de la población ocupada en México se enfrenta al riesgo de sufrir afectaciones como reducción de horas o salarios. En algunos sectores, se superpone con vulnerabilidad de informalidad e ingreso bajo.
- Durante la pandemia la ocupación informal (en sector informal y sector formal) descendió hasta un 47.7% lo que supone una baja histórica, causada no por la formalización sino por una importante pérdida de trabajos informales. En 5 meses se han destruido más empleos formales que los que fueron creados en todo 2019.
- La OIT documentó un aumento progresivo en la actividad económica a partir de junio y con ello un retorno a espacios de trabajo, pero aún no ocurre una recuperación integral del empleo y persisten desafíos para su recuperación. Estos efectos podrían empeorar en el mediano plazo.

V. Conclusión

En México viven alrededor de 7.1 millones de personas con alguna discapacidad, lo que representa aproximadamente al 6% de la población total. Pese a los esfuerzos realizados, de orden nacional e internacional, en erradicar la discriminación este grupo continúa siendo uno de los más rezagados y vulnerables en términos sociales y económicos.

Promover la inclusión de las personas con discapacidad significa ante todo reconocer y proteger sus derechos, la persona merece un trato justo y una dignidad que sea respetada. Estos derechos abarcan todos los aspectos de la vida: el derecho a ir a la escuela, a vivir en la propia comunidad, a acceder a la atención médica, a formar una familia, a participar en la participación política, a poder practicar deportes, a viajar, y tener un trabajo digno.

En la Argentina, el Ecuador y México se ha buscado incluir a la población con discapacidad en las respuestas implementadas y hacer accesibles las herramientas disponibles para no empeorar su situación.

El 3 de diciembre de 2020, la Comisión Nacional de los Derechos Humanos manifestó su preocupación ante la escasez de políticas para atender a personas con discapacidad durante la emergencia sanitaria e instó al Estado mexicano a garantizar la calidad de vida de más de siete millones de personas que viven en esta condición.

Referencias

CONAPRED. (2018). Encuesta Nacional sobre Discriminación: Prontuario de resultados.

CONEVAL. (2017). Resultados de pobreza en México 2016.

INEGI. (2012). Encuesta Nacional de Ingresos y Gastos de los Hogares (ENIGH) 2012.

INEGI. (2015). Encuesta Intercensal 2015.

Solís, P. (2017). Discriminación estructural y desigualdad social: con casos ilustrativos para jóvenes indígenas, mujeres y personas con discapacidad. México: Conapred-CEPAL.

Effect of Governmental Program in Promoting SME's Exports

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Abstract

Governmental Programs have been used all around the world to promote exports of domestic firms; frequently such mechanisms are oriented to support Small and Medium Enterprises (SMEs). Marca Gto is a Mexican program created in 2015 with the aim of building a good quality reputation of the products which have this regional certification. The objective of this research is to find an association between the participation of SMEs in that program and the beginning of export activity. A survey of 21 questions was applied to 79 SMEs of Agri-food sector. IBM SPSS Program was used to analyze the collected data; as a result, there was not found any association between the obtention of Marca Gto certification and the beginning of firms export activity. However, the finding of this research leads to a deeper comprehension of how Marca Gto is contributing to the creation of quality culture in different areas of the company that eventually could enable a more successful and easier internationalization.

I. Introduction

The factors that leads to the beginning and performance of exports have been studied over the past decades; however there is not a consensus in the theoretical literature and findings since this is a topic that depends on different aspects such as the global intensity of industry competition, the national competitiveness of each country, the maturity of domestic clusters and even the management of each company, to mention some of them.

Small and Medium Enterprises (SMEs) have been profusely studied since, in most of the countries, account for a major part of the national industries but at the same time face the biggest challenges to overcome in order to achieve a successful internationalization.

Both, in the developing and the developed economies, the strategy to promote the exports of SME is constantly evolving at different levels (National, regional, or local). For instance, at regional level, some Governmental mechanisms are created to promote the internationalization by building an identification and good perception of the products made in a specific geographical area. Precisely, this is the case of Marca Gto, a program created in Mexico in 2015 that looks for the creation of a good quality reputation of the products that receive it as a certification which functions as a regional trademark label. This certification is not only but highly oriented to promote the exports, based on the idea that to obtain it, the enterprises must prove high quality

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standards. However, the available information of this program results does not provide clear evidence of the achievement of the internationalization goal.

Then, the objective of this research is to find an association between the participation of SMEs in Marca Gto program and the beginning of export activity. A survey of 21 questions was applied to 79 SMEs of Agri-food sector. IBM SPSS program was used to analyze the collected data; as a result, there was not found any association between the obtention of Marca Gto certification and the beginning of firms export activity.

However, the finding of this research leads to a deeper comprehension of how Marca Gto is contributing to the creation of quality culture in different areas of the company that eventually could enable a more successful and easier internationalization.

This information is useful for the managers of surveyed SMEs and the regional Government office in charge of tracking the program results, which was created with the objective to increase competitiveness and the global presence of products made in Guanajuato.

This paper contributes to the existent literature in the area since it describes, analyze and concludes about the effect of a Governmental program on Agri-food cluster conformed by traditional SMEs.

II. Literature Review

The literature focused on the factors of export performance is extensive but still shows heterogeneous and controversial results (Chugan & Singh, 2014; Moghaddam, Hamid, & Aliakbar, 2012; Nazar & Saleem, 2009; Srivastava, Moser, & Meijer, 2015).

Several authors (Diez-Vial & Fernandez-Olmos, 2014; Fernhaber, Gilbert & McDougall, 2008) have analyzed the relationships between the location advantages of regional clusters and the export performance. Though, there are few studies of the relationship among clusters, export performance and regional certifications.

For the purposes of this research, for a regional cluster approach it will be considered the definition of industrial district proposed by Alfred Marshall (1920) who used it for the "concentration of specialized industries in particular localities". The Italian economist Becattini (1989, 1990) used the concept to capture the success of agglomerations of small firms in some areas of his country. Then, this applies to the regional Agro-food cluster considered in this research.

The main attributes of regional clusters are: geographical proximity, sectoral specialization, predominance of SMEs, close interfirm collaboration, interfirm competition based on innovation rather than lowering wages, a socio-cultural identity, active supportive organizations, and active regional and municipal Government which strengthens the innovative capacity of local industry (Schmitz & Musyck, 2016). Marca Gto certification promotes most of these attributes, specially the creation of a socio-cultural identity by active regional Government.

One of the main aspects in the regional cluster literature is that the performance should be achieved by taking the "high road" to competitiveness (Sengenberger, & Pyke, 1992). This means seeking to compete by adopting new technologies, developing new or better products and reacting more speedily to market changes. In contrast, the "low road" means trying to compete based on low wages and poor labour standards. It is important to mention that institutions are essential in steering enterprises toward the high road (Schmitz & Musyck, 2016).

Small industries require a supportive infrastructure and producer services, which the market does not necessarily provides by itself. In principle, these could be provided by central institutions, but they tend to be less transparent to the local user and more remote from local needs. Thus, regional and local institutions offer two advantages over central institutions: less ideology and more accountability. It seems plausible to suggest that in regional and local institutions there is more a sense of accountability and reciprocity than in centralized institutions (Schmitz & Musyck, 2016). In the case presented in this paper, the regional institution is the Secretaria de Desarrollo Economico Sustentable, an office of Guanajuato State Government, in charge of the management of Marca Gto program.

According to Hashino and Otsuka (2016), Government can play a critically important role in facilitating the development of industrial districts by providing public goods and services. This is a useful lesson for Governments in developing countries, which have seldom taken any supportive policy measures to develop their industrial districts.

Another constraint to the development of the regional clusters could be the lack of tracking of Governmental programs results because their existence does not assure automatically the achievement of their goals. Despite the absence of such tracking results, Governmental programs are of high value because trade association's attempts to control the quality of products produced in the industrial district may or may not succeed due to the difficulty for the association to punish producers who manufacture fake or inferior quality products. Nonetheless, the Government can assist the trade association by setting quality standards and enforcing them (Tetsushi, Otsuka, & Hashino, 2018).

That is precisely the essence of Marca Gto program which establishes some quality standards to offer the company the option to use this certification as a trademark label in the global market; in this work it was analyzed the Agro-food cluster of Guanajuato state.

Certification's Role in International Markets

Certification is a corroboration granted by certain specialized organizations in a formal and written way for producers to justify that they comply with the standards or some other specification that they want to offer (Fonseca, Munoz & Cleves, 2011). A certification is of organizational nature as it includes the policies and established objectives, ensuring sustainability and compliance with quality standards in processes, systems, competencies and continuous improvement, influencing the achievement of an optimal level of competitiveness (Duque, Cardona, & Rendon, 2013).

Certifications include a set of tasks that qualify a product and that demand certain requirements. To achieve this, an organism is needed to determine the steps to follow to get the desired certification and thus have the guarantee in writing that the products comply with all the standards, providing the producers with benefits and in turn offering the consumer quality (Rangel, Arredondo & Espejel, 2017).

Certification is considered as a strategy to strengthen the reputation of companies, linked to compliance with strict protocols on production processes. According to some authors as Chirinos and Rosado (2016), and Mendez (2017), certification is identified as a differentiation strategy that companies implement to generate and maintain their competitive position.

Certifications in both, products and processes, improve or increase the possibility of entering an international market, reaching the benefit of producers with better prices. Companies are looking for efficient certifiers that guarantee quality for buyers and the standards required by the goal international markets (Contreras-Valenzuela et al., 2018). In this case, regional Government should have a better reputation as certifier than any other unrecognized private organization and that should be profited.

In general, there are two types of certifications: voluntary and mandatory.

In the voluntary certifications, the seller acts spontaneously to provide their customers with security, trust and frequently to demonstrate care for the environment. These certifications also may be required by the buyer, in this way it is guaranteed that to obtain the product, they acted in a responsible manner in the economic, social and environmental fields. Marca Gto is considered in this category since the regional Government offers as an option to apply for a better recognition of the products in the domestic and international markets.

On the contrary, mandatory certifications are those implemented as a requirement or provision in each of the countries to proceed with the purchase or sale of products. These show that the merchandise that enters or leaves a country comply with all the standards required by the markets (Mora-Cordova, Lituma-Loja, Gonzalez-Illescas, 2020).

Certifications are used in international trade to guarantee compliance with the regulations established by the market in general and by regulatory bodies (Ceballos, 2016). By getting these certifications, companies project their commitment to consumer safety and market standards in

different areas (Vasquez-Tejos, & Torres-Vallejos, 2018). Then, international certifications are one option that companies use in order to optimize their productivity, reach mostly attractive markets and establish trust in them (Ceballos, 2016).

Certifications play an important role for several exports regardless of the sector to which they belong to. Achieving certification is a challenge, but it provides great benefits to companies, such as increasing their sales, building customer loyalty, and conquering new markets. The proactive response of companies to face issues related to the demand for quality, safety and environmental protection, among others, is identified in the voluntary nature of exporters by adopting measures that go beyond what is required by the mandatory regulations (Mora-Cordova, Lituma-Loja, Gonzalez-Illescas, 2020).

The continuous transformations of the international markets' conditions represent a permanent challenge for companies, testing their ability to respond and adapt to new scenarios. Faced with the premise of complying with the demanding regulations and providing confidence to consumers, exporting companies have adopted certifications of different kinds, as a strategy to defend their sustainability in rapidly changing markets (Mora-Cordova, Lituma-Loja, Gonzalez-Illescas, 2020).

Increasingly, certification against a standard, or set of standards, is the minimum entry requirement to higher value markets for Agri-food, not only in industrialized countries, but also in markets of higher income developing countries (Henson, & Cranfield, 2013). For instance, through the analysis of five Ecuadorian products from the primary sector and the most representative companies in exports of these products, Mora-Cordova, Lituma-Loja, Gonzalez-Illescas (2020) found the enterprises used certifications to differentiate from the competition, and that the certifications most used by Ecuadorian exporters are those related to quality, food safety, organic production and social responsibility, as a way to ensure their processes and project value in highly competitive markets.

Also, fair trade certified products originate in the world developing and demand reveals the interest of consumers in countries developed by the conditions under which agricultural products have been produced and reach the retail market. Trade Certified Producers usually receive greater amounts of money for their products than the producers conventional (Wilkinson, & Rocha, 2013). However, not all SMEs have the financial or quality requirements to get these certifications; then, the existence of a regional certification as Marca Gto could be a valuable approach as a previous step before the application for a certification more challenging.

Llamas, Del Carmen and Moreno (2018) explain that compliance with strict health regulations and the need to provide confidence to consumers are identified as relevant factors for business sustainability, requiring an adjustment of actions that allow strengthening the relationship with the actors of international trade.

In this context, certifications play an important role in generating strategic value for companies, since they strengthen their reputation and commitment to society. The implementation of processes that lead to obtaining certifications, as a business strategy, favours opportunities to publicize the practices that are followed for the export of products, increasing the possibilities of entering new markets (Mora-Cordova, Lituma-Loja, Gonzalez-Illescas, 2020).

The strategy in the company is an important support for its development. It is a fundamental element for the projection of internationalization (Heiss, 2017). The implementation of strategies favours the adaptation of companies to the changes that take place in the markets. The implementation of strategies can contribute to improving the competitiveness of organizations (Huerta, Sandoval, & Preciado, 2016). In the context of globalized markets, competition between companies intensifies, in such a way that proactivity stands out as an indispensable ability to identify changes and adapt to them (Mora-Cordova, Lituma-Loja, Gonzalez-Illescas, 2020).

The relationship between strategy and competitiveness can be seen in long-term planned initiatives, those that the company adopts to anticipate competitors. Thus, competitiveness is related to the results of the companies, which can be made visible in a better position in the market, higher sales, in short, in a set of factors that make the products and services eligible, unlike the proposal offer from the competition (Mora-Córdova, Lituma-Loja, González-Illescas, 2020).

International Agri-food Sector

The Agri-food sector includes: a) subsistence products and local markets (basically tuber crops); b) staple foods for urban national markets (especially cereals); c) raw materials traditional exports (coffee, cocoa, tea, nuts or cotton); d) components diets with high protein content of animal origin (dairy products, oils and animal feed) and the different meat chains (red meat, pork, poultry corral), both for domestic and export markets; e) fresh produce or non-traditional (fruits, vegetables, flowers, marine products/aquaculture); f) exports differentiated traditional (fair trade, organic products, products with designation of origin), which now also target national markets (Wilkinson, & Rocha, 2013).

Like manufactured products, quality variations are large in agricultural products such as vegetables, fruits, and livestock products. Yet, it is difficult for retailers and consumers to identify immediately the quality as well as safety of these products (Otsuka, 2016).

With the increase in globalization of the Agri-food industry, regulatory frameworks of international trade play a fundamental role, especially in relation to food safety (Wilkinson & Rocha, 2013). Product markets commonly fail because of information asymmetry related to product quality. In the absence of significant scale economies in production, small-scale producers, must undertake activities that produce positive externalities. One way is the establishment of reputation as high-quality producers and as a high-quality production area, a reputation that benefits all producers in associated agricultural districts. Then, appropriate inputs must be used, proper production methods must be adopted, and strict quality inspections must be carried out, to establish a high reputation (Otsuka,2016).

Exports of Agri-food Sector

Competitiveness can be measured by the growth of production and the firms' capacity of increasing their participation in international markets through exports or foreign investments (Ibarra, Gonzalez, & Demuner, 2017).

In developed and some middle-income developing countries new high-value markets for food are increasingly important and other agricultural products that include specific quality attributes and certified, such as organic, fair trade and certified organic products appellation of origin. These markets have high growth rates demand, so they are considered opportunities potentially lucrative for exports of non-traditional products from the developing countries (Henson, 2006).

In addition to changes in domestic demand patterns in developing countries, changes in consumption patterns in industrialized countries present potentially lucrative opportunities for agro-industries in developing countries through higher value exports (Henson, & Cranfield, 2013).

In developing countries, the export of fresh fruits and vegetables to high-income countries has sharply increased in the last few decades (Hashino & Otsuka, 2016). At the same time, non-tariff measures, which include quality and food safety are posing new challenges, especially for developing countries as they lack the necessary infrastructure for quality management and food safety (World Bank, 2005; Henson, 2007). Either from the point of view of the national market or of exports, agribusiness plays a key role in the creation of income and employment opportunities in developing countries (Wilkinson, & Rocha, 2013).

The experiences of a number of developing countries that have successfully accessed higher value markets show how they have managed to add value to traditional Agri-food exports through agroprocessing, eg Côte d'Ivoire, fisheries and timber; Senegal, fishing; and Ghana, wood (Crammer, 1999). Other countries have diversified diagonally, shifting its traditional primary exports towards processing other products, as is the case of Equatorial Guinea (cocoa to sawn wood and sheet metal foil) and Kenya (tea and coffee to horticultural and fish products).

Wilkinson, & Rocha (2019) present data showing the increasing importance of processed agricultural products in agricultural trade, including South-South trade. The authors also analyze the recent expansion in differentiated food markets, including products fair trade, organic and with a designation of origin. They recognize that focus on these and other non-traditional exports

as a strategy to driving agro-industrial development may be attractive, but there could probably be difficulties due to market access restrictions, progressivity tariffs and costs of compliance with increasingly demanding standards by private organizations and large-scale buyers.

Wilkinson, & Rocha (2013) conclude that policies for agro-industrial development should occupy a privileged place in Government strategies.

Agroindustrialization presents valuable opportunities and benefits for developing countries, in terms of global processes of industrialization and economic development, export performance, food safety and quality (Wilkinson, & Rocha, 2019). At the same time, however, there are potentially adverse effects for those involved in agro-processing companies in the informal sector, since agroindustrialization processes must be paired with the global economic restructuring processes (Henson, & Cranfield, 2013).

Latin-America Agri-food Exports

International trade will remain essential for food security in a growing number of food importing countries. It is also still important for income and livelihoods in exporting regions such as Latin America and The Caribbean, a region that is expected to continue increasing its share of agricultural exports worldwide (Organization for Economic Cooperation and Development, & Food and Agriculture Organization, 2019).

Countries Latin Americans are major exporters of soybeans, pork, corn, poultry corral, forage, sugar, coffee, and fruits and vegetables. Brazil is the largest exporter of products agriculture and food (USD 79.3 billion [Mm] in 2017) from the region, followed by Argentina (USD 35.0 Mm), Mexico (USD 32.5 Mm) (Organization for Economic Cooperation and Development, & Food and Agriculture Organization, 2019).

The growth prospects in high-value fruit and vegetable crops offer opportunities to small producers, but it will be necessary to differentiate policies according to resource endowments and market potential (Organization for Economic Cooperation and Development, & Food and Agriculture Organization, 2019).

Mexican Agri-food Industry & Guanajuato Cluster

The Mexican trade balance of agricultural products and agro-industrials has shown a surplus since 2015. This positive result of the trade balance has several causes: from 1997 exports grew at an average rate annual higher than imports (7.7% versus 6.5%); the depreciation of the Mexican peso against the US dollar in recent years; the changes in the crop pattern that manifested itself in the growth of the area planted with avocado, berries, agaves, etc.; the increased surface harvested now around 22 million hectares; the increased performance of some crops, especially vegetables, and the increase in rented area and agriculture contract (Food and Agriculture Organization, 2019).

The food industry is related to the behavior of the Mexican economy and with the North American economy. The distribution of this link shows its expansion throughout the country, although production is concentrated in the northern and central states of the country (such as Guanajuato); this has led to the high concentration of the processed food market (Hernandez-Cortes, & Perez-Sanchez, 2020).

Although for classification reasons they are grouped into a single industry, the Mexican Agri-food sector is made up by large companies which tend to behave more like oligopolies, and a large number of SMEs which serve local or regional markets (Hernandez-Cortes, & Perez-Sanchez, 2020).

In relation to employed personnel and number of enterprises, Guanajuato positioned as one of the important states of the Mexican food industry, since during the period 1999-2014, the growth in the number of firms was more intense than the north-central or north (Hernandez-Cortes, & Perez-Sanchez, 2020).

Considering the National number of employees, in Guanajuato the importance of Agro-food firms has increased from a relative weight of 5.00 in 1999 to 5.87 in 2014 (Hernandez-Cortes, & Perez-Sanchez, 2020).

Although the food industry as a whole is maintained with a greater presence of Mexican imports over exports, as of 2015 the growth in the amount of exports grew and, as of 2016 and 2017, the balances of the trade balance of the industry were positive, a situation that may be reflecting greater coverage of food exports to the United States and Central America (Hernandez-Cortes, & Perez-Sanchez, 2020)

Then, Agri-food Sector of Guanajuato state represents a good example for analysing the importance of firm's internationalisation for growth and regional economic development.

III. Objective

The objective of the following analysis was to find an association between the participation of SMEs of Guanajuato's Agri-food cluster in the governmental program Marca Gto and the beginning of export activity.

IV. Methodology

To collect the data used in this research, a survey of 21 questions was applied to a sample of 79 MSMEs part of the Agri-food Cluster that currently have the Marca Gto certification. The survey was sent by e-mail during October 2020; and IBM SPSS program was used to analyze the collected data.

The Cronbach's alpha was calculated to validate the reliability of the research instrument. Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered a measure of scale reliability. A "high" value for alpha does not imply that the measure is unidimensional. Technically speaking, Cronbach's alpha is not a statistical test – it is a coefficient of reliability (or consistency).

Cronbach's alpha can be written as a function of the number of test items and the average inter-correlation among the items. Below, for conceptual purposes, the formula for the

Cronbach's alpha is shown:

$$\propto = \frac{N\,\bar{c}}{\bar{v} + (N-1)\,\bar{c}}$$

(1)

Here N is equal to the number of items, $\bar{c}$ is the average inter-item covariance among the items and v equals the average variance.

It can be seen from this formula that if the number of items increases, Cronbach's alpha increases too. Additionally, if the average inter-item correlation is low, alpha will be low. As the average inter-item correlation increases, Cronbach's alpha increases as well (holding the number of items constant) (University of California Los Angeles, 2020)

After that, the McNemar test was applied to the proposed hypothesis. The McNemar test is used to determine if there are differences on a dichotomous dependent variable between two related groups. It can be considered similar to the paired-samples t-test, but for a dichotomous rather than a continuous dependent variable. However, unlike the paired-samples t-test, it can be conceptualized to be testing two different properties of a repeated measure dichotomous variable.

The McNemar test is used to analyze pretest-posttest study designs, as well as being commonly employed in analyzing matched pairs and case-control studies. This test has three assumptions:

There is one categorical dependent variable with two categories (i.e.,a dichotomous variable) and one categorical independent variable with two related groups. Examples of dichotomous variables in this case is export activity (two groups: "yes" and "no"). Having an independent variable with two related groups indicates that there is a pretest-posttest study design.

The two groups of the dependent variable must be mutually exclusive. This means that no groups can overlap. In other words, a participant can only be in one of the two groups; they cannot be in both groups at the same time. Similarly, after the revision period.

The cases (enterprises) are a random sample from the population of interest (Aerd, Statistics, 2020).

Three assumptions are valid for the subject of this research.

The McNemar test formula is:

$$x^2 = \frac{(b-c)^2}{b+c}$$ (2)

Under the null hypothesis, with a sufficiently large number of discordants (cells b and c), x^2 has a chi-squared distribution with 1 degree of freedom. If the x^2 result is significant, this provides sufficient evidence to reject the null hypothesis, in favor of the alternative hypothesis that pb ≠ pc, which would mean that the marginal proportions are significantly different from each other (McNemar, 1947).

V. Results

1. Cronbach's Alpha

Table 1. Case Processing Summary
Case Processing Summary

		N	%
Cases	Valid	79	100,0
	Excluded[a]	0	,0
	Total	79	100,0

   a. List elimination is based on all variables in the procedure.
Source: Authors' creation

Table 2. Reliability Statistics
Reliability statistics

Cronbach's alpha	Cronbach's alpha based on standardized elements	N of elements
,955	,954	19

Source: Authors' creation
Given the Cronbach's α = 0.955 the instrument is excellent reliable (internal consistency).

Table 3. Statistics of Element
Statistics of element

	Mean	Standars desv.	N
Quality of the product	3,85	1,406	79
Productive processes	3,68	1,392	79
Administrative processes	3,77	1,330	79
Expansion plans	3,82	1,337	79
National competitive position	3,56	1,375	79
International competitive position	3,03	1,339	79
National price competitiveness	3,38	1,314	79
National price competitiveness	3,10	1,267	79
National distribution	3,28	1,377	79
International distribution	2,97	1,281	79
National recognition	3,32	1,428	79
International recognition	3,06	1,274	79
Incursion into global value chains	3,48	1,164	79
Increase of exports	2,53	1,060	79
Easiness of exportation to traditional markets	2,58	1,128	79
Easiness of exportation to new markets	2,62	1,124	79
Identification of new exports markets	2,71	1,100	79
Export plan in future 1-2 years	2,76	1,232	79
Consideration of internationalization of the enterprise	2,84	1,305	79

Source: Authors' creation

2. Mc-Nemar Test

H0: There are no differences in exports before and after the implementation of Marca Gto
H1: There are differences in exports before and after the implementation of Marca Gto
Level of significance 5% = 0.05

Table 4. Cross Table Exports Before*Exports After
Cross Table Exports Before*Exports After

			Exports After		
			Yes	No	Total
Exports Before	Yes	Count	6	5	11
		% of total	7,6%	6,3%	13,9%
	No	Count	2	66	68
		% of total	2,5%	83,5%	86,1%
Total		Count	32	8	79
		% of total	10,1%	89,9%	100%

Source: Authors' creation

Table 5. Chi-square test
Chi-square tests

Value	Exact significance (bilateral)
	,453[a]
79	

a. Binomial distribution used.
$\chi^2 = 0.453$
0.453 > 0.05 H1 is rejected and thus H0 accepted: There are no differences in exports before and after the implementation of the Marca Gto

VI. Discussion and Conclusions

After reviewing the theoretical considerations presented in this paper, related to the characteristics of any cluster (industrial district), and the focus on the importance of Agri-food certifications as a differentiation strategy when entering into foreign markets; it is possible to make some conclusions of Marca Gto certification, which was analyzed in the present study.

The objective of this research was to find any association between the SME's participation in the program, said getting the certification, and the beginning of the export activity; in order to register it as part of the scarcely documented results of this governmental program.

Afterward the application of the McNemar test to the data collected from the surveyed SMEs of Agri-food cluster, it was not possible to find any association between the participation in the program and the start of exports.

Though, it was possible to conclude from the survey that Marca Gto certification does promote the creation of competitiveness by the high-road in terms of the Sengenberger, & Pyke (1992) appreciation; focusing on the development of better products.

Thus, Marca Gto certification might be part of a differentiation strategy that companies could implement to generate and maintain their competitive position (Chirinos, & Rosado, 2016; Mendez, 2017), but only when it is effectively recognized by the consumers. According to the opinion of surveyed entrepreneurs this program should be more enhanced by the regional Government like it was in the former years, with the aim to increase the good reputation in front of foreign clients.

Also, it was established that international certifications are one option that companies use in order to optimize their productivity, reach mostly attractive markets and build trust (Ceballos, 2016). However, requirements and particularly the cost of getting international certifications could be out of the reach of some SMEs. Then, having at least a regional certification as Marca Gto (which is almost free of charge for the company), could enhance the good reputation of the product and eventually facilitate the internationalization of the firm.

Increasingly, certification against a standard is the minimum entry requirement to higher value markets for Agri-food in industrialized countries (Henson, & Cranfield, 2013). Organic, fair-trade and other similar certifications have becoming increasing popular in Agri-food market; but since few of the surveyed SMEs have the financial or quality requirements to get a well-recognized fair-trade certification; the existence of a regional certification as Marca Gto might be a valuable approach as a previous step before the application for a more challenging certification. For those companies, to get a regional certification should be considered an initiative as necessary as the increment of the competitiveness of the firm. The role of the regional Government is key in the process of getting the certification recognized, by both the entrepreneurs and the foreign consumers. As it was already mentioned, a constraint to the development of the regional clusters could be the lack of tracking of Governmental programs results because their existence does not assure automatically the achievement of their goals, this research attempted to contribute to fill the gap in this area.

Finally, it is possible to state that Marca Gto effectively generates strategic value for companies, by strengthening the firm's reputation. That, eventually favours opportunities to publicize the practices that are followed by the producers, increasing the possibilities of entering new markets (Mora-Cordova, Lituma-Loja, Gonzalez-Illescas, 2020).

References

Aerd Statistics (2021). *McNemar's test using SPSS Statistics*. Aerd Statistics https://statistics.laerd.com/spss-tutorials/mcnemars-test-using-spss-statistics.php

Becattini, G. (1989). Sectors and/or districts: some remarks on the conceptual foundations of industrial economics. In E. Goodman & J. Bamford (Eds.), *Small firms and industrial districts in Italy*. Routledge.

Ceballos, S. L. (2016). Conocimiento y aplicación de las certificaciones internacionales por las empresas del Altiplano del Oriente Antioqueño. *Science of human*, 1(2), 300-322.

Chirinos, C., & Rosado, J. (2016). Estrategia de diferenciación: el caso de las empresas industriales. *Ingeniería Industrial*, 34, 165-174.

Chugan, P. K. & Singh, S. (2014). Taxonomy for firm-level determinants of export performance. *Universal Journal of Industrial and Business Management*, 2(1), 6-12. doi:10.13189/ujibm.2014.020102

Contreras-Valenzuela, A. C., Preciado-Rodriguez, J. M., Baez-Sañudo, R., Robles-Parra, J. M., Taddel-Bringas, C., & Valderrain-Benitez, R. A. (2018). Certificaciones agrícolas como conducta estratégica del sistema vid de mesa sonorense. *Revista Iberoamericana de Tecnología Postcosecha*, 19(1), 4-20.

Diez-Vial, I. & Fernandez-Olmos, M. (2014). Moderating influence of internal resources on cluster externalities. *EuroMed Journal of Business*, 9(1), 75-92. doi:10.1108/EMJB-04-2013-0014

Duque, Y., Cardona, M., & Rendon, J. (2013). Responsabilidad Social Empresarial: Teorías, índices, estándares y certificaciones. *Cuadernos de Administración*, 29(50), 196-206.

Fernhaber, S. A., Gilbert, B. A. & McDougall, P. P. (2008). International entrepreneurship and geographic location: an empirical examination of new venture internationalization. *Journal of International Business Studies*, 39(2), 267-290. doi: 10.1057/palgrave.jibs.8400342

Food and Agriculture organization (FAO) (2019). *El sistema alimentario en México Oportunidades para el campo mexicano en la Agenda 2030 de Desarrollo Sostenible*.

Fonseca, J. A., Muñoz, N. A., & Cleves, J. A. (2011). El sistema de gestión de calidad: elemento para la competitividad y la sostenibilidad de la producción agropecuaria colombiana. *Revista de investigación agraria y ambiental*, 2(1), 9-22.

Hashino, T. & Otsuka, K. (2016). Beyond Marshallian Agglomeration Economies in T. Hashino & K. Otsuka (Eds.), *Industrial Districts in History and the Developing World* (3-13). Springer.

Heiss, G. (2017). Influencing factors and the effect of organizational capabilities on internationalization strategies for German SMEs in the MedTech Industry. *Management Studies*, 5(4), 263-277. doi:10.17265/2328-2185/2017.04.001

Henson, S. (2006). *New markets and their supporting institutions: opportunities and constraints for demand growth*. RIMISP.

Henson, S. (2007). The role of public and private standards in regulating international food markets. *Journal of International Agricultural Trade and Development*, 4(1), 52-66.

Henson, S. & Cranfield, J. (2013). Planteamiento de un caso político para las agroindustrias y agronegocios en los países en desarrollo. In C. A. Da Silva, D. Bayker, A. W. Shepherd, C. Jenane, S. Miranda da Cruz, *Agroindustrias para el Desarrollo*. Food and Agriculture Organization (11-50).

Hernandez-Cortes, C., & Perez-Sanchez, A. (2020). La industria alimentaria en México: comportamiento y distribución geográfica durante 1999-2014. *Estudios Sociales,* 30(56), 2-33. doi: https://dx.doi.org/10.836/es.v30i56.1037

Huerta, M., Sandoval, S. A., & Preciado, J. M. (2016). Sistemas de calidad y desempeño empresarial: estudio de caso de empresas cárnicas en una región del noroeste de México. *Ingeniería Industrial*, 34, 97-117.

Ibarra, M. A., Gonzalez, L. A., & Demuner, M. (2017). Competitividad empresarial de las pequeñas y medianas empresas manufactureras de Baja California. *Estudios fronterizos*, 18(35), 107-130. doi:http://dx.doi.org/10.21670/ref.2017.35.a06

Llamas, B., Del Carmen, R., & Moreno, L. (2018). Impacto de la confianza en la percepción del consumidor. *Revista de Investigación Académica sin Frontera: División de Ciencias Económicas y Sociales*, 6(17).

McNemar, Q. (1947). Note on the sampling error of the difference between correlated proportions or percentages. *Psychometrika*, 12(2), 153–157.

Marshall, A. (1920). *Principles of Economics* (8th Ed). Macmillan.

Mendez, J. (2017). Fusiones horizontales de empresas y estrategias de diferenciación de producto. *Estudios de Economía*, 44(2), 173-184. doi:http://dx.doi.org/10.4067/S0718-52862017000200173

Moghaddam, F. M., Hamid, A. B. B. A., & Aliakbar, E. (2012). Management influence on the export performance of firms: a review of the empirical literature 1989-2009. *African Journal of Business Management*, 6(15), 5150-5158. doi: 10.5897/AJBM11.1408

Mora-Cordova, D. E., Lituma-Loja, A. A., & Gonzalez-Illescas, M. L. (2020). Las certificaciones como estrategia para la competitividad de las empresas exportadoras. *INNOVA Research Journal*, 5 (2), 113-132. doi:doi.org/10.33890/innova.v5.n2.2020.1274

Nazar, M. S., & Saleem, H. M. N. (2009). Firm-level determinants of export performance. *International Business & Economics Research Journal*, 8(2), 105-112. doi:10.19030/iber.v8i2.3107

Organization for Economic Cooperation and Development, & Food and Agriculture Organization (2019). OCDE-FAO Perspectivas Agrícolas 2019-2028, OECD Publishing, Paris/Organización de las Naciones Unidas para la Alimentación y la Agricultura (FAO), Roma. doi: https://doi.org/10.1787/7b2e8ba3-es

Otsuka, K. (2016). Development of High-Value Agricultural Districts: The Role of Producer Cooperatives in Japan and Developing Countries. In T. Hatsino & K. Otsuka (Eds.). *Industrial Districts in History and the Developing World*. Springer. (101-116).

Rangel, J., Arredondo, M. C., & Espejel, I. (2017). ¿Estamos investigando la efectividad de las certificaciones ambientales para lograr la sustentabilidad acuicola? *Sociedad y ambiente*, 15, 7-37.

Schmitz, H. & Musyck, B. (2016). Industrial Districts in Europe: Policy Lessons for Developing Countries? In T. Hashino & K. Otsuka (Eds.), *Industrial Districts in History and the Developing World* (117-152). Springer.

Sengenberger, W. & Pyke, F. (1992). Industrial districts and local economic regeneration: Research and policy issues. In F. Pyke & W. Sengenberger (Eds.), *Industrial districts and local Economic Regeneration*. International Institute for Labour Studies.

Srivastava, M., Moser, R. & Meijer, T. de (2015). Internationalization and performance in European market: an Asian perspective. *International Business Research*, 8(4), 122-138. doi:10.5539/ibr.v8n4p122

Otsuka, K. (2016). Development of High-Value Agricultural Districts: The Role of Producer Cooperatives in Japan and Developing Countries. In T. Hatsino & K. Otsuka (Eds.) *Industrial Districts in History and the Developing World* (101-116). Springer.

Tetsushi, T., Otsuka, K. & Hashino, T. (2018). Toward a New Paradigm of the Long-Term Development of Industrial Districts. In T. Hashino & K. Otsuka (Eds.), *Industrial Districts in History and the Developing World* (13-24). Springer.

University of California Los Angeles (October 25th, 2020). What does Cronbach's alpha mean? *Institute for Digital research & Education, Statistical Consulting Research* https://stats.idre.ucla.edu/spss/faq/what-does-cronbachs-alpha-mean/

Vasquez-Tejos, J., & Torres-Vallejos, J. (2018). Caracterización de los auditores de sistemas de gestión pertenecientes a empresas certificadoras en Chile. *Signos*, 10(2), 55-69. doi:10.15332/s2145-1389.2018.0002.03

Wilkinson, J., & Rocha, R. (2013). Tendencias de las agroindustrias, patrones e impactos en el desarrollo. In C. A. Da Silva, D. Bayker, A. W. Shepherd, C. Jenane, S. Miranda da Cruz, *Agroindustrias para el Desarrollo.* Food and Agriculture Organization (51-102).

World Bank (2005). *Food safety and agricultural health standards: challenges and opportunities for developing country exports*.

Rotación de personal en las agencias aduanales de Nuevo Laredo, Tamaulipas

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Resumen

En las empresas de hoy en día, constantemente se tiene que lidiar con el fenómeno de la rotación de personal y las consecuencias que esto trae en términos de productividad y desempeño. Las personas están en una búsqueda constante de mejorar su situación profesional y personal y debido a ello toman decisiones respecto a su situación laboral tomando en consideración diversas condiciones.

Este fenómeno representa grandes problemas para las organizaciones, ya que resta trabajadores a la empresa, pudiendo generar impactos negativos sobre la productividad o la calidad servicio prestado, además se asocian a este fenómeno grandes costos por conceptos como desvinculación del empleado que se va, por contratación y capacitación de los nuevos empleados, aunque estos últimos se pueden evitar si es que el puesto es tomado por algún empleado de la misma organización.

Este trabajo busca descubrir los factores que llevan a las personas que laboran en las Agencias Aduanales de Nuevo Laredo, Tamaulipas a renunciar a su trabajo.

Para llevar a cabo este estudio, realizamos una encuesta a 184 personas que actualmente laboran o han laborado en una Agencia Aduanal, en la ciudad de Nuevo Laredo Tamaulipas, México.

Palabras clave: Rotación; personal; agencias aduanales

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Mejora de la autenticación mediante el uso de dialectos indígenas mexicanos para contraseñas más robustas

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Resumen

Los sistemas de información, aplicaciones, y dispositivos requieren de un mecanismo de autenticación para los usuarios.

Éste permite verificar que el usuario es quien dice ser ante esa aplicación y así pueda trabajar con ella. Existen diversos mecanismos de autenticación desarrollados e implementados como el uso de dibujo de patrones, el uso de datos biométricos como la huella dactilar, la lectura del iris del ojo, el uso de captcha y mecanismo en dos vías. La propuesta no reemplaza los mecanismos de autenticación antes expuestos, sino que los complementa, al incorporar un método de autenticación que utiliza la combinación de conjunto de caracteres que forman una palabra en el idioma español con algunos caracteres en dialectos indígenas mexicanos. La propuesta empírica, intenta mejorar la autenticación en sistemas y dispositivos que requieren un conjunto de caracteres en el campo de contraseña. Como se demuestra en la literatura científica computacional, muchos de los usuarios de estos sistemas utilizan palabras como nombres de personas, mascotas, cosas, fechas, entre otras; esas palabras pueden ser encontradas en diccionarios de palabras usados por los hackers; que haciendo uso de técnicas de cracking pueden tener acceso a los dispositivos, aplicaciones y sistemas de información que solamente tienen una manera de autenticar a través de contraseñas de palabras. Teniendo presente esto, presentamos una mejora al utilizar un intercalado de palabras o caracteres del alfabeto de un dialecto indígena mexicano, mejorando de manera empírica la robustez de la contraseña, al aplicar este método propuesto, debido a que esa palabra no se puede encontrar en un diccionario de palabras del idioma inglés, ni español. Se tiene la hipótesis de sospecha de mejorar en un gran porcentaje la autenticación y facilitar la memorización a los usuarios del método propuesto.

Palabras clave: Contraseñas; autenticación; dialectos-mexicanos

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Improved Authentication by Using Indigenous Mexican Dialects for Stronger Passwords

Abstract

Information systems, applications, and devices require an authentication mechanism for users. This allows to verify that the user is who he claims to be in view of that application and thus to be able to work with it. There are various authentication mechanisms developed and implemented such as the use of the drawing of patterns, the use of biometric data such as fingerprints, the reading of the iris of the eye, the use of captcha and a two-way mechanism. The proposal does not replace the authentication mechanisms, but rather complements them, by incorporating an authentication method that uses the combination of a set of characters that form a word in the Spanish language with some characters in indigenous Mexican dialects. The empirical proposal tries to improve authentication in systems and devices that require a set of characters in the password field. As demonstrated in the computational scientific literature, many of the users of these systems use words such as names of people, pets, things, dates, among others; those words can be found in word dictionaries used by hackers; that by making use of cracking techniques, they can have access to devices, applications and information systems that only have one way of authenticating through word passwords. Bearing this in mind, we present an improvement when using an interleaving of words or characters from the alphabet of a Mexican indigenous dialect, empirically improving the robustness of the password, when applying this proposed method, because that word cannot be found in a Dictionary of words of the English or Spanish language. The hypothesis of suspicion is to improve authentication by a large percentage and facilitate memorization for users of the proposed method.

Keywords: Passwords; authentication; Mexican-dialects

Análisis de inversión y retorno al implementar un manual de procedimientos basado en uso de la metodología Seis Sigma para el área de embarques de empresa maquiladora

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Resumen

La maquiladora de estudio es una empresa de origen estadounidense conocida por ser una de las más grandes compañías ubicada en Tamaulipas, se han dedicado al remanufacturado de autopartes con más de 10, 000 empleados en sus 3 plantas industriales con diversos enfoques comenzando por la división eléctrica enfocada a alternadores y marchas, un centro de distribución para un producto terminado y la que está ubicada dentro del parque industrial norte de Reynosa. La reconocida compañía cuenta con distintos procesos de producción y actualmente están certificados en la norma ISO 9001:2015 ya que a lo largo de los años han buscado el mejoramiento continuo en el área de calidad, por lo que ha implicado múltiples cambios organizacionales. Los distintos estudios dentro de las actividades en el área de trabajo brindaron la oportunidad de realizar un manual de procedimientos dentro del área de embarques ya que cuentan con distintos problemas en dicha área. Los procedimientos involucrados en la problemática son el flejado, empaquetado y la realización del número de orden, no obstante, se espera que el manual de procedimientos del área de embarques otorgue al personal una herramienta que permita realizar el trabajo de manera correcta. Este trabajo tiene un alto impacto de manera directa e indirecta con los clientes de la compañía y con la organización, a la vez se busca erradicar la resistencia al cambio por parte de los trabajadores con un curso de capacitación sobre la sensibilización al cambio. Se considera que el manual de procedimientos junto con el curso de capacitación son las mejores alternativas para el mejoramiento y control del proceso de embarques dentro de la empresa.

Palabras clave: Embarques; manual; procedimientos; procesos; personal.

I.   Introducción

Actualmente, toda empresa tiene pensamientos de expansión, de posicionamiento en el mercado, de ser el mejor, de suministrar productos y/o servicios con lineamientos específicos como calidad, cantidad y fecha. (Castañón, 2012) Esta maquiladora no es la excepción, es una empresa de origen estadounidense conocida por ser una de las compañías más grandes ubicada en Reynosa, Tamaulipas, dedicada al remanufacturado de autopartes con más de 10,000 empleados en sus 3 plantas industriales con diversos enfoques comenzando por la división eléctrica enfocada a alternadores y marchas, un centro de distribución para producto terminado y la ubicada en el parque industrial norte de Reynosa dividida en dos plantas diferentes, en la primer planta se encuentran productos en direcciones, mientras que la segunda está enfocada a "Calipers" (productos para frenos). Esta empresa maquiladora tiene como principales clientes a empresas ubicadas en Canadá y Estados Unidos de América.   La empresa maneja aproximadamente 10,000 tipos diferentes de Calipers y tiene diferentes clientes los cuales tienen diferentes especificaciones para los empaques y además se tienen órdenes o embarques de aproximadamente 200,000 piezas a la semana.

El incremento de la demanda de sus productos a lo largo de en estos últimos años, es el motivo por el que la compañía en enero del 2020 opto por la decisión de separar el proceso de embarques y moverlo al centro de distribución para producto terminado, el cual está ubicado en una nave y planta industrial diferente a la de origen. El proceso de embarques consiste en: el escaneo de órdenes que han sido solicitadas por los clientes, empaquetado realizado en bandas transportadoras, el proceso de armado de tarimas y flejado. La separación del proceso ha traído consigo como consecuencia un desajuste en los controles de calidad e inspección, de modo que actualmente la compañía recibe continuamente quejas y multas por parte de los clientes.

Ante un análisis de la información obtenida gracias a la interacción con la gerente del área de calidad nace la propuesta de la elaboración de un manual de procedimientos, ya que se identifica que los procesos se realizan sin una descripción formal de las actividades a realizar. En la actualidad las organizaciones a nivel mundial se mueven mediante procesos y nace la necesidad de controlar cada proceso para que este se desarrolle de una manera eficiente por lo que es importante el control interno aplicado a manuales de procedimientos, los que al mismo tiempo son guías operativas para el proceso que se asigna a una persona o actividad dentro de una organización. (Vivianco, 2017)

Como labor extra se planea realizar un pequeño curso para la sensibilización al cambio, donde se plantee la importancia de la mejora continua y como ayuda a la empresa las nuevas implementaciones.

Planteamiento del problema

A principios del año 2020, se realizó el cambio del proceso de embarques al centro de distribución ubicado en otra nave y planta industrial. Con este cambio en las etapas del empaquetado y flejado, el empacado incluye la caja, la etiqueta y la orden, la etiqueta contiene un código de barras la cual al estar completando la orden permite contar las piezas en el sistema para cumplir con la cantidad requerida por el cliente. En algunas ocasiones las etiquetas no se agregan a todas las piezas, se agregan etiquetas incorrectas, también de vez en cuando el operador se distrae mientras realiza el conteo, provocando que no se completen las ordenes requeridas o la adición excedida de piezas. El flejado es otro problema recurrente en el área de embarques ya que el personal no lo ha estado realizando de la manera correcta, provocando que dentro del transporte se caiga.

Los errores recurrentes que se presentan en los procesos dentro del área de embarques dan como consecuencia que del total de tarimas que se envían semanalmente un 5% corresponda a tarimas defectuosas, el 60% de estas corresponden a material dañado presuntamente por fleje incorrecto, el 40% por los problemas anteriormente mencionados del proceso de empaques, destacando en la cantidad de piezas y esto a su vez genera una gran repercusión económica para la empresa ya que mensualmente ha generado multas de 25,000 dólares mensuales.

Al mismo tiempo, los empleados han presentado en múltiples ocasiones la resistencia al cambio al negarse en aceptar de la mejor manera los nuevos procesos que imparten desde los altos mandos de la organización.

Justificación

La elaboración de un manual de procedimientos es de suma importancia ya que beneficiara a la maquiladora específicamente dentro del área de embarques buscando mejorar la eficiencia y reduciendo los errores del área mediante el uso de la metodología Seis Sigma.

Objetivo General

Análisis de inversión y retorno al elaborar un manual de procedimientos enfocado en el proceso de embarques de una empresa maquiladora ubicada en el parque industrial de Reynosa, Tamaulipas para aumentar la eficiencia de los procesos y la reducción de errores.

Objetivos Específicos

- Analizar la situación actual del proceso de embarques que se realiza en la empresa mediante entrevistas, desde el escaneo de ordenes hasta el flejado para la mayor comprensión del proceso.
- Identificar los problemas principales dentro del proceso de embarques con el uso de la herramienta diagrama de Ishikawa, para poder sustentar la propuesta de solución.
- Redactar los procedimientos para que pueda servir como medio de integración al personal de nuevo ingreso, facilitando su incorporación e inducción a las distintas áreas.
- Elaborar una propuesta de un manual de procedimientos que permita al personal contar con un material que indique la manera específica de realizar las actividades que involucra el proceso de embarques.
- Realizar el contenido maqueta de capacitación para el manual de procedimientos para que se tenga un recurso como borrador en caso de ser implementado.
- Realizar el contenido para la impartición del curso de sensibilización al cambio para ampliar el panorama de los trabajadores.

Análisis FODA de la propuesta

Tabla 1 Análisis FODA del proyecto

Amenazas	Fortalezas
✓ Cambios en la administración de la empresa. ✓ Limitante para acceder a la empresa a causa de COVID-19.	✓ Comunicación con el personal. ✓ Acceso a información sobre embarques.
Debilidades	**Oportunidades**
✓ Tiempo limitado para realización de proyecto. ✓ Empresa ubicada en una ciudad diferente. ✓ Resistencia al cambio.	✓ Desarrollar procedimientos específicos. ✓ Crear programas de capacitación.

Metodología Experimental

Fig. 1 Metodología Seis Sigma


```
Reconocer       →     Definir        →      Medir
el problema

Analizar        →     Mejorar        →      Controlar
```
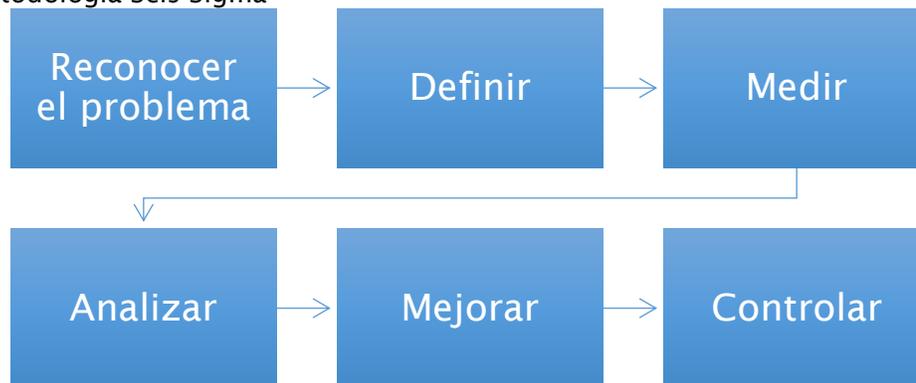
Fase 1: Reconocer el problema

Dentro de esta fase se realiza una investigación de campo para observar los detalles de la empresa, la fase de reconocer el problema involucra el escuchar y observar.

La herramienta para aplicar dentro de esta fase es un cuestionario de entrevista donde se conozca la empresa, alguna problemática, factores que ocasionaron la problemática, el área donde sucede la problemática, además de las normas o certificaciones con las que cuenta la empresa.

Fase 2: Definir

Dentro de esta primera fase se define el propósito y el alcance del proyecto, además se reúne la información del proceso, como los requerimientos y necesidades de los clientes.

CTQ's del proyecto

Dentro de este entregable se identifican los requerimientos de calidad del cliente (CTQ's), para conocerlos un poco más se desarrolla un segundo cuestionario enfocado a conocer más de fondo el proceso, así como sus variables, además se identifica si es crítico para la calidad o crítico para el proceso.

Charter del proyecto

El charter del proyecto se identifica por un documento del equipo que describe el propósito y las metas del proyecto, dentro de este proyecto se puede relacionar con el documento de solicitud de proyecto.

Mapa de proceso

El mapeo de proceso es una herramienta que despliega de manera gráfica desde un alto nivel los eventos principales que ocurren dentro del proceso.
En esta etapa se realizará un análisis de las entradas y salidas del proceso y será representado mediante un mapa de proceso SIPOC o PEPSU.

Fase 3: Medir

En esta etapa se identifica que influye dentro de los CTQ's del proceso, se definen los defectos, parámetros y variables, se reúne la información necesaria para comprender el desempeño del producto o proceso.

Y del proyecto

Dentro de este entregable se identifican las variables del proceso, que tienen relación con las CTQ's identficadas en el entregable 1.

Estándares de desempeño (Para la Y del Proyecto)

Son los valores aceptables para las variables "Y" del proceso.

Plan de colección de datos

Dentro de esta etapa se planifica la manera de recopilar datos, información y costos que se encuentran dentro del proceso, en esta etapa es correcta para la elaboración de un tercer cuestionario.

Datos para Y

Dentro de esta etapa se agrega al documento todos los datos recopilados.

Capacidad del proceso

Se elabora una evaluación del desempeño del proceso en base a los datos obtenidos en el entregable

Meta de mejora

Este entregable se relaciona directamente con los objetivos del proyecto.

Fase 4: Analizar

Lista con prioridad de todas las X´s

En base a la información recopilada se identifican todas las causas posibles de variación en el proceso que afectan a la salida.
Dentro de este entregable se agrega un listado de todas las causas posibles que ocurren dentro de los problemas.

Lista de las pocas X's vitales

En este entregable se identifican las causas que más peso tienen dentro de las problemáticas. En este paso se utiliza la herramienta del diagrama de Ishikawa.

Oportunidad financiera

Se realiza un análisis costo-beneficio esperado como resultado de la ejecución del proyecto.

Fase 5: Mejorar

Solución propuesta

Es la propuesta de solución que funciona para reducir las inconformidades dentro del proceso. Dentro de este entregable se agrega el producto final que viene siendo el Manual de procedimientos para el área de embarques.

Solución Piloto

Este entregable se omitirá debido a que consiste en probar a menor escala la implementación de la propuesta.

II. Resultados Y Discusión

Fase 1: Reconocer el problema

Como se mencionó en la sección anterior en este apartado se realiza una investigación de la empresa y el proceso. Lo primero que se realizó fue contactar a la persona encargada del área de calidad, para conocer la disponibilidad de tiempo al realizar entrevistas, hablar sobre la empresa y el área.

El proceso por analizar es el de embarques que consiste en la preparación del producto para la distribución con los clientes y mediante la información investigada sobre el proceso de embarques se comienza a realizar el procedimiento.

Primer cuestionario de entrevista

Dentro de esta entrega se aplica el primer cuestionario de entrevista, donde se conoce la empresa, el producto, el área y la problemática actual de la empresa.

Puntos importantes recopilados de la entrevista:
- El producto de la empresa son calipers remanufacturados
- La empresa cuenta con 3,000 empleados.
- El promedio de venta semanal es de 200,000 piezas
- Se vende el producto a Estados Unidos y Canadá
- Los principales clientes distintas empresas y agencias automovilísticas.
- Manejan más de 10,000 tipos de Calipers
- Se realizan análisis de calidad al producto terminado
- Se encuentran certificados en ISO 9001
- Utilizan un métrico llamada APV que indica cuanto se produce y cuanto se rechaza.
- Se implementan normas ISO 9000 y la norma IATF 16949
- La problemática actual de la empresa surge en el área de embarques.
- Actualmente el proceso de embarques fue separado de la planta y se mandó a un centro de distribución en otro edificio, sin embargo, los controles que se tenían de ese proceso ya no se tienen.
- En algunas ocasiones las etiquetas no se agregan a todas las piezas, se agregan etiquetas incorrectas, también de vez en cuando el operador se distrae mientras realiza el conteo.
- El flejado es otro problema en el proceso ya que el personal no lo ha estado realizando de la manera correcta, provocando que dentro del transporte se caiga y el material se dañe.

- Para resolver el problema se tiene en mente realizar una cámara de visión que capture la pieza que se encuentre en la banda y si la foto no coincide con lo físico, no se genera la etiqueta para el producto. Se debe hacer una evaluación financiera.

Fase 2: Definir

CTQ's del proyecto

Segundo cuestionario de entrevista

La segunda entrevista tiene el propósito de conocer el proceso y las especificaciones de del cliente. Los puntos más relevantes de la entrevista son:
- Se cuentan con 18 líneas de producción, con 2 tarimas que son para orden y para stock.
- El stock solo se considera para perdidos muy grandes y se extraen del almacén.
- En el área de escaneo se llega todo lo que se llegó de las 18 líneas de producción.
- En el área de escaneo se separan las piezas y van consolidando las tarimas.
- Los clientes determinan el fleje, material de tarima, tamaño de tarima, altura.
- En el área de escaneo se verifica que lo que el cliente pide vaya en cantidades, tamaño y ordenes correctas.
- En el proceso de flejado se realiza de acuerdo con que dentro del camión no se dañe el producto.
- La logística es el proceso que sucede después de los embarques.
- Dentro del proceso de embarques los errores más recurrentes son:
o Se agregan cantidades extra o faltantes.
o Las etiquetas no se agregan a todas las piezas.
o Se agregan etiquetas incorrectas.
o Material dañado cuando no está correctamente flejado.

Como resultado de esta entrevista se obtuvo también los documentos de cartas de proceso y especificaciones de medidas de las tarimas, los cuales estarán incluidos en el apartado de anexos.

Identificación de los CTQ's del proceso

Los principales requerimientos del cliente son:
- Peso
- Altura
- Tamaño de tarima
- Tipo de tarima.
- Flejado

Los CTQ´s son críticos para la calidad ya que afectan al cliente, debido a que llega en condiciones no aptas para la venta.

Charter del proyecto

En el caso de este proyecto se realizó un documento que incluía el propósito, objetivos, integrantes del proyecto y la metodología a aplicar, para así recibir una aprobación por parte del personal a calificar el documento.

Aunque no es el mismo formato y no incluye todos los datos que un Charter de proyecto incluiría, si se asemeja a los datos que se requieren del mismo. Dentro de este entregable se agrega la introducción, planteamiento del problema y justificación.

El proyecto si recibió la aprobación del personal.

Mapa de proceso.

El mapa de proceso se realizó comprendiendo las etapas del proceso de embarques, así como las áreas que estaban conectadas al mismo.

Figura 2. Mapa de procesos
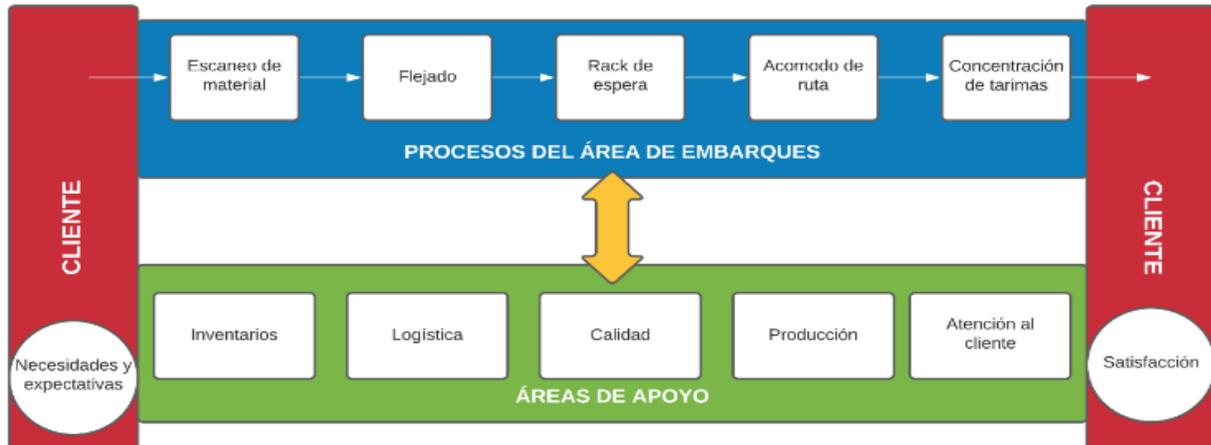
Elaboración de un mapa de proceso SIPOC(PEPSU)

En esta etapa se realizará un análisis de las entradas y salidas del proceso y será representado mediante un diagrama SIPOC o también conocido como PEPSU.

Figura 3. mapa de proceso SIPOC(PEPSU)
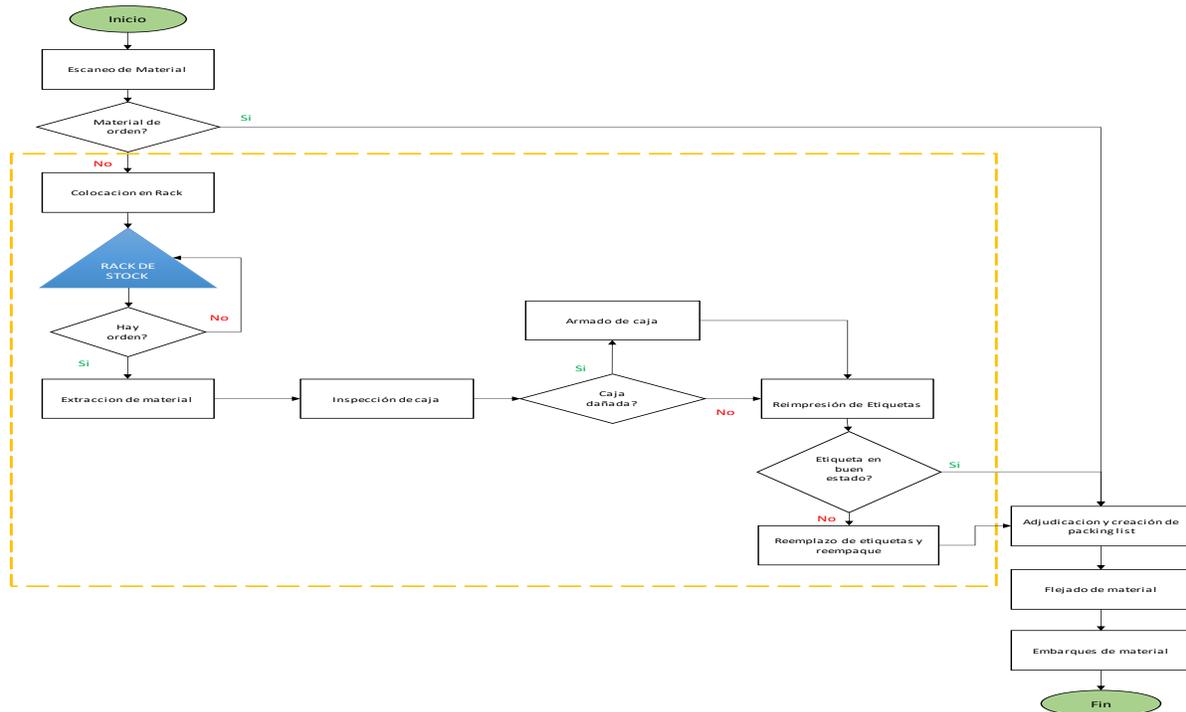
Fase 3: Medir

Identificación de las Y del proyecto

Dentro del paso 1 se identificaron las CTQ's del proceso, como se mencionó anteriormente. Los principales requerimientos del cliente, que vienen siendo las variables para evaluar son:
- Peso
- Altura
- Tamaño de tarima
- Tipo de tarima.
- Flejado

Estándares de desempeño para la Y del proceso

Los estándares de desempeño para la Y del proceso vienen siendo los límites de las especificaciones que el cliente tiene. En el apartado de anexos se agregará el documento que se utiliza para las especificaciones especiales de los clientes:
- Tarimas: que contenga 7 tablas
- Fleje especial
- Fleje con calibre de 80
- Altura de 1.30 metros
- Tipo de material: se nombra por tipo y cada cliente puede pedir más de un tipo
- Cantidad de piezas

Plan de colección de datos

Para la elaboración de esta etapa se elaboró un tercer cuestionario donde el propósito principal era conocer datos cuantitativos del proceso. Lo más importante recopilado de la entrevista es:
- Costo de remanufactura por pieza: 14 dólares
- Cantidad promedio de piezas dentro de una tarima: 150 piezas
- Ventas semanales: 200,000 piezas
- Ventas anuales: 9,000,000 de piezas
- Cantidad promedio que piden los clientes: 30,000 piezas
- Especificaciones:
- Tarimas: que contenga 7 tablas
- Fleje especial
- Fleje con calibre de 80
- Altura de 1.30 metros
- Tipo de material: se nombra por tipo y cada cliente puede pedir más de un tipo
- Cantidad de piezas
- Producto consolidado
- Inexistencia de estudio de capacidad en relación con las especificaciones del cliente.
- El peso si se verifica por cuestiones legales
- Registro de gastos provocados por los incidentes:
- Multas en promedio de 25,000 dólares mensuales
- Motivos de multa:
- Mandar cantidades menores o mayores
- Material dañado
- Envíos fuera de tiempo
- Incumplimiento de especificaciones de empaque
- Mandar material mixto
- Personas involucradas en el proceso de embarques: 80 personas
- Operadores: 30
- Horario laboral de los operadores: 8:00 a.m. a 4:00 p.m.

- Solo se capacita a las personas cuando ingresan, se entrenan durante 1 semana por el supervisor entregándoles las cartas de proceso, explicándoles de manera física el funcionamiento del área.
- Porcentaje de rotación de personal: 14%
- Cada 2 semanas ingresa personal nuevo
- Causas de la problemática:
- Distracción del personal

Datos para Y

Tomando en consideración el dato anterior, no existen datos para la Y, ya que la empresa no tiene control sobre los mismos, solo se conoce que cada cliente tiene especificaciones diferentes de acuerdo con su control de inventario, normalmente se intentan cumplir con los requerimientos, pero no se realiza un análisis estadístico de la calidad del cumplimiento de estos rubros, aunque se conoce que no se están cumpliendo en su totalidad porque la empresa continuamente recibe quejas por parte de los clientes y multas en promedio de 25,000 dls mensuales.

Capacidad del proceso

La estandarización de los procesos es otro problema importante del área por lo que se tiene que realizar un énfasis en obtener mediciones para poder conseguir lo que viene siendo la capacidad del proceso y de esta manera poder mejorarlo.

Las variables Y o de especificación del cliente son
- Peso
- Altura
- Tamaño de tarima
- Tipo de tarima.
- Flejado

Dentro de lo que a capacidad se conoce que el 5% de las tarimas semanales corresponden a defectos, que, si a la semana se piden 1340 tarimas, 65 tarimas corresponden a producto dañado.

Fase 4: Analizar

Lista con prioridad de las X's

Las X's existentes son:
- Cambio de área del proceso de embarques a otra nave industrial
- Personal nuevo
- Falta de manual de procedimientos (Se dan cartas de proceso, pero no describen completamente todo el procedimiento)
- Modelo de capacitación inconstante
- Distracción del personal al momento de realizar su trabajo
- Resistencia al cambio por parte de los trabajadores
- Falta de cultura de pertenencia a la organización

Lista de las pocas X's vitales

Figura 4. Problemas dentro del área de embarques
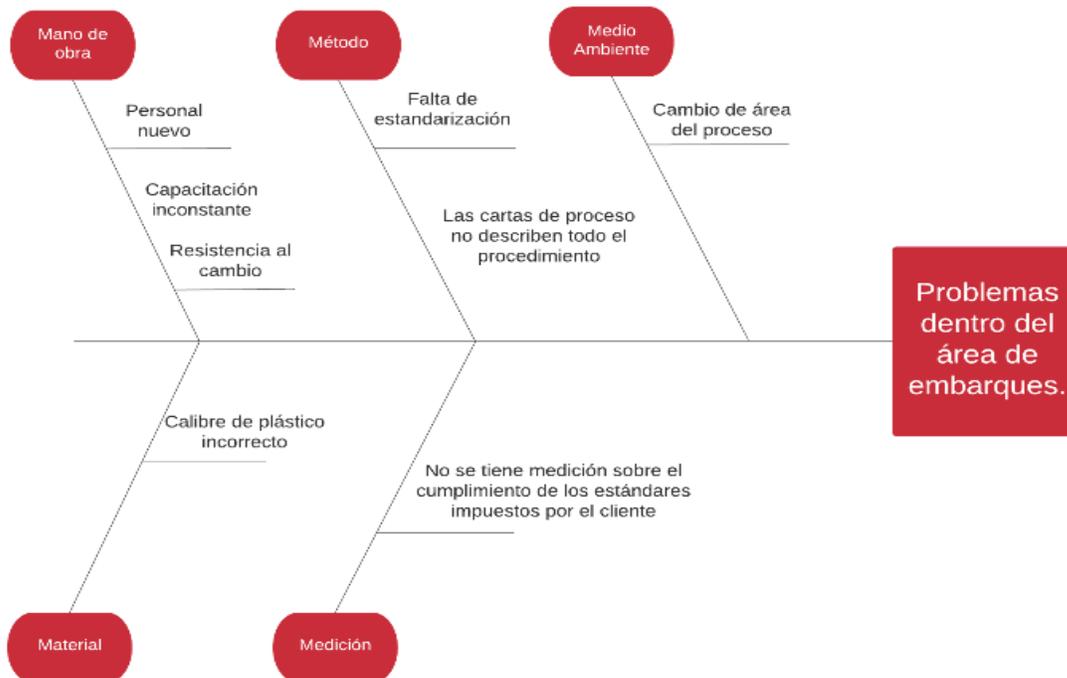
- Mano de obra:
o Personal nuevo: Existe una rotación del personal del 14% teniendo como resultado que cada 2 semanas 4 personas renuncian y se tenga que contratar a alguien para cubrir su puesto.
o Capacitación inconstante: Solo se realiza la capacitación de inducción al proceso, se entrena al personal durante 1 semana por el supervisor entregándoles las cartas de proceso y explicándoles el funcionamiento del área.
o Resistencia al cambio: El personal normalmente se encuentra errático al momento de intentar implementar mejoras dentro de los procesos

- Métodos:
o Falta de estandarización: La estandarización ayuda en la reducción de perdidas, formación de cultura, reducción de variabilidad y aumento de transparencia, desafortunadamente actualmente no se cuenta con estándares de especificación que se lleven a cabo dentro de este proceso.
o Las cartas de proceso no describen todo el procedimiento de embarques (Ver Anexos:): Las cartas de proceso son documentos que se entregan al personal para la comprensión de las actividades a realizar y se entregan distintos documentos separados donde únicamente se explican los procesos.

- Medición:
o No se tiene medición sobre los estándares impuestos por el cliente: En el área de embarques el cliente se enfoca en 4 cosas:
▪ Peso

- Material de flejado
- Cantidad de producto
- Altura

Dentro de estas 4 cosas solo se verifica que el peso este correcto, pero no se hacen pruebas sobre la calidad de los otros 3 rubros, por lo que no se tiene información de la cantidad de tarimas que si cumplen con los requerimientos del cliente.

- Medio Ambiente:
- Cambio de área del proceso: Anteriormente no existían tantos problemas en el proceso de embarques ya que se realizaba en la misma planta donde se elaboran los calipers, pero al momento de realizar el cambio de área al centro de distribución, el control se vio afectado ante este nuevo proceso.

Análisis financiero

Costos de la empresa que le produce el problema actualmente
Dentro de la empresa se solicitan semanalmente 200,000 piezas, las cuales se dividen en un promedio de 6 clientes por semana, cada uno solicitando entre 20,000 y 30,000 piezas.

El problema del incumplimiento de especificaciones como tiempo, material de tarimas, calibre del plástico que se utiliza para el flejado, además, las ocasiones que el producto llega dañado o incompleto, se han impuesto multas.

Las multas han sido constantes dando como resultado un gasto mínimo de $25,000 dólares mensuales.
El tipo de cambio de la fecha 08/11/2020 es de:
$1 US= 20.58 MXN
Por lo que el costo del problema en pesos mexicanos es de
$25,000.00 US * 20.58 MXN = 514,500.00MXN

Costos que implican el proyecto

Costo del personal que colabora en la elaboración del manual

La persona encargada del área de calidad, ha colaborado en la elaboración del manual en un total de 36 horas, desglosándose en 4 horas dando tiempo para entrevistas y algunas recomendaciones para la elaboración del manual de procedimientos, además de, 4 turnos laborales en consultas externas con aporte y búsqueda de información documentada del proceso de embarques.

Su salario mensual es de $31,607.00 MXN sin contar prestaciones, aguinaldos, ni utilidades, por lo que el costo para la empresa por la colaboración de esta persona seria de:
$1 \; mes \; laboral = 205 \; horas$

$Gasto \; salarial \; de \; la \; colaboración \; por \; hora = \dfrac{\$31,607.00MXN}{205hr} = \dfrac{\$154.18MXN}{hr}$

$Gasto \; salarial \; total \; por \; la \; colaboración = \$154.18 * 36 \; horas = \$5,550.50 \; MXN$

Cotización de impresión de los manuales de procedimiento

Se realizó una cotización del costo de la impresión de los manuales de procedimientos.
Se imprimirían en total 33 manuales, 1 para cada integrante del curso de capacitación, para inducción al proceso de embarques, se imprimirían 3 para los instructores internos del curso de capacitación del manual de procedimientos.

Tabla 2 Cotización de impresión de manual de procedimiento

Producto	Costo
Manual engrapado B/n Tamaño: Carta	$88 MXN c/u

Costos por capacitación del manual de procedimientos

Para asegurar el cumplimiento de los datos prescritos en un manual de procedimientos es fundamental la capacitación, ya que una inadecuada atención de esta puede hacer fracasar todas las operaciones o procesos existentes.

La realización de un curso de capacitación para la presentación del manual de procedimientos sería de 8 horas, 6 días a la semana en horario laboral durante dos semanas, lo que viene dando un total de 96 horas por el curso completo.

Las personas por participar dentro del curso de capacitación serian 30 trabajadores con el puesto de operadores generales del área de embarques y 3 personas con el puesto de supervisor en el área de embarques, calidad y logística, las cuales se encargarán de ser los instructores internos.

Los costos para tomar en consideración para la capacitación de inducción sobre el manual de procedimientos son los siguientes:

- El salario de los operadores en la planta es de $4039.00 MXN mensuales, lo que viene siendo $19.70 MXN por hora.
- El salario de los supervisores en la planta es de $14256.00 MXN mensuales, lo que viene siendo $69.54 MXN
- El costo de la impresión de los manuales de procedimientos en el área de embarques, que en base a la cotización tiene un costo de $88.00 MXN por manual

Costo total por semana laboral de los participantes
$1\ mes\ laboral = 205\ horas$

$$Gasto\ salarial\ por\ hora\ de\ los\ participantes = \frac{\$4,039\ MXN}{205hr} = \frac{\$19.70\ MXN}{hr}$$

$$Gasto\ salarial\ total\ de\ todos\ los\ participantes\ por$$
$$semana = \$19.70\ MXN * 48\ horas * 30\ participantes = \$28,371.51\ MXN$$

Costo total por semana laboral de los instructores internos
$1\ mes\ laboral = 205\ horas$

$$Gasto\ salarial\ por\ hora\ de\ los\ instructores = \frac{\$14,256\ MXN}{205hr} = \frac{\$69.54\ MXN}{hr}$$

$$Gasto\ salarial\ total\ de\ todos\ los\ instructores\ por\ semana = \$69.54\ MXN * 48\ horas * 3\ instructores$$
$$= \$10,013.97 MXN$$

Costo total de materiales de capacitación
$Manual\ de\ procedimiento = \$88\ MXN\ c/u$
$Costo\ total\ de\ Manuales\ de\ procedimiento\ (33\ unidades) = \$88.00\ MXN * 33 manuales = \$2,904.00\ MXN$

Costo total por la capacitación durante las 2 semanas de duración del curso
$\$79,674.97\ MXN$

Tabla 3. Gastos totales de la capacitación de implementación del manual

Componentes del gasto de capacitación	Cursos Prioritarios		Gastos totales	
	Semana 1	Semana 2		
1. Gastos salariales:				
1.1 Salarios por participantes	$28,371.51	$28,371.51		
Total gastos salariales			$ 56,743.02	
2. Gastos directos de capacitación				
2.1 Salarios de instructores Internos	$10,013.97	$10,013.97		
2.2 Materiales de capacitación (manual de procedimientos impreso)	$ 2,904.00	$ -		
Gastos totales directos de capacitación			$ 22,931.94	
Gastos totales de capacitación				$ 79,674.97
Número de trabajadores capacitados	30	30	30	
Gasto promedio por trabajador capacitado	$ 2,655.83	$ 2,655.83	$ 2,655.83	
Número de horas por capacitación	48	48	96	
Gasto promedio por hora de capacitación	$ 1,659.90	$ 1,659.90	$ 1,659.90	

Dentro de este análisis se considera que todo el personal que se encuentra dentro del área operativa actualmente será capacitado.

Actualmente se están capacitando en promedio 4 personas cada vez que entra nuevo personal con el puesto de operador, de igual manera, entra personal nuevo cada 2 semanas con un índice de rotación del personal del 14%, por lo que el costo por capacitar a los 4 empleados nuevos se desarrollaría de la siguiente forma:

Costo total por semana laboral de los participantes

$1\ mes\ laboral = 205\ horas$

$Gasto\ salarial\ por\ hora\ de\ los\ participantes = \dfrac{\$4{,}039\ MXN}{205hr} = \dfrac{\$19.70\ MXN}{hr}$

$Gasto\ salarial\ total\ de\ todos\ los\ participantes\ por\ semana = \$19.70\ MXN * 48\ horas * 4\ participantes$
$= \$3{,}337.99MXN$

Costo total por semana laboral de los instructores internos

$1\ mes\ laboral = 205\ horas$

$Gasto\ salarial\ por\ hora\ de\ los\ instructores = \dfrac{\$14{,}256\ MXN}{205hr} = \dfrac{\$69.54\ MXN}{hr}$

$Gasto\ salarial\ total\ de\ todos\ los\ instructores$
$por\ semana = \$69.54\ MXN * 48\ horas * 1\ instructores = \$3{,}337.99MXN$

Costo total de materiales de capacitación

$Manual\ de\ procedimiento = \$88\ MXN\ c/u$

$Costo\ total\ de\ manuales\ de\ procedimientos$
$(4\ unidad) = \$88.00\ MXN * 4\ manuales = \$352.00\ MXN$

Costo total por la capacitación durante las 2 semanas de duración del curso

$14,593.72\ MXN$

Tabla 4. Gastos totales de la capacitación por inducción

Componentes del gasto de capacitación	Cursos Prioritarios		Gastos totales	
	Semana 1	Semana 2		
1. Gastos salariales:				
1.1 Salarios por participantes	$ 3,782.87	$ 3,782.87		
Total gastos salariales			$ 7,565.74	
2. Gastos directos de capacitación				
2.1 Salarios de instructores Internos	$ 3,337.99	$ 3,337.99		
2.2 Materiales de capacitación (manual de procedimientos impreso)	$ 88.00			
Gastos totales directos de capacitación			$ 6,763.98	
Gastos totales de capacitación				$ 14,329.72
Número de trabajadores capacitados	4	4	4	
Gasto promedio por trabajador capacitado	$ 3,582.43	$ 3,582.43	$ 3,582.43	
Número de horas por capacitación	48	48	96	
Gasto promedio por hora de capacitación	$ 298.54	$ 298.54	$ 298.54	

Beneficio del proyecto

En un caso muy especial, donde la propuesta del manual de procedimientos para el proceso de embarques sea implementada en la empresa y junto con la capacitación del manual resuelva en un 7.1% el problema que se tiene dentro de esta área.

Es necesario resaltar que esto solo sucedería en un caso especial y sería solo una suposición, ya que desafortunadamente se carece de datos por parte de la empresa para verificar que tanto mejoró el proceso.

Se podría obtener la tasa interna de rentabilidad (TIR):
$$TIR = \frac{-I + \sum_{i=1}^{n} F_i}{\sum_{i=1}^{n} i * F_i}$$

En este caso se utilizó la formula directa que proporciona el programa de Excel para su solución:
TIR=(celdas del flujo anual)

Los valores que se tomaron son:
Capacitación de los 30 operadores actuales en el área de embarques con el nuevo manual de procedimientos, más el tiempo en que el supervisor ha colaborado, se tomó como costo inicial en el año 0: $85,225.46MXN

Como ingreso se tomó el gasto actual anual de la empresa debido al problema que existe, con la suposición de que con la implementación del manual ya no existiría:
$Costo\ mensual = 514{,}500.00 MXN$
$Costo\ anual = 514{,}500.00 MXN * 12\ meses * 7.1\% = \$438{,}354.00 MXN$

Como egreso se tomó el gasto anual que se tendría con la capacitación del personal nuevo:

$Costo\ mensual = \$29,187.43\ MXN$

$Costo\ anual = \$29,187.43\ MXN * 12\ meses = \$350,249.21 MXN$

Se considera también que anualmente se aumenta un 20% del salario mínimo.

Como resultado da un TIR a 5 años de:

$TIR = 12\%$

Tabla 5. Tasa interna de rentabilidad

Años	Costo inicial	Ingresos		Egresos		Flujo efectivo anual	
0	-$ 85,225.46					-$	85,225.46
1		$	438,354.00	-$	350,249.21	$	88,104.79
2		$	438,354.00	-$	386,564.75	$	51,789.25
3		$	438,354.00	-$	422,880.28	$	15,473.72
4		$	438,354.00	-$	459,195.82	-$	20,841.82
5		$	438,354.00	-$	495,511.35	-$	57,157.35

TIR	12%

Se menciona que estos datos son en un caso hipotético ya que la empresa no proporciona datos que prueben la factibilidad de esta mejora, además de que influyen más situaciones que alteran el proceso.

Fase 5: Mejora

Solución Propuesta

La solución propuesta de este proyecto es la elaboración de un Manual de Procedimientos para el área de embarques, una herramienta muy útil ya que engloba todos los procedimientos a elaborar, así como determina las funciones de cada persona que integra este proceso.

Material extra

Este apartado no se encuentra incluido dentro de la metodología ya que corresponde a un material extra, independiente de la elaboración de la propuesta inicial, pero relevante para la compañía.

Curso de capacitación para sensibilización al cambio

Fase 6: Control

Documentación del proyecto

Este entregable consiste en el registro documentado del proyecto, que viene siendo la finalización de este, e involucra este documento.

III. Conclusiones

El presente trabajo tiene la finalidad de proporcionar a la empresa una herramienta formalizada de los procesos que existen actualmente en la empresa para que la inducción de estos sea más sencilla.

Para poder verificar que el problema se redujo, se necesitaría realizar una medición posterior a la implementación del manual con sus respectivos cursos de capacitación, para así poder analizar qué tan factible fue la propuesta. El manual de procedimientos deberá ser revisado 1 vez al año para analizar qué tan factibles son en el tiempo de revisión, también se deberán revisar cada vez que haya cambios en la administración y tendrán que ser modificados si así lo requiere.

El cumplimiento de los objetivos se realizó ya que se analizó la situación en base a la información otorgada y en base a eso se realizó un manual de procedimientos, ya que, el manual de procedimientos permite que en un documento se tenga toda la información en conjunto sobre las actividades, procesos y etapas para desarrollar determinada operación de manera cronológica.

Aunque es notable decir que el manual de procedimientos no resuelve por completo el problema que se está teniendo, es posible reducirlo, pero no resolverlo, por lo que se recomienda a la empresa que opte por medidas de muestreo estadístico de calidad para poder conocer cuáles son los niveles de capacidad actual de proceso y poder así establecer medidas para controlarlos y reducir las causas especiales que se están teniendo. Además, para reducir el porcentaje de retorno de personal se recomienda que se busque una manera de realizar una campaña para crear una cultura de pertenencia dentro de la empresa, que permita al personal querer quedarse y así reducir costos por capacitación.

Dentro de este proyecto se logró obtener conocimientos del área de calidad, la Norma ISO 9001:2015, así como la importancia de los procedimientos formales en las empresas, además de reafirmar conocimientos de ingeniería económica y las materias vistas a lo largo de toda la carrera, que serán muy útiles para el futuro desarrollo profesional de los integrantes.

Referencias

Álvarez Torres, M. (1996). Manual para Elaborar Políticas y Procedimientos. México. Panorama.

Castañón, A. (2012) Propuesta De Un Manual De Procedimientos Para El Departamento De Logística. Recuperado de: http://biblioteca.usac.edu.gt/tesis/08/08_2481_IN.pdf

Chiavenato, I. (2001). Administración de recursos humanos (5.a ed., Vol. 1). McGraw-Hill Education.

Córdoba, M. (2009). Seis Sigma en la práctica: guía para la aplicación en proyectos. Madrid, España: Fragma Reprografía.

Delfín, L. (2014). El Desarrollo Organizacional Y La Resistencia Al Cambio En Las Organizaciones. Veracruz, México: Ciencia Administrativa.

Gunnar Zapata Zurita. (2004). Comunicación Organizacional. México: UMSS Publicaciones.

Gutiérrez, H. & Vara R. (2009) Control estadístico de la calidad y seis sigma. Segunda edición. McGraw-Hill Education. México D.F.

Herrera, R. (2012). Seis Sigma: métodos estadísticos y sus aplicaciones. B - EUMED.

Ilzarbe, L., Dueñas, M., Sangüesa, R. & Sánchez, M. (2019). Teoría y práctica de la calidad. 2ª edición revisada y actualizada. Madrid: Paraninfo.

Macluf, J., Delfín & L. Arano, R. (2014) El desarrollo organizacional y la resistencia al cambio en las organizaciones. En ciencia administrativa (264). MÉXICO: Académico-investigador del Instituto de Investigaciones y Estudios Superiores de las Ciencias Administrativas

Marín, J., Bautista, Y., & García, J. (2014). Etapas en la evolución de la mejora continua: Estudio multicaso Intangible Capital. Intangible Capital, 10(1), 584-618. https://www.redalyc.org/pdf/549/54932488008.pdf

Mentado, L., & Mentado, B. (2019). Propuesta De Procedimiento De Control Para Mejorar El Proceso De Expedición Y Aduana En Sherritt-Cubapetróleo. ECA Sinergia, 10(1), 19-37. https://www.researchgate.net/publication/332235341_Propuesta_de_procedimiento_de_con trol_para_mejorar_el_proceso_de_expedicion_y_aduana_en_Sherritt-Cubapetroleo

Mideplan (2009) Guía para la Elaboración de Diagramas de Flujo. Ministerio de planificación nacional y política económica área de modernización del estado.

Miranda, L. (2006). Seis Sigma / Six Sigma: Guia Para Principiantes / Guide for Beginners. México, D.F.: Panorama.

Münch & García (2006) Fundamentos de Administración. Trillas. México D.F.

Molina, M., Torres, M., Zambrano, R. & Martínez, J. (2016). Manual de procedimiento en la empresa. Revista Caribeña de Ciencias Sociales.

López, M. (2013). Resistencia Al Cambio En Organizaciones Modernas. Colombia: Scientia Et Technica.

López, P. (2014). Novedades ISO 9001: 2015. Madrid, FC Editorial.

Patricia, M. (2018). Comunicación Organizacional Y La Teoría De La Información. México: Trillas.

Peña, H. (2017). Motivación Laboral. Elemento Fundamental en el Éxito Organizacional. Scientific, 1, 36.

Organización Internacional de Normalización. (2015) Sistemas de Gestión de la Calidad (ISO 9000)

Organización Internacional de Normalización. (2015) Sistemas de Gestión de la Calidad (ISO 9001)

UNAM (1994) Guía técnica para la elaboración de manuales de procedimientos. Recuperado de: https://www.ingenieria.unam.mx/planeacion/manual_proc/docs/GT_%20para_la_Elaboracion _de_Manuales_de_Procedimientos.pdf

UNCTAD (1971) Conocimientos de embarque. Conferencia de las naciones unidas sobre el comercio y el desarrollo.

Ulloa, A. (2020). La remanufactura, negocio sostenible en el mercado automotriz. México Industry. https://mexicoindustry.com/noticia/-la-remanufactura-negocio-sostenible-en-el-mercado-automotriz

Vieira, C. (2015). Código De Ética, Mucho Más Que Buenas Intenciones. Lima, Perú: Imagen Ediciones.

Vivanco Vergara, M. E. (2017). Los manuales de procedimientos como herramientas de control interno de una organización. Universidad y Sociedad, 9(2), 247-252. Recuperado de http://rus.ucf.edu.cu/index.php/rus

Serech, E. (2005) "Elaboración e implementación del manual de procedimientos para el control de inventario en una empresa distribuidora". Facultad de Ingeniería. Escuela de Ingeniería Mecánica Industrial. Universidad de San Carlos de Guatemala.

Recuperado de: http://biblioteca.usac.edu.gt/tesis/08/08_1427_IN.pdf

El impacto de los sellos en el consumo de la Coca-Cola

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Resumen

Para brindar al consumidor final información comercial y sanitaria sobre el contenido de nutrimentos críticos e ingredientes que representan un riesgo para la salud en los productos pre envasados, hablando específicamente de la Coca-Cola, se aprobó una ley de etiquetado. El motivo de esta investigación se centra en los patrones de consumo de los mexicanos antes y después de que dicha ley entrara en vigor.

Nuestro objetivo principal es analizar datos estadísticos sobre el impacto que tienen los sellos en el consumo de la Coca-Cola.

Como antecedente, se tiene que en la Cámara de Diputados la iniciativa para modificar la Ley General de Salud en materia de etiquetado, y el 27 de marzo del 2020 fue aprobada por el Senado de la República. Esta modificación estableció que el etiquetado en México tiene que ser un etiquetado frontal de advertencia que informe de forma veraz, clara, rápida y simple sobre el contenido de los nutrimentos críticos y demás ingredientes que determine la autoridad sanitaria. La problemática más grande de la Coca-Cola es que, si bien es conocida por el dulce y refrescante sabor de su producto estrella, también tiene un lado maligno, ya que, acompañado de un abuso en su consumo, es perjudicial para la salud. Antes de la llegada de los sellos, la mayoría de los consumidores ignoraban la información nutrimental de esta famosa bebida, haciendo su consumo una rutina. La cuestión aquí es la información nutrimental de este producto, ya que se conoce que por cada 100ml la bebida contiene un total de 10,6 gr. La OMS sugiere que el máximo de azúcar que debemos adquirir al día, son únicamente 25 gr. Dado a que el excesivo consumo de azúcar y colorantes artificiales causa problemas de salud, se decidió agregar unos sellos en los productos vendidos en México, los cuales advierten al público los elementos que se encuentran en exceso dentro del producto, con fin de prevenir el abuso en su consumo y reducir la obesidad, diabetes, entre muchos otros problemas de salud, causados por los excesos.

Durante el desarrollo de esta investigación, realizó una encuesta a un grupo de personas de diferentes edades y nivel socioeconómico, sobre su consumo de Coca-Cola antes y después de la implementación de los sellos. Entre las preguntas que se desarrollaron, se tuvo como resultado, en su mayoría, que los sellos no fueron razón para pausar su consumo.

Se obtuvo como resultado que la mayoría de los entrevistados reconocen lo peligroso que es para su salud seguir consumiendo dicho producto, y a pesar de que los sellos estén ahí para crear conciencia, el resultado de su implementación no ha bajado su consumo tan radicalmente.

Por lo que se concluye que el consumo excesivo de la Coca-Cola continúa sin importar su valor nutrimental.

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Patrones cognitivos-emocionales en el desarrollo organizacional

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Resumen

El objetivo es identificar patrones de conducta del individuo y la disposición sobre las nuevas competencias para generar el cambio de segundo orden (CSO). La conducta del individuo está sujeta a elementos cognoscitivas-emocionales que activen el desarrollo del comportamiento organizacional ante el nuevo conocimiento. Las acciones de los individuos son evaluadas para conocer los estados de primer o segundo orden. El estado de primer orden significa estar en rutinas permanentes cumpliendo las necesidades básicas en la organización para permanecer. Por otra parte, el estado de segundo orden significa un cambio en las estructuras y transformación de los procesos a través de nuevas estrategias implementadas para hacer frente a las nuevas necesidades del entorno. Para conocer los factores que impiden el cambio de primer a segundo orden se aplica el algoritmo de entrenamiento de tipo perceptrón que permita clasificar los pesos sinápticos en el umbral de activación sobre los elementos cognitivos y emocionales en relación causales con los elementos de gestión del conocimiento, competencias y la disponibilidad al cambio. La red neuronal permite generar la matriz de pesos sinápticos para pronosticar los procesos de evaluación de cambio de estructuras y los CSO a fin de generar aprendizaje en la organización.

Palabras clave: Administración del conocimiento; cambio de segundo orden; cognitivo; emocional; redes neuronales

Cognitive-emotional Patterns in Organizational Development

Abstract

The objective is to identify patterns of behavior of the individual and the disposition on the new competences to generate the change of the second order (CSO). The behavior of the individual is subject to cognitive-emotional elements that activate the development of organizational behavior in the face of new knowledge. The actions of the individuals are evaluated to know the states of the first or second order. The first order state means being in permanent routines fulfilling the basic needs in the organization to remain. On the other hand, the second order state means a change in the structures and transformation of the processes through new strategies implemented to face the new needs of the environment. To know the factors that prevent the change from first to second order, the perceptron-type training algorithm is applied which allows classifying the synaptic weights in the activation threshold on the cognitive and emotional elements in causal relationship with the elements of knowledge management, skills and

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availability to change. The neural network allows to generate the matrix of synaptic weights to forecast the processes of evaluation of change of structures and the CSO in order to generate learning in the organization.

El impacto de las Redes Sociales en el proceso de reclutamiento en el Sector Empresarial en la Región Laredos

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Resumen

La presente investigación busca mostrar la influencia que tienen las redes sociales en el proceso de reclutamiento y selección de personal. Se muestra de manera detallada el impacto de la tecnología a través de las redes sociales en casi todas las etapas del proceso de reclutamiento y de selección de personal y cómo la contingencia sanitaria del COVID-19 marcó un antes y un después en el uso de la tecnología de manera permanente. Se realizó un estudio documental exploratorio y descriptivo en donde se entrevistó a la directora general de una empresa de reclutamiento de la ciudad de Nuevo Laredo y Laredo Texas. Algunas de las conclusiones son que, aunque la tecnología permitió continuar las actividades para seleccionar y reclutar a los empleados idóneos, aún existen etapas en el proceso en donde la presencia del candidato es indispensable para elegir de manera correcta a las personas para cada vacante.

Palabras clave: Candidatos; contratación; empresas; proceso de reclutamiento y redes sociales

The Social Network Impact on the Recruitment Process in the Business Sector in the Laredos Region

Abstract

This research seeks to show the influence that social networks have on the recruitment and selection process of personnel. The impact of technology is shown in detail through social networks in almost all stages of the recruitment and personnel selection process and how the health contingency of COVID-19 marked a before and after in the use of technology permanently. An exploratory and descriptive documentary study was carried out in which the general director of a recruitment company in the city of Nuevo Laredo and Laredo, Texas was interviewed. Some of the conclusions are that, although technology allowed to continue the activities to select and recruit the ideal employees, there are still stages in the process where the presence of the candidate is essential to correctly choose the people for each vacancy.

Keywords: Candidates; hiring; enterprises; recruitment process and social media

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La importancia del embellecimiento de los espacios públicos: La psicología ambiental de las áreas verdes

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El crecimiento de la densidad demográfica dentro de los centros urbanos requiere de la atención constante de la agenda pública. Al incorporar elementos fundamentales para la construcción del tejido social con la implementación de los espacios públicos destinados a la convivencia. Como parte del derecho público, lo que indica a las autoridades que la comunidad debe de tener la capacidad de satisfacer sus necesidades es los espacios colectivos. Dando prioridad a las clases sociales más desfavorecidas (Delgado Gaitán, 2009) (Vidal Vidales & Martínez Rivera, 2012).

La construcción de estos sitios como acción prioritaria de las funciones administrativas busca reducir la separación social y equilibrar actividades socioeconómicas. Lo cual motiva a la construcción de infraestructura adecuada para el desarrollo social y el crecimiento económico. (Delgado Gaitán, 2009).

Por lo que los elementos de planeación urbana y ordenamiento territorial deben de considerar el beneficio asociado al disfrute y embellecimiento de los espacios públicos y las obras publicas de uso para la convivencia (Delgado Gaitán, 2009) (Martine-Soto, López-Lena, & De la Roca Chiapas, 2016) (Venegas & Rojas, 2009)

El problema surge cuando los sitios de convivencia dejan de recibir mantenimiento. Al no ser incorporados con un contexto de mejora continua y con procesos de involucramiento comunitarios. Estos espacios a través del tiempo pueden llegar a perder valor y entrar en procesos de deterioro y desgaste (Mejía Velázquez, 2016).

Por lo que a través de estrategias como el rescate de espacios públicos se puede revertir y reconstruir la buena percepción de esto sitios (Vidal Vidales & Martínez Rivera, 2012). La psicología ambiental analiza el beneficio generado por un buen paisaje. La presencia de un ambiente sano, cálido y en buen estado beneficia a los servicios ambientales del lugar. Si no que la comunidad aledaña al sitio que se enfrenta a procesos de mejora y rescate propician ambientes seguros y por ende un estado de ánimo cada vez mejor (Martine-Soto, López-Lena, & De la Roca Chiapas, 2016).

Como parte del proceso de mejoramiento de los espacios públicos se analizarán los beneficios de embellecer los espacios colectivos dentro de la Facultad de comercio, administración y ciencias sociales (FCAyCS) y la percepción de los estudiantes asociada al bienestar físico y emocional de ver los espacios públicos dentro de la universidad (Martinez-Soto, Montero-López, & Córdova y Vázquez, 2014).

De acuerdo con el modelo para el sistema de áreas naturales, productivas y de conservación propuesta por indica la jerarquía urbana para las áreas verdes. La infraestructura interna de la FCAyCS se categoriza en el nivel inicial de la escala. La cual se incorpora a los Edificios considerados como patios – jardines – huertos familiares (Venegas & Rojas, 2009)

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Referencias

Delgado Gaitán, J. A. (2009). Infraestructura urbana, participación ciudadana y espacios públicos. Revista Digital de Derecho Administrativo (2), 247-268. Recuperado el 22 de febrero de 2020, de https://heinonline.org/HOL/LandingPage?handle=hein.journals/rdigdad2&div=10&id=&page=

Martine-Soto, J., López-Lena, M. M., & De la Roca Chiapas, J. M. (2016). Efecto psicológico de las áreas verdes en la salud mental. (S. I. Psicología, Ed.) Revista Interamericana de Psicología/Interamerican Journal of Psychology (IJP), 50(2), 204-214. doi: https://doi.org/10.30849/rip/ijp.v50i2.93

Martinez-Soto, J., Montero-López, M. L., & Córdova y Vázquez, A. (mayo / junio de 2014). Restauración Psicología y naturaleza urbana: algunas implicaciones para la salud mental. Salud Mental, 37(3), 217-224. Recuperado el 15 de febrero de 2020, de http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0185-33252014000300005

Mejía Velázquez, N. A. (septiembre de 2016). Evaluación del programa de rescate de espacios públicos en Entidades federativas con mayor incidencia delictiva 2011. Tesis para obtener el título de Licenciada en Actuaría. Toluca, Estado de México. Recuperado el 15 de febrero de 2020, de http://ri.uaemex.mx/handle/20.500.11799/67010

Venegas, F. R., & Rojas, R. I. (2009). Teoría y Práctica del Ordenamiento y Manejo Sustentable del Territorio: Tijuana - Rosarito - Tecate, Baja California, México. Información Tecnológica, 20(3), 73-87. doi: 10.1612/inf.tecnol.4077it.08

Vidal Vidales, A. C., & Martínez Rivera, J. C. (2012). Metodología para la recuperación de espacios públicos. 61. Universidad Tecnológica de El Salvador. doi:978-99923-21-97-3

El emprendedurismo en una Economía Naranja. Contextualización empírica internacional

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Resumen

En el transcurso de los tiempos, se ha establecido que el emprendedurismo se presenta mas frecuentemente en forma de iniciar modelos de negocios en las áreas de industria, comercio y servicios. Esto deja una incertidumbre, porque se dejan fuera de las áreas d emprendimiento, la cultura y las artes?- En este trabajo de investigación documental se explora el emprendimiento en otros sectores de la economía, que han sido adoptados por otros países, y se le ha llamado la Economía Naranja. A través de exploración documental, podemos percibir un interesante área de oportunidad para todo tipo de proyectos, en especial para los emprendedores, en diversas áreas del arte, la cultura, el entretenimiento y el turismo. Y se presentan alternativas para promover su inserción a la economía nacional, como un verdadero apoyo al crecimiento y productividad sostenibles.

Palabras clave: Artes; cultura; economía; emprendedor

Entrepreneurship in an Orange Economy. An International Empirical Contextualization

Abstract

In the course of time, it has been established that entrepreneurship occurs more frequently in the form of starting business models in the areas of industry, commerce and services. This leaves an uncertainty, why are culture and the arts left out of the areas of entrepreneurship? In this documentary research work, we explore entrepreneurship in other sectors of the economy, which have been adopted by other countries, and are called the Orange Economy. Through this documentary exploration, we can perceive an interesting area of opportunity for all kinds of projects, especially for entrepreneurs in various areas of art, culture, entertainment, and tourism. Alternatives are presented to promote their insertion into the national economy in order to support sustainable growth and productivity.

Keywords: Arts; culture; economy; entrepreneur

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I. Introducción

Es claro que los tiempos cambian, y tiene impacto en la economía de los países, y se da por hecho que debemos identificar las características de los esquemas económicos que se presentan de acuerdo a la actualidad de participación y el impacto que tienen en los modelos de negocios y emprendedurismo, como base de oportunidad de desarrollo (Benavente, J. M. y Grazzi, M., 2017)

Conforme al paso del tiempo, han surgidos varios términos de identificación de los esquemas económicos, tales como economía verde, sustentable, entre otros, que permiten identificar oportunidades o riesgos para los esquemas de negocios y emprendedurismo.

Con la integración de la tecnología, la innovación y las propuestas de valor, a los esquemas de negocios, es razonable encontrar un término que describa con el mayor entendimiento posible, cual es el entorno de participación, así que para algunos autores, se dieron a llamarle Economía Creativa, cuya característica principal es precisamente la innovación. (Mejía, L. F. et al. 2019)

Economía Naranja es aquella relacionada con las industrias que crean, promueven, promocionan o comercializan los bienes, servicios o actividades de contenido cultural, artístico o patrimonial. Las principales características son las actividades coordinadas entre sí para la producción de ideas que se transforman en bienes o servicios protegidas por la propiedad intelectual.

Las categorías sectoriales que consideradas dentro de la Economía Naranja: son las artes y patrimonio artístico, industrias culturales, y creaciones funcionales, tales como medios de comunicación y de software de contenidos. (Finlev, T. et al., 2017).

Estas actividades son impulsadas en cuatro niveles por agentes de la sociedad, como sigue:
- Primer nivel: los agentes con iniciativas propias, creadores independientes y auto dirigidos, sectores comunitarios (como los artesanos), y organizaciones sin ánimo de lucro.
- En segundo nivel se ubican los emprendedores emergentes;
- Tercer nivel, están los emprendedores consolidados; y finalmente,
- Cuarto nivel, la gran empresa.

La Economía Naranja, puede ser vista y analizada como una herramienta de desarrollo cultural, social y económico. Se diferencia de otros modelos económicos, por estar basada en la creación, producción y distribución de bienes y servicios, cuyo contenido de carácter cultural y creativo y que se puede proteger por los derechos de propiedad intelectual.

II. Conceptualización del término Economía Naranja: origen

La pertinencia del término Economía Creativa frente a la propuesta terminológica Economía Naranja, resulta a partir de distintas fuentes académicas e institucionales, como la UNICEF, que planteó la idoneidad del primer concepto respecto al segundo.

Esto no es una postura que no se considera, con base en los argumentos presentados, que el término Economía Naranja reemplace al de Economía Creativa y más bien parece un sinónimo creado por los autores. Utilizar el término Economía Naranja, propiciaría el problema de sinónimo y polisemia descrito por Ríos Szalay (2010).

El término Economía Naranja no debería usarse en los ámbitos académicos. Pudiera ser mal visto definir lo que ya está definido para presentarlo como una novedad. Aun así, hay que seguir promoviendo políticas que permitan el desarrollo de los modelos de negocios de la Economía Creativa mientras se garantizan los derechos y el respeto por las tradiciones de los diferentes grupos.

Promover nuevas formas de transacción en la Economía Creativa, como el caso del turismo, es esencial en países marcados por la tradicionalidad económica, como en el caso de México. Dinamizar nuevos sectores económicos permite la inclusión de más personas a la vida laboral.

Además, se aumentan los aportes al PIB. Los espectáculos culturales, los proyectos innovadores cada día ganan mayor auge y se recomienda poner atención sobre las reglamentaciones que se promuevan dado que muchas veces el desconocimiento en algunos temas ralentiza o perjudica a las iniciativas dinamizadoras.

III. Los beneficios de una Economía Naranja

La Economía Naranja puede considerarse como un sector de desarrollo económico, con un potencial impresionante que desgraciadamente aún se encuentra "invisible" debido a que aunque este sector ha contribuido con millones de dólares a la economía de distintos países, numerosos economistas aún no la han notado o considerado importante. (Rodríguez, D. 2019)

Por otro lado, como es un concepto emergente, distintas instituciones, organizaciones, economistas y demás expertos en el tema como la UNESCO, el OMPI, la UNCTAD, el CEPAL , entre otros, tienen distintas opiniones sobre lo que significa esta tendencia llamada "Economía Naranja", sin embargo todos concuerdan con que la creatividad, el arte y la cultura actúan como materia prima; hay una relación con los derechos de propiedad intelectual; y que hay una función directa en una cadena de valor creativa. Es posible encontrar información que evidencia el éxito e impacto que tiene la Economía Naranja, un ejemplo de estos datos es que en el año de 2012 Price Waterhouse Coopers estimó que la industria del entretenimiento (parte de la Economía Naranja) inyectaría aproximadamente $2,2 billones de dólares anuales a la economía mundial, y en una comparativa equivale al 230% del valor de la exportaciones petroleras de los miembros de la Organización de Países Exportadores de Petróleo (OPEP, 2019).

En el tema de la Oportunidad Naranja se establece que las grandes oportunidades de negocio y transformación son para quienes se atreven a encarar la innovación y la adopción temprana, esto dicho haciendo referencia al ciclo de vida de la adopción de tecnologías que presenta 5 momentos:
- la innovación,
- la adopción temprana,
- mayoría temprana,
- mayoría tardía
- y rezago.

En esta parte se hace énfasis en el riesgo que se debe de tomar al hacer una innovación y una adaptación temprana para explotar el potencial de la Economía Naranja.

Se hace necesario pensar sobre la manera en que se calcula toda para esta industria ya que anteriormente se han establecido desacuerdos entre la relación de la cultura y la economía, para esto se cuenta con modelos de análisis, guías para el mapeo de industrias culturales y creativas, y hasta un acuerdo multilateral para un marco de estadísticas culturales (Hernández, I et al. 2017)

En algunas publicaciones se establece que la cultura se considera como un bien público y eso hace que caiga en lo común, por lo tanto causa mucho daño a aquellos artistas y creativos ya que no hay un reconocimiento a su actividad como un trabajo legítimo y no tienen acceso a una remuneración adecuada. Es por esto que muestran tantas cifras sobre el impacto económico que tiene la Economía Naranja y dejar en claro que la cultura no es gratis, sino que es un sector productivo y rentable.

IV. La Economía Naranja caso Colombia

En el caso de la economía en Colombia se establecieron 32 actividades de inclusión total en la Economía Naranja. Entre ellas se encuentran la fabricación de joyas, accesorios, instrumentos musicales, juegos, rompecabezas y juguetes, la edición de libros y revistas, la producción de

películas cinematográficas, la enseñanza cultural, y la creación literaria, musical, teatral, entre muchas otras. (Buitrago,F. y Ducke 2013)-

De igual manera, se establecieron 69 actividades de inclusión parcial en la Economía Naranja, lo cual quiere decir que sólo ciertos productos o servicios son tomados en cuenta, teniendo un total de 101 actividades involucradas.

Para la delimitación de actividades parciales se establecieron los siguientes criterios:
- Para la industria manufacturera (artesanías) se toma en cuenta sólo la transformación de materia prima y elaboración a mano, y la propiedad intelectual o derechos de autor.
- Para el turismo cultural son tomados en cuenta sólo las actividades de prestación de transporte con temáticas asociadas al patrimonio cultural, desarrollado por prestadores de servicio turísticos. Igualmente las actividades de alojamiento y hospedaje en inmuebles declarados como bienes de interés cultural, o que estén ubicados en sectores históricos declarados, y por último todas aquellas actividades asociadas con la cocina tradicional, así como los servicios de bares y restaurantes ubicados en sitios de interés turístico.
- En cuanto al comercio es sólo tomado en cuenta aquellos productos "naranjas" comercializados, los cuales son aquellos bienes y servicios culturales derivados de las actividades económicas naranjas.

En cuanto a la información estadística disponible publicado en la Revista DANE, Departamento Administrativa Nacional de Estadística, (González, A et al., Revista DANE ,2019) podemos encontrar que la participación del valor agregado de la Economía Naranja con respecto al valor agregado nacional se ubica en promedio para los años 2014-2018 en 1,9%, lo cual es un porcentaje significativo tomando en cuenta que es un sector que recientemente se ha popularizado.

De acuerdo a la encuesta de calidad de vida 2018 elaborada y publicada también por el DANE, el 52,6% de los jefes, jefas o cónyuges del hogar de la Economía Naranja, manifiestan que los ingresos de su hogar cubren los gastos mínimos, el 26,2% afirma que cubren más que esos gastos y el 21,2% señala que no alcanza a cubrirlos. (Finlev, T. et al., 2017)-

El módulo de micro empresas en el 2018, DANE afirma que según grupos de edad, el mayor porcentaje de micro empresas relacionados con actividades naranjas están dirigidos por personas entre los 25 y 54 años (72,7%), seguido por el grupo de más de 55 años (14,0%) y por último se encuentra el grupo de menos de 24 años (13,3%). De igual forma afirma que por nivel educativo, las personas ocupadas que hacen parte de los micro empresas de Economía Naranja se concentran principalmente en el nivel educativo superior o universitaria, siendo 105.460 la cantidad de micro empresas con esta característica, seguida de formación secundaria y, por último, con la menor cantidad de micro empresas, las personas ocupadas con formación de educación primaria.

En este documento se presenta un panorama general de la Economía Creativa o Naranja, y se destaca su papel en la promoción del crecimiento económico, el desarrollo inclusivo y la innovación. Se han señalado varios puntos importantes: en primer lugar, los sectores creativos parecen estar caracterizados por un elevado crecimiento de la productividad; en segundo lugar, son una importante fuente de creación de trabajo para los jóvenes, no solo en los sectores puramente creativos, sino también en las industrias tradicionales; por último, la creatividad es uno de los principales impulsores del proceso de innovación en una sociedad. De hecho, los productos creativos son únicos y disruptivos, y tienen el potencial de inspirar a toda la sociedad a través de la generación de ideas y, por ende, de innovaciones.

El Departamento Administrativo Nacional de Estadística (DANE) dispone de una cuenta satélite de cultura y Economía Naranja en donde registra resultados de producción y generación de ingreso de las economías creativas, entendidas como las actividades que "generen derechos de autor y propiedad intelectual, como marcas y patentes". Así, el valor agregado de las industrias creativas en 2018 fue 15.645 mil millones de pesos, es decir, el 1,8% del valor agregado total. Las industrias culturales (editorial, audiovisual, fonográfica, entre otros) fueron las que más contribuyeron a la generación de valor agregado con 42,2%, seguido de creaciones funcionales (medios digitales, software de contenidos, diseño y publicidad) con 34,2% y de artes y patrimonio

(artes visuales, artes escénicas, espectáculos, turismo, patrimonio cultural, material e inmaterial, entre otros) con 23,6%.

Si bien estos resultados reflejan un paso importante en la medición de nuevos sectores relevantes para la economía, su metodología no está exenta de críticas. El Consejo del DANE también estableció que existen otras 69 actividades que pertenecen parcialmente al sector, ya que solo algunos de sus productos están relacionados.

V. La clasificación actividades de la Economía Naranja

Lo anterior, en el caso de Colombia, promueve la necesidad de definirse con mayor precisión qué actividades hacen parte de la Economía Naranja, para darle mayor claridad al concepto y facilitar su correcta medición. Esto puede resultar fundamental no solo para conocer su importancia en la actividad económica mexicana, sino para evaluar su posicionamiento frente a otras economías más avanzadas.

Esta clasificación estaría orientada a las actividades que pueden considerarse como motores de una economía emergente, por lo cual en primer lugar.

1. Configurar la economía creativa y cultural como una tendencia global.
2. Definir los ámbitos de innovación en los sectores de la economía nacional.
3. Aprovechar las actividades de innovación y cultura desde el punto de vista de su grado o nivel de sostenibilidad.

Esto podría dar respuesta muchas interrogantes sobre si esta economía puede llegar a ser útil para el desarrollo de la economía de un país, y como cualquier otro proyecto de nación, se debe monitorear, medir y evaluar como en el caso de Colombia. Esto puede ser la evidencia más factible de un proyecto de nación.

VI. El futuro de la Economía Naranja

Es probable que en los próximos años, la economía orientada a la creatividad y actividad cultural tiene el potencial para contribuir a mejorar la calidad de vida no solo económicamente sino también personalmente en todas las economías, incluyendo México, pues no solo permite el desarrollo de nuevos segmentos del mercado sino que da mayor énfasis a la calidad de vida de las personas, como el enriquecimiento cultural, apreciar sus valores, costumbres y tradiciones. (Finlev, T. et al., 2017)-

Las medidas adoptadas actualmente para cultivar, amplificar y empoderar el trabajo de los innovadores culturales de todo tipo —artistas, arquitectos, narradores, animadores y otros— pueden rendir sus beneficios produciendo un futuro más incluyente y sostenible para todos. Sin embargo, este resultado se producirá sólo si el gobierno, las empresas y las comunidades deciden actuar y dejar de lado los medios tradicionales de desarrollo para tomar nuevas directrices.

Igualmente, es evidente que durante el proceso de cambio, las sociedades y gobiernos se encontrarán con retos y obstáculos, que tarde o temprano deberán de ser solucionados mediante las actividades naranjas o creativas, así impulsando este tipo de economía.

Este proyecto de cambio es un instrumento estratégico destinado a ser aprovechado por las personas, las organizaciones para el desarrollo económico y los sectores de la sociedad. Para el desarrollo e implementación de este proyecto estratégico, se podrían utilizar los ejemplos de desarrollo de la Economía Naranja en otros países. Estos serían más que consejos, sino recomendaciones que pueden ser utilizas para cambiar la perspectiva y así emprender nuevas iniciativas.

VII. Reflexiones finales

Al desarrollar reflexiones sobre la Economía Naranja, podemos decir que se caracteriza por los bienes y servicios que son generados a base de propiedad intelectual, además que son un motor de desarrollo y que puede tener una expansión potencial en cualquier economía en desarrollo y desarrollada. Estas reflexiones pueden catalogarse como sigue:

En primer lugar, considerar que la Economía Naranja, también tiene un impacto económico que se refleja en rentabilidad y por los empleos que genera.

En segundo lugar, el actual esquema en que los negocios participan, están basados en el sistema capitalista con dos objetivos principales: crear valor para compartirlo, es decir, cooperar, o copiar el valor existente, lo que se traduce en competir. La Economía Naranja es un ejemplo de valor social que permite la sustentabilidad de sus emprendimientos, para esto, combina elementos como la empatía y un profundo respeto por las culturas ancestrales, que de tal manera construye un vínculo significativo con los consumidores, quienes son un eje primordial en el proceso de creación de los bienes y servicios.

En tercer lugar, estos proyectos sobre Economía Naranja, están estrechamente relacionados con los objetivos de Desarrollo Sostenible, que son un compromiso de todos los países para tener una sociedad sin hambre, que cuide el medioambiente y que sea responsable con el uso de recursos.

En cuarto lugar, por último, fue posible advertir que durante el proceso de crecimiento de los emprendimientos Naranja, surgen retos directamente relacionados con la gestión administrativa y financiera de las empresas, que muchas veces no son superados y conllevan al fracaso de los mismos.

De acuerdo a lo anterior, es de vital importancia que todos los actores sociales, como el gobierno, la empresa privada, academia y la sociedad civil actúen cooperativamente para proveer a los artistas, creativos y emprendedores naranja con las herramientas necesarias para que su impacto social pueda seguir beneficiando a muchas personas y comunidades.

Es posible tomar en consideración que este tipo de actividades creativas deben ser impulsadas y preservadas ahora más que nunca, el mundo no es ya el mismo y con el paso de los años se irá deteriorando aún más. La Economía Naranja puede ser la industria adecuada que sigue los objetivos de desarrollo sostenible propuestos por la ONU y combina el desarrollo social con un fuerte impacto económico positivo.

Finalmente podemos concluir que puede existir una ruta para el emprendedor de la economía naranja; primeramente se tiene que identificar qué actividades naranja desarrolla, después identificar su ubicación en el ecosistema de valor (creador, productor, distribuidor, circulación o audiencia), luego se identifica el modelo de gestión (a qué tipo de unidad de negocio se refiere) y finalmente utilizar los programas e instrumentos que el gobierno ofrece como apoyo a estos emprendedores naranjas.

Referencias

ABC de la economía naranja. 2019
https://drive.google.com/drive/u/0/folders/1jWdswYVIy_4FMpQLDXgwWeNBEgxysrGp
Benavente, J., & Grazzi, M. (2017). Políticas públicas para la creatividad y la innovación: impulsando la economía naranja en América Latina y el Caribe. Washington: Banco Interamericano de Desarrollo
Buitrago,F. y Ducke, I. Banco Interamericano de Desarrollo, B., Márquez, I. D., & Restrepo, P. F. B. (2013). La economía naranja: una oportunidad infinita. Inter-American Development Bank.
Finlev, T. et al. Institute For The Future - Banco Interamericano de Desarrollo BID
González, A et al. (2019). Economía naranja: primer reporte 2019. DANE

Hernández,I.,Ospina, P., Londoño, J., & Tello, C.. (2019). Economía naranja o economía creativa: una discusión conceptual respecto a la Ley 1834 de 2017. Researchgate

Mejía, L. F. et al. FEDESARROLLO. centro de investigación económica y social 2019

Rodríguez, D.. (2019). La economía naranja en Latinoamérica y el Caribe: ¿innovaciones empresariales que crean valor social?. Research Gate

Proyecto de Investigación en Cuerpos Académicos: Las Dimensiones de la Responsabilidad Social Empresarial (RSE)

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I. Introducción

Las empresas, para entenderlas, es necesario comprender el entorno donde están ubicadas, estas no podrían existir si no hubiera una relación con los clientes y con los proveedores y tampoco se lograría esta subsistencia sino estuvieran vinculadas por la competencia, las leyes que dicte el Gobierno (impuestos), el interés de consumidores, el respeto al medio ambiente... En definitiva, esto hace necesario conocerlas desde su entorno: interno y externo

II. Entorno Interno de las Empresas

El Entorno interno es el que esta estrechamente relacionado con la empresa, es el que afecta directamente al ambiente organizacional, al medio ambiente, a los trabajadores, a sus condiciones de trabajo, a su seguridad, a la calidad y peligrosidad de sus productos o la confiabilidad de sus servicios, es decir concierne a todo aquello donde la empresa tiene un mayor control y por lo tanto mayor responsabilidad.

El libro Verde (2011) lo define como las prácticas responsables en lo social afectan en primer lugar a los trabajadores y se refieren a cuestiones como la inversión en recursos humanos, la salud y la seguridad, y la gestión del cambio, mientras que las prácticas respetuosas con el medio ambiente tienen que ver fundamentalmente con la gestión de los recursos naturales utilizados en la producción

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III. El entorno Externo de las Empresas

El entorno externo, es aquel que esta formado por un gran número de factores que influyen en la empresa, pero no pertenecen al sistema de gestión, y el cual no tienen gran injerencia o difícilmente la tienen en las decisiones de esta, es decir son todos los elementos ajenos a la organización que son relevantes para su funcionamiento. Esto incluye socios comerciales, proveedores, consumidores, autoridades publicas y ONG defensoras de los intereses de la Sociedad y el Medio Ambiente en otras palabras los identificados como stakeholders o grupos de interés. Este entorno sobrepasa las fronteras, se extiende hacia las inversiones multinacionales y las cadenas de producción globalizada.

Estos entornos de la empresa deben tomar conciencia e interesarse en la preservación del planeta, lo esperado, es que emigren hacia una modalidad enfocada en aportar las condiciones que garanticen no afectar la calidad de vida y del medio ambiente del planeta, modificando así su manera de hacer las cosas llevándolas a convertirse en empresas socialmente responsables.

IV. Dimensiones de la Responsabilidad Social

Una empresa socialmente responsable es aquella que fundamenta y lleva a cabo su misión y visión común perfectamente alineada al objetivo para el cual fue creada la sociedad. La acción responsable de la empresa debe ser integral, debe implicar el análisis y la definición del alcance que la organización tendrá, en relación con las distintas necesidades, expectativas y valores que conforman el ser y quehacer de las personas y de las sociedades con las que interactúa; de esta forma sus niveles de responsabilidad se pueden entender. (CEMEFI 2020),

Toda organización sin importar su enfoque o su giro están formadas por los dos entornos ya mencionados que deben estar estrechamente vinculados para lograr los resultados óptimos esperados. Son organizaciones que se comprometen y se vinculan con su entorno y tienen asertiva capacidad de respuesta frente a los efectos e implicaciones sobre los diferentes grupos de interés con que se relacionan las organizaciones

Las empresas socialmente responsables comprenden cuatro dimensiones fundamentales vinculadas directa o indirectamente con la empresa: la económica, la social y la ecológica, y una cuarta dimensión: la Responsabilidad Social Universitaria, que si bien, no es considerada en las investigaciones que analizan la Gestión de Empresas Socialmente Responsables, se ha considerado incluirla por su destacado valor en la formación ética de los individuos y la responsabilidad de su formación educativas, ya que son precisamente las universidades, quien han logrado diseñar sus perfiles de egreso, contemplando la vinculaciones de sus egresados a la conciencia y participación social en sus comunidades en paralelo con su desarrollo como ciudadanos y profesionalmente en sus campos de trabajo.

En este capitulo se definirán cada una de las dimensiones de la Responsabilidad Social en relación con el entorno interno y externo:

La Dimensión Económica
La Dimensión Social
La Dimensión Ecológica
La Dimensión Social Universitaria

Las acciones en el contexto de la RSE, tanto en la dimensión interna como en la dimensión externa deben encontrar un equilibrio, deben trabajar en conjunto, no excluyen dimensiones, ni ámbitos, ni interlocutores. En este capitulo nos enfocaremos a los clasificados por Waddock et al. (2002) como primarios que se refieren a aquellos cuya participación es absolutamente necesaria para la supervivencia de la empresa, es decir, empleados, proveedores, consumidores y gobierno;

Dimensión Económica de la RSE

En esta dimensión podemos señalar aquella que involucra en sus aspectos generales tres áreas perfectamente definidas: la ética de los negocios, la eficiencia económica y los negocios verdes. Esta dimensión se enfoca en maximizar por un lado el beneficio económico de la empresa, y por tanto de los accionistas, y por otro lado en maximizar su valor a la sociedad.

Las empresas reflejan la obligación de ser productivas y rentables, así como de satisfacer las necesidades de los consumidores de cada sociedad (Aupperle et al., 1985; Carroll, 1979; Maignan, 2001). Bajo este contexto estas distinguen cuatro prioridades:

1. Maximizar las ganancias
2. Controlar estrictamente sus costos de producción
3. Planear el éxito a largo plazo
4. Mejorar siempre los resultados económicos

En este sentido las organizaciones tienen prioritario la mejora continua con enfoque al compromiso de ofrecer productos de calidad o brindar servicios altamente competitivos y de excelencia según sea su giro.

El compromiso debe ser visible para la sociedad, y esta visibilidad se establece con insumos idóneos y con un equilibrio en precios competitivos en el mercado y accesibles a la sociedad distinguiéndose por su deber social.

Dimensión Económica Interna

Desde el punto de vista interno el entorno económico enfoca su responsabilidad a la generación y distribución del valor agregado entre colaboradores y accionistas, considerando no sólo las condiciones de mercado sino también la equidad y la justicia. Sin dejar a un lado el objetivo de la empresa de generar utilidades, y de ser sustentable. (CEMEFI). Esta formada por las prácticas responsables para satisfacer las necesidades del presente sin comprometer los recursos para las generaciones futuras.

Se debe considerar que no es prioritaria la RSE interna, sino que el mundo globalizado exige se hagan extensivas al ámbito, local, nacional e internacional, presentándose como gran reto para las empresas, que quieren sobrevivir a los mercados, alineando en su planeación una gestión estratégica de la RSE, donde los gestores deberán ser personas capacitadas, actualizadas y certificadas en este tema.

El entorno interno de la empresa bajo el esquema de RSE que tiene un impacto directo se ha clasificado en trabajadores y transparencia

Bajo este esquema de RSE no debe entenderse como obligaciones que tiene la empresa frente a la sociedad, sino que debe definirse en términos de creación de valor, de valor social.

Trabajadores

Incluye a todas aquellas personas que desarrollan su trabajo en la organización con un contrato, laboral o profesional, y a cambio de una retribución dineraria y/o en especie, ya sean directivos o no, abarca tanto a los empleados directos como a aquellos otros cuya relación contractual la tienen con una empresa empleadora intermediaria (subcontratos o empresas de trabajo temporal).

Los trabajadores son considerados el capital humano y representan el eje central de todas las empresas y organizaciones. De allí la importancia de generar comportamientos basados en políticas internas que sigan los protocolos y lineamientos establecidos en los diferentes Códigos y manuales de RSC.

La RSE, implica no sólo el reconocimiento y respeto de los derechos laborales establecidos en la legislación, sino que va más allá, es un esfuerzo por invertir en el desarrollo personal y profesional de sus empleados, así como proporcionar una mejora en las condiciones y calidad de

vida en el trabajo e incluirlos en la toma de decisiones en las que puedan proporcionar conocimiento, es decir involucrarlos en la gestión de la empresa.

Seguridad y Salud en el lugar de trabajo.

Estas practicas tienen como objetivo la prevención y la seguridad del trabajador, de igual manera los que están laborando directamente con la empresa como el que labora con una empresa subcontratada. La tendencia de las empresas y las organizaciones a incluir criterios de salud y seguridad en el trabajo en su régimen de contratación ha permitido adoptar regímenes generales de contratación basados en requisitos uniformes que deben ser respetados por los programas de formación y de gestión de la salud y la seguridad de los contratistas, los cuales permiten dar la aprobación inicial del contratista y vigilar la mejora continua del programa. (libro Verde 2001) Programas que garanticen que van de acuerdo con los lineamientos de RSE dictados por las diferentes instituciones certificadoras.

Transparencia

La información que se proporcione debe permitir conocer en todo momento la situación de la empresa, así como la existencia de cualquier conflicto de interés que afecte el patrimonio de esta. La transparencia es esencial para generar confianza y para asegurar la viabilidad de una organización en el largo plazo. La transparencia consiste en la elaboración y la transmisión de información relevante para los grupos de interés a través de los diferentes canales de comunicación. La Comisión Europea (2002) define la transparencia como un componente esencial en toda organización, ya que contribuye a mejorar practicas y comportamiento, al tiempo que permite cuantificar resultados.

Los ejercicios de transparencia de las empresas y las organizaciones deben estar siempre orientados a gestionar los impactos y posibles riesgos y tendrá mayor claridad cuando la empresa logre un alto nivel de integración de RSE en sus políticas, estrategias, planes, cultura de la empresa…

Entorno Externo

La responsabilidad social económica se extiende al entorno externo donde se incluye un amplio número de interlocutores: socios comerciales y proveedores, consumidores, autoridades públicas y ONG defensoras de los intereses de las comunidades locales y el medio ambiente. Destacando Proveedores y consumidores

Consumidor

El consumidor responsable es el que ha adaptado sus hábitos de consumo a sus necesidades reales y optando en el mercado por productos y servicios que favorezcan la conservación del medio ambiente y la igualdad social y además consideran la conducta de la empresa que ofrece el producto o servicio.

Los consumidores responsables se abstienen de utilizar productos dañinos o que afecten al planeta, sin embargo se interesan por la procedencia del producto, su producción, su manufactura, los regímenes opresivos, los derechos humanos, las relaciones laborales, el uso experimental de animales y la filantropía, sin considerar su procedencia nacional o internacional sino que evalúan a las empresas en su comportamiento responsable y en el comercio justo y analizan los efectos que estos pueden producir, a corto y largo plazo y evalúan a las empresas en su comportamiento responsable y en el comercio justo.

Este consumo responsable se puede clasificar en ético, verde y social. El consumo verde tiene preocupaciones por el impacto ambiental al adquirir sus productos o servicios, mientras que los denominados consumidores éticos se enfocan en lo relativo a la moral en sus decisiones de compra o de adquisición de servicios, distingue entre necesidades reales e impuestas, solo

buscan satisfacer las necesidades reales y por último el consumo social es el que contribuye a la creación de empleo, garantiza condiciones de vida de calidad; para preservar el equilibrio de los ecosistemas y para mejorar el nivel de ingresos de los que participan de las redes solidarias combatiendo, de este modo, la exclusión social y el daño ambiental.

Proveedores

Los proveedores son todos aquellos que venden algo a la empresa para que ésta pueda desarrollar sus actividades, son aquellos que suministran los materiales y mercancías que se requieren para producir el bien que la empresa produce y /o comercializa de forma directa, tales como conocimiento, materias primas, transporte, logística, etc.

Los proveedores socialmente responsables deben verificar que se respete la legislación de su país y las convenciones internacionales, y que no violan derechos básicos (derechos humanos, declaraciones de la OIT, derechos de la infancia...)

Las empresas deben ser conscientes de que sus resultados sociales pueden verse afectados por las prácticas de sus proveedores a lo largo de toda la cadena de producción. Por lo tanto, deben comprobar que ellos se manejan apegados a los estándares evaluados por los certificadores de RSE.

El Pacto Mundial describe algunos principios a considerar de los proveedores

Cumplimiento de la legalidad
Protección de la información
Integridad y transparencia en la actuación
Respeto por las personas y los derechos humanos
Protección del medioambiente.

Gobierno

Su aportación es de gran impacto en materia de RSE, ya que su rol como regulador, facilitador y promotor en el desarrollo de las normativas, además al exigir la transparencia en la rendición de cuentas, y puede promover la inversión socialmente responsable, creando políticas fiscales favorables, incentivando la inversión en sectores que estén involucrados en medio ambiente, calidad de vida...

La agenda 21 de la ONU recomienda un involucramiento que considere la eficiencia en los procesos de producción y reducir el consumo innecesario en el proceso del crecimiento económico, tomar en cuenta las necesidades de desarrollo de los países, fortalecer los valores, promover modelos de producción y consumo sostenibles, impulsar el uso de tecnología ecológica y alentar la reducción de materiales que se utilizan en la producción de bienes y servicios.

Los gobiernos, en vinculación con el sector empresarial, tienen la posibilidad de incrementar los esfuerzos en el uso de energía y los recursos naturales en forma económicamente eficaz y ecológicamente racional y alinearse con los lineamientos de responsabilidad social.

Dimensión social

El rol social de la empresa implica dos aspectos relevantes: El primero se refiere a su vínculo con la sociedad, y el segundo se refiere a sus actividades para garantizar la integración y el desempeño de los Recursos Humanos. Este último constituye el grupo de interés más importante y difícil de gestionar, por lo que el compromiso de las organizaciones con el mismo es necesario e indispensable durante todo el tiempo de la relación.

Dimensión social interna

En cuanto a la Dimensión social interna, se pretende que las organizaciones con sentido de responsabilidad social, asuman el reto de cumplir con todas las expectativas sobre la gestión y desarrollo de los recursos y capital humano, partiendo de la base de que es necesario promover alto grado de respeto entre sus colaboradores, que puedan ofrecer a los mismos sueldos y salarios dignos y competitivos, ofreciendo un ambiente laboral altamente satisfactorio para todos sus empleados y ofreciendo oportunidades de capacitación y desarrollo para todos ellos. Las organizaciones tienen la responsabilidad de llevar a cabo autoevaluaciones en forma permanente, con la finalidad de buscar la mejora continua en todos sus procesos.

Todas las personas que participan en la empresa, incluyendo a los proveedores, tienen la responsabilidad de cuidar y mejorar la calidad de vida de todos los participantes en el trabajo, así como en el desarrollo personal y profesional de cada uno de ellos.

La Dimensión interna es aquella que, de una u otra forma, afecta a todos sus empleados, sus condiciones de trabajo, el grado de riesgo al manejar sus materiales o productos terminados, el abastecimiento de las materias primas que utilice la empresa, el entrenamiento y capacitación del personal y la evaluación en el desempeño de las tareas de sus trabajadores (Fernández 2010).

Ena, B. Delgado (2012: p,p, 58-59) afirman que "la Responsabilidad Social Interna se entiende como la parte de la responsabilidad social corporativa que gestiona de manera social, sostenible, ética, humanista y solidaria los recursos humanos de una empresa".

La Dimensión Interna, de acuerdo con Guzmán, G. M. Gabriela (2016), está vinculada directamente con el aspecto humano y social de las organizaciones, por lo que es por medio de una eficiente Gestión de los Recursos Humanos que se puede lograr el bienestar y satisfacción de su personal, como principal grupo de interés dentro de las mismas.

Es imprescindible que las organizaciones comprendan que el Recurso Humano es el que decide, en buena medida, la supervivencia, desaparición o éxito de la compañía; todos los Gerentes que forman la estructura organizacional participan en el compromiso de los empleados, la planeación y organización de las actividades necesarias para lograr los objetivos de la organización; establecen las condiciones laborales, los programas de capacitación y desarrollo del personal, participan en la creación de un ambiente de trabajo motivador y participativo, de trabajo en equipo y proporcionarles una mejor calidad de vida.

Werther y Davis (2008: p. 25) establecen que las actividades de los empleados "pueden concebirse en términos de sistemas de acciones interrelacionadas para producir resultados que ayuden a que la organización logre sus objetivos e incremente su productividad; tales actividades están enfocadas a obtener, desarrollar, evaluar, mantener y conservar una fuerza de trabajo efectiva".

Es conveniente aclarar que las organizaciones actuales van más allá de administrar recursos económicos, tecnológicos y humanos; cada vez es más importante el diseño e implementación de nuevas estrategias, con la finalidad de lograr sus objetivos. Uno de los aspectos clave es hacer énfasis en el grado de creatividad de los empleados, la cual depende en gran medida de la calidad de la estructura social interna, es decir, de sus trabajadores y de sus relaciones internas en la misma.

Kirschner (2006) señala que: "La mirada sociológica revela dos fenómenos de consideración para la comprensión de su futuro: Por un lado, la empresa es una entidad por sí misma, que encuentra su fuerza y eficacia, ya no en las virtudes y en las posibilidades de sus dirigentes, sino en el valor creado de su propio sistema de funcionamiento. Por otro lado, es autónoma porque se volvió social, de tal manera que ya no puede limitar su eficacia únicamente al lucro económico, sino que también fabrica empleo. Tecnología, solidaridad, forma de vida y cultura".

Por otra parte, algunos autores como Carneiro (2004) y Fernández (2005) señalan algunos aspectos importantes con respecto a la RSE interna, la cual se relaciona con la idea de contrarrestar y descartar los efectos negativos que produce la relación de trabajo en el personal, por lo que se recomienda a las empresas lo siguiente:

Las organizaciones "no pueden seguir manteniendo comportamientos y actitudes de carácter impositivo, y deben transitar por el camino del fomento de la negociación colectiva, la evaluación

del desempeño, la formación de grupos de mejora o de conocimiento, introducción de retribución variable, estructuras organizativas más planas y auge en la participación" (Carneiro, 2004).

Fernández (2005) comenta que la RSE interna se sustenta en el concepto de calidad de vida laboral, y afirma que "la forma actual de organización de la actividad económica ha llevado a la vinculación indisoluble entre vida personal y trabajo, por lo que la calidad de vida de una persona vendrá condicionada por su calidad de vida laboral".

Una organización socialmente responsable debe contemplar todos los aspectos que involucran a las personas dentro de la misma, desde su contratación, la oportunidad de un empleo y su desarrollo profesional, durante todo el tiempo que labore en la empresa, protegiendo su salud, seguridad y calidad en el trabajo, hasta que se efectúen cambios en la estructura organizacional.

En la actualidad es necesario que las organizaciones asuman su responsabilidad de implementar cambios trascendentales, en relación con la Gestión de los Recursos Humanos, a fin de impulsar iniciativas para diseñar e implementar nuevas estrategias y políticas en relación con el capital humano y social con que cuentan las organizaciones, con el objetivo de llevar a mejores prácticas que posibiliten el involucramiento del personal en la toma de decisiones, en la atención al clima laboral, implementar nuevas formas de conocimientos y desempeño y nuevos sistemas de remuneración al personal.

Dimensión sociocultural y política externa

Podemos decir que hoy en día, las organizaciones buscan ser sostenibles y sustentables, por lo que cada vez más se preocupan por lograr altos estándares de calidad y obtener mayor grado de productividad. Para lograr esto, se requiere cumplir con todas las legislaciones y normas vigentes sobre el control y mejoramiento del medio ambiente, así como respetando todos los factores que rodean el medio ambiente donde se desarrollan, así como orientar sus estrategias hacia las gestiones del talento humano.

En esta dimensión las organizaciones tienen la responsabilidad de llevar a cabo todas las acciones y aportaciones que consideren convenientes para que tanto en las personas como en la comunidad exista espíritu empresarial y desarrollo de la comunidad.

La Dimensión externa exige que la empresa genere un valor agregado, si se define como socialmente responsable. En este punto intervienen todos los colectivos que se relacionan con la empresa, tales como: proveedores, distribuidores, intermediarios, clientes y consumidores, los cuales asumen su responsabilidad en la cadena de valor para darle a la empresa un valor agregado, a fin de cumplir con su responsabilidad social.

Ferrer, M. Alejandra (2013) comenta que: "Las iniciativas sociales propias de la dimensión externa le dan carácter de estrategia competitiva a la responsabilidad social de las organizaciones. De esta manera, y más allá de la generación de beneficios económicos, el beneficio social que puede generar una empresa le permite, de acuerdo a Gómez y Luis-Bassa (2005): a) mejorar su imagen para atraer consumidores, inversores y/o capital humano (Rendueles, 2010); b) vincular la empresa con sus grupos de interés para fortalecer su cadena de distribución, motivar a gerentes y empleados y acercarse a autoridades gubernamentales; c) posicionar una marca o producto por asociación a una causa social para aumentar su participación de mercado; d) adquirir nuevas destrezas para atender otros públicos y adaptarse al entorno social; e) conocer las necesidades del mercado para idear y penetrar con nuevos productos; y, f) adquirir ventajas competitivas para lograr diferenciación y credibilidad, y construir lealtad de los consumidores" (Ramírez y col. 2010).

La Responsabilidad Social de las empresas abarca también la integración de las mismas a su entorno local, nacional y global. En cuanto a su entorno local, precisan de un entorno adecuado para su producción y venta de sus productos y/o servicios; adecuadas redes de comunicación y un medio ambiente limpio.

Las empresas tienen también la responsabilidad de participar en diversas actividades contaminantes: polución acústica, lumínica y de las aguas; contaminación del aire, del suelo y

problemas ecológicos relacionados con el transporte y la eliminación de residuos, a fin de contribuir al desarrollo de las comunidades donde interactúan.

En resumen, podemos afirmar que, de acuerdo con Antelo & Robaina (2015): "la responsabilidad Social Empresarial es el compromiso continuo de contribuir al desarrollo económico sostenible, mejorando la calidad de vida de los empleados y sus familias, así como la de la comunidad local y de la sociedad en general".

Una empresa socialmente responsable es aquella cuyos directivos y propietarios son conscientes del efecto que las operaciones de la organización pueden ocasionar al interior y al exterior de la organización.

Henríquez & Orestes (2015). Agregan que: "la Responsabilidad Social Empresarial no pretende que los integrantes de una organización actúen éticamente, sino que la compañía promueva este valor y lo haga propio de su cultura organizacional".

Una de las dimensiones de la Responsabilidad Social de las Empresas está estrechamente vinculada a los derechos humanos. Los derechos humanos son una actividad muy compleja que plantea problemas políticos, jurídicos y éticos. Por supuesto que las empresas se enfrentan a situaciones complicadas, por ejemplo, el modo de determinar que tipo de responsabilidades caen dentro de su competencia y cuales caen dentro del ámbito de la responsabilidad gubernamental, como asegurarse de que sus socios comerciales están respetando los valores que ellas consideren fundamentales y cuál es el enfoque que deben adoptar.

Dimensión Ambiental (o ecológica)

El hablar del entorno ambiental desde una perspectiva empresarial, debería convertirse en más que una sensibilización y convertirse en una obligación esencial en todo nivel de planeación, debido a que cualquier factor de error sobre el mismo, perjudica a su entorno, qué es su misma fuente de crecimiento al interior de la organización y generaría un impacto negativo de la sociedad a la que responde por los productos y servicios, que en segundo término dañaría su propia imagen.

Por eso, es importante el análisis de la dimensión ambiental, que de acuerdo Libro Verde de la Comisión de las Comunidades Europeas en Bruselas en el 2001, señala lo siguiente: "la responsabilidad social de las empresas no se debe considerar sustitutiva de la reglamentación o legislación sobre derechos sociales o normas medioambientales, ni permite tampoco soslayar la elaboración de nuevas normas apropiadas. En los países que carecen de tales reglamentaciones, los esfuerzos se deberían centrar en la instauración del marco legislativo o reglamentario adecuado a fin de definir un entorno uniforme a partir del cual desarrollar prácticas socialmente responsables".

Fernández (2008, citado por Vélez y Cano 2016) señala que la responsabilidad social ambiental refiere a los diferentes programas o planificaciones que aplica una empresa, una organización a nivel gubernamental o de manera individual para preservar o salvaguardar la naturaleza en conjunto y a sus futuras generaciones.

Es claro el mensaje, no es sólo cumplir en este punto, sino ir más allá, que independientemente de las regulaciones de gobierno, políticas públicas, normativas y de certificaciones ambientales, es crear una gestión del impacto ambiental, en donde se lleve un control de los recursos naturales utilizados y de cómo devolverlo de nuevo al ambiente, el conocer a nuestros socios comerciales y proveedores y sus procesos que realizan con sus recursos o materia prima, la relación con los consumidores y comunidades locales sobre su opinión al respecto y hasta las organizaciones no gubernamentales saber qué es lo que exigen y como llevar a cabo esos intereses y como convertirlos en beneficios para todos los involucrados, lo que lleva a la organización poner énfasis en el desarrollo de la sostenibilidad y sustentabilidad. De acuerdo con Vélez y Cano (2016) México posee normas que pretenden ayudar a las organizaciones u empresas a contribuir al desarrollo sostenible, es decir, satisfacer las necesidades actuales de la población sin comprometer a los recursos naturales y al medio ambiente.

Para el Instituto Ethos de Empresas y Responsabilidad Social que es una organización de la Sociedad Civil de Interés Público en Brasil y cuya misión es movilizar, crear conciencia y ayudar a las empresas a administrar sus negocios de una manera socialmente responsable, convirtiéndolos en socios en la construcción de una sociedad justa, equitativa y sostenible, señala que la Responsabilidad Social Empresarial implica prácticas de diálogo y gestión que resulten en la calidad de la relación de las compañías con la comunidad y los demás públicos como empleados, consumidores, clientes, proveedores, medio ambiente, gobierno y sociedad. "Es la gestión que se define por la relación ética y transparente con todas las empresas públicas con las que se refiere y el establecimiento de metas empresariales que fomenten el desarrollo sostenible de la sociedad, preservando recursos ambientales y culturales para las generaciones futuras, respetando la diversidad y promoviendo la reducción de las desigualdades sociales" (Jaramillo, 2011).

De acuerdo con el Consejo Mexicano de filantropía (CEMEFI), la RSE, es el compromiso consciente y congruente de cumplir integralmente con la finalidad de la empresa, tanto en lo interno como en lo externo, considerando las expectativas económicas, sociales y ambientales de todos sus participantes, demostrando respeto por la gente, los valores éticos, la comunidad y el medio ambiente, contribuyendo así a la construcción del bien común.

Cajiga (2013) señala que la dimensión medio ambiental o ecológica, la gestión del impacto ambiental y de los recursos naturales se clasifica en: interna y externa

Dimensión medio ambiental o ecológica interna

La Dimensión medio ambiental o ecológica interna, implica la responsabilidad total sobre las repercusiones ambientales de sus procesos, productos y subproductos; y, por lo tanto, la prevención, y en su caso remedio, de los daños que causen o pudieran causar. Este punto implica para la organización el estudio y medición de los impactos que genera sus procesos, por ejemplo: el ruido, vapores, expulsiones de gases, radiación, temperatura y los riesgos laborales que pudieran ocasionarse al personal por la naturaleza del proceso mismo. En este sentido, es todo aquello relacionado con el ambiente físico y ergonómico que los individuos realizan en sus labores diarias, así como también la cultura del cuidado de todo los materiales orgánicos e inorgánicos dentro de las instalaciones manejarse con una actitud de cuidado y conservación para el bienestar del ambiente físico y laboral, persiguiendo que las acciones de la organización y de los individuos sea con ética, transparencia y legalidad y esto contribuye con la sostenibilidad y sustentabilidad.

Dimensión medio ambiental o ecológica externa

La externa, conlleva a la realización de acciones específicas para contribuir a la preservación y mejora de la herencia ecológica común para el bien de la humanidad actual y futura. En este apartado las organizaciones que tienen una planeación estratégica y que incluyen el aspecto de la responsabilidad social en su dimensión ambiental, promueven acciones como son las certificaciones tales como el ISO14000, distinciones como empresa socialmente responsable (CEMEFI), premios nacionales e internacionales de calidad, porque al interior tiene programas de mejora continua, que son evidenciadas y revisadas por organizaciones independientes y demuestran cumplimiento mayor, por lo general, a las normas y regulaciones emitidas por la autoridad en sus países y eso repercute en las relaciones al exterior por medio de sus productos y servicios, creando conciencia por el cuidado de los recursos y materias primas que son necesarias en sus procesos productivos y hay un compromiso con la comunidad para lograr una comunicación ética, transparente y legal en su quehacer diario.

La dimensión ambiental de la responsabilidad social toma un lugar preponderante en la actualidad por la situación que implica el impacto que las empresas generan al medio ambiente y por tal motivo, tienen un compromiso muy fuerte con la sociedad a la que deben responder no sólo con productos o servicios de calidad, sino que a su vez, estos mismos, en su uso y posterior desuso no afecte al planeta en este momento y ni a las generaciones venideras.

Dimensión Universitaria

La gestión social y responsable que se derivan de los impactos de una Universidad, se deberán tomar los mismos que para cualquier otra organización, cuyo propósito esencial es la generación y transmisión de conocimientos, así como la formación humanística y profesional integra en cada uno de los egresados. Es por esta razón que se vuelve este tópico de investigación de mayor interés para las comunidades educativas de la actualidad, el poder retomar y replantear el rol de las universidades en su participación social y sobre todo en su actuación no solo como ciudadanos, sino en la importante función de formación educativa de egresados que cumplan con ética, creatividad, innovación y entusiasmo con su desarrollo profesional, a contribuir por una sociedad de desarrollo sustentable, centrada en valores y principios que exaltan a la humanidad.

Dimensión Interna

Desde su dimensión interna, la Responsabilidad Social Universitaria pretende y promueve que sus acciones cubran cuatro áreas fundamentales para lograr en sus egresados un perfil profesional con responsabilidad social (Vallaeys; V. 2017), y estas cuatro acciones y procesos son: - gestión interna - oferta académica - investigación aplicada, y - participación social.

El presente estudio tiene como objetivo analizar la metodología que otras universidades en América Latina, llevan a cabo para implementar el concepto de responsabilidad social universitaria, mediante selección de modelos educativos, sin dejar fuera contenidos académicos transversales en todos sus cursos sobre ética profesional y de carácter interdisciplinario para contribuir a formar profesionales con visión innovadora y creativa. Este estudio conlleva a comparar el enfoque interno de las universidades sobre su misión y visión con respecto a los contenidos de responsabilidad social relacionados con los 2 grupos de interés como parte importante para la toma de decisiones y los beneficios para la sociedad en general. Una de las primeras tareas de las universidades es el llegar a entender realmente lo que es la Responsabilidad Social (Vallaeys; V. 2017), para que se aplique de manera correcta y así comprender que la responsabilidad social no es solo el hacer donaciones, desde el punto de vista Universitario, se refiere a realizar un cambio interno en las universidades, de manera que todas las personas involucradas tengan el mismo comportamiento, esto se refiere a capacitar a los docentes para que ellos puedan replicar su conocimiento con los alumnos que los oriente a trabajar con ética y valores.

Al analizar el impacto que tiene la responsabilidad social de las Universidades Públicas sobre todo en países en desarrollo de América Latina, con ello la elaboración de un índice de evaluación de la Responsabilidad Social Universitaria, a través de un proyecto que permita medir la capacidad de las instituciones educativas para cumplir con su compromiso social, así mismo la creación de espacios de análisis, para dar respuesta a los objetivos propuestos en la Declaración Mundial sobre Educación Superior para el siglo XXI de la OECD(OECD, 1998), y establece como plataforma de arranque la necesidad de visualizar una universidad socialmente responsable.

En nuestro contexto en México, existe la Asociación Nacional de Facultades y Escuelas de Contaduría y Administración, ANFECA fue fundada en abril de 1959, y que desde la dimensión interna se puede decir que es índice de evaluación y certificación de la responsabilidad social universitaria. Aportar una contribución al sin caer en redundante complicación de definiciones, es necesario puntualizar cual debe la orientación de todo esfuerzo académico e institucional, si se pretende practicar la Responsabilidad Social Universitaria de forma responsable, y no como propuesta de elitismo institucional.

Las Universidades debe tratar de superar el enfoque de la proyección social y extensión universitaria (Villa, J. 2007). como solo propuestas bien intencionadas a su operatividad en llevar a cabo su función central de formación educativa y producción de conocimientos, para poder asumir la verdadera exigencia de la Responsabilidad Social Universitaria, mediante las cuatro acciones mencionadas anteriormente: - Gestión interna - Oferta académica - Investigación, y - Proyección social En estas cuatro líneas de acción permite formular y evaluar la riqueza de las

propuestas de Responsabilidad Social Universitaria. 3 herramientas de la RSU Para lograr que las universidades cambien su estructura tradicional para así poder llegar a crear un espacio fundamental de desarrollo desde la perspectiva de una sociedad del conocimiento para lo cual se debe de realizar un proyecto integral en materia de pertinencia y responsabilidad social universitaria.

También es de vital importancia la auto-evaluación y la evaluación que se realice para medir la calidad y el desempeño de las universidades públicas en donde se especifique la pertinencia social, la calidad educativa, la contribución al desarrollo económico (dimensión externa), entre otros principios. Por consiguiente, la ANFECA (2005) lleva a cabo la elaboración de un índice de evaluación cuyo objetivo principal es certificar a las Universidades de conformidad a sus acciones en Responsabilidad Social Universitaria tomando en cuenta su misión y visión, así como generar un esquema sobre su responsabilidad social universitaria y su difusión.

Para ello se requiere de herramientas que permitan difundir y consolidar la Responsabilidad Social Universitaria como referente distintivo de la identidad de las universidades, en donde se tomen en cuenta diversos puntos tales como: la erradicación de la pobreza, la intolerancia, la violencia, el analfabetismo, el hambre, el deterioro del medio ambiente y las enfermedades, es decir, a responder a los desafíos de alineación y colaboración con los objetivos nacionales y de la verdadera cobertura de la educación para todos.

Debemos pensar que las mejores herramientas para lograr estos objetivos son en realidad los contenidos en los programas educativos, los cuales, al ser enseñados, fortalecidos y apropiados por los estudiantes en su formación profesional y ética, en las cuales podemos encontrar: actuación ética, orientación a la calidad, aprendizaje autónomo, innovación y creatividad, comunicación en otros idiomas, y trabajo en equipo.

En el ámbito de las instituciones de educación superior, según la UNESCO (1998), los procesos de cambio social expresados en la globalización de la economía y el desarrollo tecnológico le otorgan un papel importante a la producción y difusión del conocimiento, razón por la cual "desde la perspectiva de la comunidad universitaria estas tendencias le asignan una responsabilidad cada vez mayor en materia de formación, investigación, estudio y asesoría y servicios de orientación, transferencia de tecnología y educación permanente".

De acuerdo con Gibbons et al. (2017), la generación del conocimiento científico en el contexto planteado por la UNESCO se desarrolla mediante un nuevo modelo denominado "modo 2", identificando cinco atributos que caracterizan esta nueva modalidad de producción del conocimiento socialmente comprometido: conocimiento producido en el contexto de aplicación; transdisciplinariedad; heterogeneidad y diversidad organizativa; responsabilidad social; y control de calidad.

Dimensión Externa

Planteamientos de la RSU

Hoy en día la existencia de muchas universidades públicas en países en desarrollo no ha logrado adecuarse a la Sociedad del siglo XXI y por ello la importancia de disponer de las herramientas que permitan dimensionar con amplitud y rigor científico los avances que registran las universidades. De acuerdo con los procedimientos que tienen como objetivo responder a las necesidades del entorno de manera oportuna y eficaz resulta de mucha importancia ya que la globalización ha generado resultados económicos y sociales que provocan el rechazo de amplios sectores de la sociedad.

De acuerdo con los planteamientos de Gaete Quezada, (2019), la formación profesional, la investigación, y la extensión y difusión de la cultura que realicen las Instituciones de Educación Superior deberán considerar los desafíos globales que la humanidad enfrentará: el ambiente sustentable, el equilibrio entre el crecimiento de la población y los recursos que se requieren para alimentarla, la cultura democrática global, entre otros. Este desafío no es nuevo para las universidades, pues siempre ha subsistido su necesidad de autotransformarse en función de las demandas de su entorno social.

Es evidente que las actividades orientadas hacia la Responsabilidad Social de la Universidad pública en México han ocupado un papel preponderante, a pesar de que en muchos casos se le ha limitado a programas de extensión universitaria y de servicio social que padecen problemas ya que no reflejan la presencia de sinergias entre la universidad, y los sectores gubernamentales, productivos y sociales. En este sentido, aún son mucho que hacer para desarrollar, un programa universitario en materia de pertinencia y responsabilidad social universitaria.

Tomando en cuenta que la metodología del procedimiento para llegar a un índice trae consigo ciertas variables con las cuales se tendrá que trabajar, así como también algunos indicadores: normas éticas, imparcialidad política, capacidad crítica, articulación con los problemas de la sociedad, y el campo de trabajo.

Con un programa de Responsabilidad Social Universitaria se permitirá impulsar, fortalecer y evaluar todas las actividades que reflejen la pertinencia o responsabilidad social de las universidades. Es pertinente tomar en cuenta en el concepto de Responsabilidad Social Universitaria, es que ese programa debe ser construido por cada universidad a partir de un proceso participativo de todos los actores externos e internos (stakeholders) pero teniendo en cuenta una serie de grandes condiciones o directrices acordadas entre dichas comunidades. Todo lo anterior, con la finalidad de que las universidades consideren que la Responsabilidad Social Universitaria, orienta a las universidades hacia una clara misión, propicia junto con una apropiada autonomía en sus decisiones responsabilizándose de los procesos e impactos previstos, y esto le permite la integración curricular de la 5 Responsabilidad Social en su modelo educativo, sus programas específicos de ética aplicada y procesos evaluativos propios o característicos así como de técnicas y metodologías pedagógicas.

Para lo cual se supone que es importante la implementación de herramientas que aseguren los resultados que demanda el mundo de la universidad en una gestión eficaz, en donde se especifican puntos como: La metodología pedagógica de aprendizaje servicio, medición de impactos e indicadores, autoevaluación, hetero-evaluación y coevaluación. Dentro de la planeación universitaria se deben tomar en cuenta que algunos de los principales grupos de interés que más influyen son el estado, la región, el país y con una muy poca relevancia cuando se trata de académicos, funcionarios y empleadores, lo cual es contradictorio que las Universidades no contemplen en su misión o visión a los empleadores ya que gracias a ellos se llega al correcto acredita miento de sus egresados, así como siendo piezas clave dentro del tema de responsabilidad social. (Sánchez C. L at al 2007).

En cuanto a planteamiento de beneficios de la Responsabilidad Social Universitaria, solo algunas universidades consideran dentro de sus objetivos el lograr un aporte significativo a la educación superior, ya que la gran mayoría menciona los beneficios sociales públicos, privados y también económicos como algo que no puede faltar. Cabe mencionar que también se encuentran universidades fuera del consorcio de universidades nacionales, regionales o estatales donde han comenzado a implementar otro tipo de acciones para la incorporación de la responsabilidad social.

En resumen La aplicación de herramientas de incorporación de la responsabilidad social y ambiental en la misma universidad, la formación ética profesional centrada en la comprensión de los retos de un desarrollo humano justo y sostenible, el aprendizaje activo y basado en proyectos sociales, la gestión socialmente responsable del conocimiento, la investigación aplicada para el desarrollo sostenible y la participación en proyectos y programas con fines sociales, constituyen los principales instrumentos de la Responsabilidad Social Universitaria. En cuanto al análisis de los beneficios de la Responsabilidad Social Universitaria, es posible concretar que existe un bajo desarrollo sobre los discursos referidos a sus beneficios como herramienta de concientización en otras Universidades.

Además es posible observar un incremento de discursos sobre beneficios sociales públicos y privados por sobre los beneficios de carácter económico, que actúan como argumento a favor de la implementación de programas de Responsabilidad Social Universitaria. En el análisis más específico de los beneficios sociales mencionados con mayor frecuencia en los discursos, se encuentran los referidos a la cohesión social y respeto a la diversidad, así como los relativos a mayores habilidades en apoyo a la toma de decisiones.

Las metodologías y productos del proceso de enseñanza aprendizaje conllevan un esfuerzo permanente de innovación y creatividad para enseñar contenidos difícilmente enseñables a partir de metodologías clásicas. En referencia a los modelos educativos es importante tomar en cuenta la perspectiva del bien común, del desarrollo humano y sustentable, y la justicia social. Es por ello la mejora y la eficacia en la formación ética y de Responsabilidad Social está orientada a la comprensión de los procesos de enseñanza aprendizaje desde las competencias para la integración social y en el campo profesional de los egresados.

V. Conclusión

Las Dimensiones de la Responsabilidad social deben tener una visión no solo a corto plazo sino también estar enfocadas a largo plazo, considerando en este estudio: la dimensión económica, la dimensión social, la dimensión económica y la dimensión universitaria. Estas dimensiones si bien, cada una tiene sus objetivos para que se puedan lograr deben ser indisociables, se deben trabajar en conjunto. Los objetivos de estas son:

La Dimensión económica, consiste en la creación de riqueza, en maximizar el beneficio económico de la empresa y por tanto de los accionistas, y además en maximizar su valor a la sociedad al mejorar las condiciones de vida presentes y futuras.

En la Dimensión social, nos referimos al desarrollo de la sociedad, garantizando la calidad de vida de las personas sin importar el origen o cualquier otra situación que pudiera existir.

La Dimensión medio ambiental (ecológica), es la voluntad de adaptar nuestro modo de consumo y de vida para preservar el planeta

La Dimensión de la Responsabilidad Social Universitaria es un llamado a las instituciones de enseñanza superior a reconstruir y reelaborar la cultura y el saber para desarrollar una sociedad más solidaria y humana.

Referencias

ANFECA (México) www.anfeca.unam.mx OECD (1998) Educación siglo 21

Antelo, Y., y Robaina, D. (2015). Análisis de la Responsabilidad Social Empresarial basado en un modelo de Lógica Difusa Compensatoria. Ingeniería Industrial, 36(1), pp.58-69. Recuperado http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S181559362015000100007&lng=es&tlng=es

Bermúdez, G.M y Gómez, B.T. (2018). Desafíos de la responsabilidad social corporativa (RSE) frente a los derechos humanos de los trabajadores: el ejemplo mexicano. Alegatos, 29(91), 591-610.

Carneiro, M. (2004). La Responsabilidad Social Corporativa Interna: La nueva frontera de los Recursos Humanos. ESIC, Madrid, España.

COMISIÓN DE LAS COMUNIDADES EUROPEAS. (2001). LIBRO VERDE, Fomentar un marco europeo para la responsabilidad social de las empresas. Bruselas, 18.7.2001, COM (2001) 366final.https://eurlex.europa.eu/legalcontent/ES/TXT/PDF/?uri=CELEX:52001DC0366&from=ES

Cajiga, J. F. (2013). Cemefi. Centro Mexicano para la Filantropía. Recuperado el 30 de enero de 2014, de El Concepto De Responsabilidad Social Empresarial http://www.cemefi.org/esr/images/stories/pdf/esr/concepto_esr.pdf

Del Valle, S.S. (2011). La Responsabilidad Social Empresarial: Gestión Estratégica para la supervivencia de las empresas. Dimensión Empresarial, 9(2), 6-15.

Ena, B. Delgado S. (2012). Recursos Humanos y Responsabilidad Social Corporativa. Paraninfo, Madrid, España, pp.58-59-

Fernández, G. Ricardo. Diario: La RSE global: opinión (2010).

Fernández García Ricardo(2011) una nueva cultura de empresa, Editorial Club Universitario, La dimensión económica del desarrollo sostenible, (pp 209-216) España

Ferrer, M. Alejandra. (2013). La Dimensión externa de la Responsabilidad Social Empresarial de CANTTV. Editorial TELOS, vol. 15, No. 3, Maracaibo, Venezuela.

Gaete Quezada, R. (2019). Discursos de responsabilidad social universitaria. El caso de las universidades de la macro zona norte de Chile pertenecientes al Consejo de Rectores.

Gibbons, Kaye; (2018) Social Structure. Mc Graw Hill (p. 238) Perfiles Educativos, No. 32(128).

Gómez Samper, Henry; y Luis-Bassa, Carolina (2005). Iniciativa social como estrategia

competitiva: Una guía práctica. Primera edición. Ediciones IESA. Venezuela.

Guzmán, G. María Gabriela (2016). SABER. Revista multidisciplinaria del Consejo de Investigación de la Universidad de Oriente. Venezuela.

Jaramillo Naranjo, Olga Lucía (2011). La dimensión interna de la responsabilidad social en las micro, pequeñas y medianas empresas del programa EXPOPYME de la Universidad del Norte. http://rcientificas.uninorte.edu.co/index.php/pensamiento/article/viewFile/3665/2380

Ramírez, Fanny; Miquelena, Miriam; Galuppo, Renata; Bermúdez, José Luis; y Blanco, Charles (2010). Responsabilidad social e identificación de los trabajadores en las empresas de telecomunicaciones de   Venezuela. Quórum Académico. Volumen 7, N° 2, julio-diciembre 2010.

Venezuela Rendueles Mata, Miguel (2010). Mercado social, responsabilidad social y balance social: concepto a desarrollar por instituciones universitarias. Revista TELOS. Volumen 12, N° 1. Venezuela (Pp. 29-42).

Sánchez C. L., Herrera A., Zarate L. Y Moreno W. Sánchez González, Herrera Márquez, Zárate Moreno. (2007). LA RESPONSABILIDAD SOCIAL UNIVERSITARIA (RSU) EN EL   CONTEXTO DEL CAMBIO DE LA EDUCACIÓN SUPERIOR. Virtual Educa

UNESCO (1998) Principios de la educación mundial – Declaración de la UNESCO

Vallaeys; François: (2017)¿Qué es la Responsabilidad Social Universitaria?; , Portal de Asuntos Públicos de la Pontificia Universidad Católica del Perú

http://palestra.pucp.edu.pe/index.php?id=111

Villa, J. (2007). Resposabilidad Social Universitaria: nuevos paradigmas para una educación liberadora y humanizadora de las personas y las sociedades. Belo Horizonte. https://www.unrc.edu.ar/unrc/psc/pdfs/biblio/2.%20Javier%20Villar.pdf ANFECA (Mexico) www.anfeca.unam.mx OECD (1998) Educacion siglo 21

Vélez-Romero, Xavier A. y Cano-Lara, Evelyn D. (2016). Los diferentes tipos de Responsabilidad social y sus implicaciones éticas. Universidad Laica "Eloy Alfaro" de Manabí, Manta, Ecuador. Dialnet LosDiferentesTiposDeResponsabilidadSocialYSusImpli-5802930%20(2).pdf

Villa, J. (2007). Responsabilidad Social Universitaria: nuevos paradigmas para una educación liberadora y humanizadora de las personas y las sociedades. Belo Horizonte. https://www.unrc.edu.ar/unrc/psc/pdfs/biblio/2.%20Javier%20Villar.pdf

Werther, w. & Davis, K. (2008). Administración de Recursos Humanos. El capital Humano de las empresas. 6ta. Edición. Ed. McGraw-Hill. México, D.F. México

The Relationship of Social Responsibility with Socially Responsible Behaviors and Entrepreneurs Values of the Central Zone of the State of Guanajuato

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Abstract

This assignment aims to understand how social values underpin behaviors and how these also may be measured through social responsibility indicators, and ultimately how they can be translated into entrepreneurial performance. The study was raised from the quantitative paradigm, by an explanatory scope, with a sample of 725 entrepreneurs from the central region of the state of Guanajuato. The investigation shows that values have a direct impact on socially responsible behaviors, how these at the same time impact on the social responsibility indicators, and ultimately how these indicators impact on the organization or enterprise performance.

Keywords: Social responsibility; values; socially responsible behaviors; performance; Guanajuato

JEL: M14; A13

I. Introduction

Social responsibility from its primeval origins, has been closely associated to ethical behaviors that transform into rules and behaviors of conduct (Zarathustra, 1767 BC; Hammurabi, 1728 BC; Plato, 387 BC; Aristotle, 350 BC; Cersosimo, 2002; Sacconi, 2004; Wang, 2010, Shin, 2014; Yang and Guo, 2014). The strong criticism made at the philanthropic period of 1850 – 1911 has been made due to the lack of ethical elements evidenced back in that period (Wren, 2005), a few attempts to amend the path were led by Carnegie, León XIII and Weber (Ojeda, et al., 2015) with their respective writings, however, at the second decade of the 20th century, various authors emphasized social factors of entrepreneurial activity, so that Clark (1916) could emphasize the transparency of enterprises issue, claiming that if entrepreneurs are known for their entrepreneurial actions, they should begin to include the known results of their commercial relationships, even if they have been recognized by law or not. Sheldon (1924) referred to social responsibility of an enterprise as a mechanism to improve the community as well as the enterprise´s profit. Berle and Means (1932) in the framework of economic transformations suggest that companies should practice philanthropy as a form of social balance. Chamberlain

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(1933) describes the impact of large enterprises on a traditional form of competition schematics. On the other hand, Keynes (1936) questioned economic liberalism, and evidenced that the supposed automatic balance that the market should generate was not fulfilled and also defended state interventionism to generate that balance. Barnard inputs the concept of strategy within the field of economics and administrazon and analyses the relationships and influencing factors between corporations and their respective associated parties. Kreps (1940) inputs the social auditing topic to relate enterprises to social responsibility and proposes it as a form of influencing the responsibilities of the entrepreneurs. Simon (1945) analyses the influences of the individual actions in the organization and vice versa, noting that the commitment with community must go farther from the merely legal, while recognizing that the social values organizations must respond to, are the source of the values that judge against corporate actions (family, religion, etc.).

II. Literature Review

Parting from the studies and reviews of the first half of the 20th century, regarding social responsibility, Bowen (1953) strikes the term of social responsibility of entrepreneurs while one is established:

> "[...] new consideration on the subject of the enterprise´s social function, which has led to a series of deliberations about the necessity of defining its corporate identity in this context of change. The clarification of the concept of social responsibility highlights the importance that specific values are acquiring to the theoretical context due to their nature, in the entrepreneurial activities of the framework, and the fact od identifying with them, which involves soaking up in such corporate culture with a remarkable orientation towards ethical willingness. These corporate values are related to social responsibility methods, as well as the discourse, processes and creation, in such a manner that they coalesce in the search for management models and styles which are eventually detached from the social responsibility discourse." (Lozano, 2003:183).

The ethical values associated with social responsibility are fairness, transparency, and the social responsibility methods, such as discourse, processes and creation. (Xertatu, 2007).

Argandoña (2009) affirms social responsibility should be an ethical responsibility, from the social, moral and legal point of view, the qualification of socials as socially ethical responsibility is given by the mandatory regulations without coercion of the law.

Almagro, et al., (2010) use the classics of corporate culture as a basis (Maslow, Herzberg, Likert, Cameron, etc.) and suggests that the values associated to social responsibility are: income, security, participation, self-realization, knowledge, prestige and environment.

The theory and configuration of the values has been approached from different typologies (Scheler, 1919; Rokeach, 1973; Garzón and Garcés, 1989; Vera and Martínez, 1994 and Schwartz, 2006) and the studies have approached a quite wide range of concepts (Allport, et al., 1972; Rokeach, 1979; Cooke and Lafertty, 1989; Hall, 1995; Gouveia, 1998; Schwartz, 1999, 2006b; and Gordon, 2003). In these analyses it has been attempted to identify the values by country and the distance of the individual regarding to power (Echeverria, 1997) or its relationship with corporate culture (Gómez and Martínez, 2000), or as a lifestyle in society (González, 2005; Allport, et al., 1972 and Spranger, 1964).

There is evidence of reviews from various angles that have been made to Schwartz studies (1999, 2006b) and the values proposed in his work (self-direction, stimulation, hedonism, achievement, power, security, compliance, tradition, benevolence, and universality) have been approved in several contexts (Grimaldo, 2011; Medrano, et al., 2009; Medrano, et al., 2007; Medrano, Palacios and Aierbe, 2006) their scale has been tested and compared to others of international acceptance (Lege, et al., 2012; Suarez, et al., 2011; Schwartz, 1992; Gibb, et al., 1984).

When the needs are expressed in terms of specific values, both individuals and groups of people are able to adapt to their specific sociocultural reality (Schwartz and Sagie, 2000; Schwartz and Bardi, 2001; Schwartz, et al., 2001). In Schwartz opinion, values were trans-situational and desired purposes that vary importantly and come in handy as a guide in people's lives (Koivula, 2008). Based on the above, studies have been focused on analyzing the behavior of values based on four factors:

Table 1: Studies of the Factors in the Behavior of Values

Factor	Authors
The Age	Kiovula, 2008; Knafo and Schwartz, 2001; Schuman and Scott, 1989; Karakitapogluaygün and Imamoglu, 2002; Prince-Gibson and Schwartz, 1988; Schwartz, 2005; Schwartz, et al., 2001; Costa,et al. 1986; Prince-Gibson and Schwartz, 1988; Schwartz, 2005
The Genre	Chodorow, 1990; Scott, 1988; Gilligan,1982; Schwartz, 1992; Rokeach,1973; Kahle, 1996; Pohjanheimo, 1997; Guimond, et al.2007; Hosftede and Bond, 1988, Parsons and Bales, 1985; Schwartz, 1992; Bakan, 1966; Schwartz and Rubel, 2005), Pohjanheimo, 1997; Puohiniemi, 2006
Educational Standard	Feather, 1984; Hofstede, 1980; Kohn and Schooler, 1986; Prince-Gibson and Schwartz, 1998; Pohjanheimo, 1997; Rokeach, 1973; Inglehart, et al. 2004; Inglehart, 1990,1977; Schwartz, et al. 2001; Knafo and Schwartz, 2001; Schwartz, 2005
Economic Standard	Inglehart, 1977, 1990; Holland, 1997; Kohn and Schooler, 1986; Rokeach, 1973; Knafo and Sagiv, 2004

Source: Own elaboration with author's information.

These studies establish the importance of the dimensions proposed by the authors on the prediction of the values in Schwartz's scale (2006a) such as the recent Nedelko studies, et al. (2015) and Hüyesin, et al. (2015) demonstrate how the values of the Schwartz scale (2006a) are predictors of personal ethics and life goals.

These studies reveal the fact that values become actions and these actions and behaviors could be gathered as a set of moral behaviors or actions that have been developed by the people, and constitute a concrete reference that detonate the social responsibility pursued by each person (Navarro, 2003a). In order that each person is able to express their understanding of social responsibility, is therefore essential that, apart from developing their morality, they acquire social specific abilities that allow them to signify these behaviors in favor of society and the behaviors oriented to fulfil at the same time the necessities of others (Davidovich, et al. 2005).

Throughout the link established between values and actions, and based on Barman's studies (1997), Arón and Milicic (1999), Saéz (2001), Ursua (2001), Navarro (2003b) and Davidovich, et al. (2005), Bustamente and Navarro (2007) proposed the following concept of social responsibility:

> "The capacity and commitment of each person to respond to society for actions or omissions that traduce in a personal compromise with others and reflects of moral behaviors that orient individual and collaborative activities to develop their capacities and satisfy their necessities; in which concrete attitudes, values and behaviors are included through which each person enforces their responsibility with society" (Martí, 2011:209).

These socially responsible behaviors can be measured by means of academic/occupational responsibility dimensions, volunteer activities, social assistance, religious activities, social coexistence, civic responsibility, self-care, cultural development, ecology and environment and respect for communal spaces (Martí, 2011).

Socially responsible behaviors that are articulated towards and for society, are a phenomenon that has been previously observed, even established in the concepts of social responsibility, which is understood as a general obligation that takes action and improves the society's wellness and at the same time cherishes the interests of organization, it is claimed that the enterprise should not only safeguard economic, technical and legal factors, but also take special care for the responsibilities that are generated for society (Davis, 1973; Davis and Blomstron, 1975; Stone, 1978 and Kohlberg, 1981; Frederick, 1987).

The concept has evolved throughout the years to become a synonym of citizen behavior, it´s about recognizing the particular realities, referring to its´ own responsibilities which are part of the daily lives of organizations and the impact of their decisions (Mardsen and Andriof, 1998; Waddock, 2002).

Boutlier y Thompson (2011) specify that social responsibility is the answer that the organization gives to society due to the impacts they have generated, and this answer must be escorted by an ethical and transparent behavior that contributes to the sustainable development, including health and wellness for society, it's the commitment to have acquired the consent of the society to settle and obtain resources from it. For Wilburn and Wilburn (2011) another feature of a response to society, is to keep in mind the stakeholders and as Granillo said (2013) that the way to tackle such responsibilities is always within legality and congruence with international laws and specifies socially responsible methods must take integral part in organizations and must be practiced in all their relationships, in their influence sphere, with a holistic influence.

Based on the above, the following investigation hypotheses have been proposed:

H1: The values systems influence the socially responsible behaviors of the enterprises in a positive way: $CSR = \beta_o + \beta_1 VALUES + \xi$

H2: The socially responsible behaviors influence the social responsibility of the enterprises in a positive way: $INDRS = \beta_o + \beta_1 CSR + \xi$

H3: The social responsibility indicators of the enterprises contribute in the enterprise´s performance in a positive way: $REND = \beta_o + \beta_1 INDRS + \xi$

H4: The values systems, socially responsible behaviors and social responsibility indicators contribute in the enterprise´s performance in a positive way:
$REND = \beta_o + \beta_1 VAL + \beta_2 CSR + \beta_3 INDRS + \xi$

III. Methods

The current assignment is undertaken from a quantitative perspective, with a non-experimental design, with an explanatory scope. The sample is composed by 725, owners of the enterprise of the central region of the state of Guanajuato, Mexico, which holds 95% confidentiality and 3.6% inaccuracy.

The surveyed enterprises are 100% in the category of medium-sized enterprises since they tend to have between 10 to 245 entrepreneurs, with a lifetime of 1 to 45 years, with an average of 6.45 years and a standard departure of 4.4 years, their leaders were 13.52% females and 86.48% males, these managers show an average age of 40 years with a standard departure of 7 years; the 86.34% of these enterprises have only had one manager, likewise 92.55% of the enterprises declare to have family control.

The owners of the enterprises were administered a questionnaire that measured the values below the Schwartz scale (2006a), the socially responsible behaviors with the Davidovich scale et al. (2005), the social responsibility indicators of the ISO 26000 norm with a scale composed by Mitofsky (2004) and by Cruz, et al. (2013) and ultimately the performance dimensions, with a scale composed by García (2007).

The Cronbach's alphas for the specific scales were for the values scale of 0.910, for the socially responsible behaviors 0.908, for the social responsibility indicators 0.933 and lastly for performance 0.839

IV. Results

For the 1st hypotheses the model overview was:

Table 2: Overview of the Model VAL → CSR

Model	R	R square	R corrected square	Typical error of estimation	Change statistics				
					Change in R square	Change in F	gl1	gl2	Change in F
1	0.575	0.331	0.329	0.4432	0.331	194.44	1	393	000

Source: Own elaboration with investigation data.

The value of the Durbin-Watson trial for this first regression was 2.035

Table 3: ANOVA VAL → CSR

Model	Square sum	gl	Root mean square	F	Sig
Regression	38.193	1	38.193	194.44	000
Residual	77.196	393	0.196		
Total	115.390	394			

Source: Own elaboration with investigation data.

From which: CSR = 0.563 + 0.801VAL

For the 2nd hypotheses the model overview is:

Table 4: Model CSR → INDRS Overview

Model	R	R square	R corrected square	Typical error of estimation	Change statistics				
					Change in R square	Change in F	gl1	gl2	Sig change in F
1	0.731	0.535	0.534	0.4400	0.535	451.761	1	393	000

Source: Own elaboration with investigation data.

The value of the Durbin – Watson trial for this second regression was 1.603

Table 5: ANOVA CSR → VAL

Model	Square sum	gl	Root mean square	F	Sig
Regression	87.711	1	87.711	451.761	000
Residual	76.303	393	0.194		
Total	164.014	394			

Source: Own elaboration with investigation data.

From which: INDRS = 0.652 + 0.872CSR

For the 3rd hypotheses the model resulted:

Table 6: Model INDRS → REND Overview

Model	R	R square	R corrected square	Typical error of estimation	Change in R square	Change in F	gl1	gl2	Sig change in F
					Change Statistics				
1	0.401	0.161	0.159	0.485	0.161	75.306	1	393	000

Source: Own elaboration with investigation data.

The value of the Durbin – Watson trial for this third regression was 1.722

Table 7: ANOVA CSR → VAL

Model	Square sum	gl	Root mean square	F	Sig
Regression	17.775	1	17.775	75.306	000
Residual	92.765	393	0.236		
Total	110.541	394			

Source: Own elaboration with investigation data.

From which: REND = 2.670 + 0.329INDRS

Ultimately, in the last hypotheses the model is expressed as:

Table 8: Model Overview

Model	R	R square	R corrected square	Typical error of estimation	Change in R square	Change in F	gl1	gl2	Sig change in F
					Change Statistics				
1	0.601	0.361	0.356	0.425	0.361	75.551	1	2	000

Source: Own elaboration with investigation data.

The value of the Durbin – Watson trial for this second*** regression was 2.005.

Table 9: ANOVA

Model	Square sum	gl	Root mean square	F	Sig
Regression	39.878	1	13.293	75.551	000
Residual	70.663	391	0.181		
Total	110.541	394			

Source: Own elaboration with investigation data.

Table 10: Coefficients Chart

Model	Non-standardized coefficients		Typical coefficients	T	sig
	B	Typical Error	BETA		
Constant	0.751	0.235		3.193	002
VAL	-0.133	0.059	-0.136	-2.243	025
CSR	0.099	0.053	0.121	1.878	061
INDRS	0.810	0.073	0.594	11.059	000

Source: Own elaboration with investigation data.

From which: REND = 0.751 + 0.099 VAL – 0.133 CSR + 0.810 INDRS

V. Conclusion

The theory of social responsibility has evidenced various studies about the impact of values referring to behaviors called socially responsible, and how these through ethic (when they are an individual extent) or through the corporate citizenship (when they are an organizational extent) they transform in behaviors that are evidenced by stakeholders and acknowledged through a social declaration that the organization is socially responsible or not.

These socially responsible behaviors are evidenced, through a quality efficient paradigm, in clear and tough indicators of social responsibility that in the end contribute in the performance indicators of the organizations.

In this study it is likely to observe how the values demonstrate direct impact on socially responsible behaviors, and how these, in turn, affect the social responsibility indicators and lastly how this indicators impact the performance of the organization or enterprise.

Nevertheless, when they are analyzed as an assemblage, it manifests so that values as well as the social responsibility indicators have a direct implication on performance, yet not on socially responsible behaviors.

This investigation demonstrates that both values and social responsibility indictors contribute in a positive way (in major extent the indicators, in minor extent the values) on the performance variable in their organizations or enterprises, however, it is observed that the socially responsible behaviors impinge negatively on the performance indicator, which means, the investigation displays that although social responsibility indicators favor the increase of entrepreneurial performance, the socially responsible behaviors (that are generated by social responsibility indicators) impact the performance in a negative form.

These results make undeniable the belief that socially responsible behaviors are a cost, that initially generate a decrease in the utilities, however, when these become social responsibility indicators, clear, tangible and measurable, their impinge on the performance is positive. Likewise, it´s clear that values impact on the performance indicators in a positive form, since there is a constricted relationship between what values and reductionist understanding are of the social responsibility as philanthropy.

These results were obtained based on a sample, which, while fulfilling a reliability and an error according to the standards, demonstrates the central region of the state of Guanajuato, Mexico, consequently any generalization must be undertaken beneath this care and we should wait for similar studies in other contexts to be able to establish conclusive statements.

References

Allport, G. et al. (1972). Study of values on México. El Manual Moderno, Ciudad de México.

Almagro, J. et al. (2010). Responsabilidad social, una reflexión sobre la RSE. Prentice Hall, Madrid, España.

Argandoña, A. (2009). ¿Puede la responsabilidad social corporativa ayudar a entender la crisis financiera?. Cátedra "la Caixa" de responsabilidad social de la empresa y gobierno corporativo.

Aron, A. y Milicic, N. (1999). Clima escolar y desarrollo personal. Santiago de Chile. Ed. Andrés Bello.

Bakan, D. (1966). The duality of human existence: an essay on psychology and religion.Rand McNally, Editores, Chicago.

Barnard, Ch. (1938). The functions of the executive. Cambridge, MA: Harvard University, Press.

Berle, A. y Means, G. (1932). The modern corporation and private property. New York: Harcourt, Brace & World.

Berman, S. (1997). Children´s social consciousness and the development of social responsibility. New York: New York State University Press.

Boutlier, R. y Thompson, I. (2011). Modeling and measuring the social license to operate: fruits of a dialogue between theory and practice. Society for mining and metallurgy, on common ground consultants, Vancouver, CA.

Bowen, H. (1953). Social responsibility of the businessman. Harper & Row, New York.

Bustamente, M. y Navarro, G. (2009). Autoatribución de comportamientos socialmente responsables en estudiantes de carreras del área de Ciencias Sociales. Revista Perspectivas, Vol. 18, pp. 45 – 121.

Cersósimo, A. (2002). Notas preliminares para el desarrollo de los conceptos de ética y moral en el Antiguo Egipto. http://www.transoxiana.org/0105/etica.html

Chamberlain, E. (1933). The theory of monopolistic competition. Cambridge, MA: Harvard University Press.

Chodorow, N. (1990). Feminism and psychoanalytic theory. Yale University Press. EEUU.

Clark, John (1916). The changing basis of economic responsibility, Journal of political economy, Vol. 24, No. 3, pp. 209 – 229.

Cooke, R. y Lafertty, C. (1989). Organizational culture inventory. Human Synergistics, Plymouth, MA.

Costa, P., et al. (1986). Cross-sectional studies of personality in a national simple: Stability in neuroticism, extraversion, and openness. Psychology and Aging, Vol. 1, No. 2. pp. 144 – 149.

Cruz, J. (2013). Responsabilidad social empresarial: Investigación empírica – exploratoria sobre los conceptos de RSE y RSU. XVIII Congreso Internacional de Contaduría, Administración e Informática. México. D.F.

Davidovich, P., et al. (2005). Construcción y estudio piloto de un cuestionario para evaluar comportamientos socialmente responsables en estudiantes universitarios. Revista de Psicología, Vol. 14, No. 1, pp. 125 – 139

Davis, K. (1973). The case for and against business assumption of social responsibilities. Academy of Management Journal, Vol. 16, pp. 312 – 322.

Davis, K. y Blomstrom, R. (1975). Business and society: Environment and responsibility, New York, Mc Graw Hill.

Echeverria, B. (1997). Los servicios de orientación universitarios. En Apodaca, P. y Lobato,C. (Eds). Calidad en la universidad: Orientación y evaluación, pp. 112 – 136. Barcelona, Laertes.

Feather, N. (1984). Protestant ethic, conservatism and values. Journal of Personality and Social Psychology, Vol. 46, No. 5, pp. 1132 – 1141

Frederick, W. (1987). Theories of corporate social performance. Sethi, S. & Falbe, C. (Eds). Business and society. Dimensions of conflict and cooperation, pp. 142 – 161. Lexington, Mass.

Garzón, A. y Garcés, J. (1989). Hacia la conceptualización del valor. En Mayor, J. y Pinillos, J. (Eds). Tratado de psicología: Actitudes, creencias y valores (VII), pp. 365 – 408. Madrid, Alhambra.

Gibbs, J. (1984). Construction and validation of a multiple – choice measure of moral reasoning of child development, Vol. 55, pp. 527 – 536.

Gilligan, C. (1982). In a different voice. Cambridge, MA, Harvard University Press. EEUU.

Gómez, A. y Martínez, E. (2000). Implicaciones del modelo de valores de Schwartz para el estudio del individualismo y colectivismo. Discusión de algunos datos obtenidos en muestras españolas. Revista de psicología general y aplicada, Vol. 53, No, 2, pp. 279 – 301.

Gonzalez, R. (2005). Los valores morales. Revista cubana de salud pública. Vol. 31, No. 4, pp. 269.

Gordón, L. (2003). Cuestionario de valores personales (SPV). Madrid. TEA.

Gouveia, V. (1998). La naturaleza de los valores descriptores del individualismo y del colectivismo: una comparación intra e intercultural. Disertación Doctoral no publicada, Universidad Complutense de Madrid, España.

Granillo, L. (2013). ¿Para qué, cómo y quiénes desarrollan la responsabilidad social en las organizaciones? Prólogo crítico para un México en paz. En Leal, F. y Ojeda, J. (Coord.). Desarrollo de la responsabilidad social en las organizaciones. pp. 9 – 22. Editorial de la Universidad Autónoma de Aguascalientes.

Grimaldo, M. (2011). Valores y juicio moral en un grupo de abogados de lima. Revista de psicología Trujillo, Vol. 13, No. 1, pp. 29 – 45.

Guimond, S., et al. (2007). Culture, gender and the self: Variations and impact of social comparison processes. Journal of Personality and Social Psychology, Vol. 96, No. 6, pp. 1118 – 1134.

Hall, B. (1995). Values shift, understanding personal and organizational transformation. Twin Lights Publications, Rockport, MA.

Hammurabi (1728 aC). El Código.

https://thales.cica.es/rd/Recursos/rd98/HisArtLit/01/hammurabi.htm

Hofstede, G. (1980). Culture´s consequences: International differences in work – related values. Berverly Hills, CA, Sage Publications.

Hofstede, G. y Bond, M. (1988). The Confucius connection: from cultural roots to economic growth. Organizational Dynamics, Vol. 16, No. 4, pp. 4 – 21.

Holland, J. (1997). Making vocational choices: A theory of vocational personalities and work environments (3 Ed.). Odessa, FL, Psychological Assessment Resources.

Hüyesin, C., et al. (2015). Value preferences of university students as predictors of life goals. Social Indicators Research, Vol. 124, No. 1, pp. 111 – 125.

Inglehart, R. (1977). The silent revolution: changing values and political styles in advances industrial society. Princenton, NJ, Princenton University Press.

Inglehart, R. (1990). Cultures shift in advanced industrial society. Princenton, NJ, Princenton University Press.

Inglehart, R., et al. (2004). Human beliefs and values, a cross – cultural sourcebook based on the 1999 – 2002 values surveys. México, Siglo XXI Editores.

Kahle, L., (1996). Social values and consumer behavior: Research from the list of values. The psychology of values: The Ontario symposium. Vol. 8, pp. 135 – 151.

Karakitapogluaygün, Z. & Imamoglu, O. (2002). Value domains of Turkish adults and university students. The Journal of Social Psychology, Vol.142, No.3, pp. 333-351

Keynes, J. (1936). The general theory of employment, interest and money. London, MacMillan

Knafo, A. & Schwartz, Shalom (2001). Value socialization in families of Israeli – born and Soviet – born adolescents in Israel. Journal of Cross – Cultural Psychology, Vol. 32, No. 2, pp. 213 – 228.

Knafo, Ariel & Sagiv, L. (2004). Values and work environment: mapping 32 occupations. European Journal of Psychology of Education. Vol. 19, No. 3. Pp. 255 – 273.

Kohlberg, L. (1981). Essay on moral development, Vol. 1: The philosophy of moral development. San Francisco, CA: Harper & Row.

Kohn, M. & Schooler, C. (1986). Work and personality: An inquiry into the impact of social stratification. Political Psychology, Vol. 7, No. 3, pp. 605 – 607.

Koivula, P. (2008) Inclusive education in Finland. Ponencia presentada en el taller internacional sobre la educación inclusiva. Paises nórdicos, 6 – 7 marzo 2008, Helsinki.

Kreps, T. (1940). Measurement of the social performance of business. In An investigation of concentration of economic power for the temporary national economic committee (Monograph No, 7) Washington DC, U.S. Government Printing Office.

Legé, L., et al. (2012). Evaluación del capital psíquico y valores en una institución universitaria. Revista Electrónica de psicología Iztacala, Vol. 15, No. 4, pp. 1356 – 1397.

Lozano, G. (2003). El sentido del negocio de las alianzas intersectoriales. Monterrey, México: SEKN.

Marsden, C. & Andriof, J. (1998). Towards an understanding of corporate citizenship and how to influence it. Citizen Studies, Vol. 2, No. 2, pp. 329 – 352.

Martí, J. (2011). Responsabilidad social universitaria: Estudio acerca de los comportamientos, los valores y la empatía en estudiantes de universidades iberoamericanas. Tesis Doctoral, Universidad de Valencia.

Medrano, C., et al. (2006). Analisis multidimensional de la escala de dominios televisivos. En Bacaicoa, F., De Dios, J. y Amez, A. (Eds). Psicología del desarrollo y desarrollo social. pp. 541 – 550. Bilbao: Psicoex.

Medrano, C., et al. (2007). La televisión y el desarrollo de los valores. Revista de educación, Vol. 342, pp. 307 – 328.

Medrano, C., et al. (2009). Los valores personales y los valores percibidos en la televisión: un estudio con adolecentes. REIFOP, Vol. 12, No. 4, pp. 55 – 66.

Navarro, G. (2003a). ¿Qué entendemos por educación para la responsabilidad social? En Universidad Construye País: Educando para la responsabilidad social (22 – 45), Santiago de Chile, Participa.

Navarro, G. (2003b). Educación para la responsabilidad social: elementos para la discusión. Ponencia presentada en el Seminario "Educación para la responsabilidad social: la universidad en su función docente" Universidad de Concepción, 8 y 9 de mayo.

Nedelko, Z., et al.(2015). Current and future use of management tolos. Ekonomie a Management, Vol. 8, No. 1, pp. 28 – 45.

Ojeda, J., et al. (2015). Responsabilidad social. Una revisión de la literatura. En Counraud, E., Ojeda, J. y Lira, G. (Coord). Responsabilidad social empresarial de las pymes del estado de Guanajuato. pp. 29 – 51. Editorial Pearson.

Parsons, T. & Bales, R. (1985). Family, socialization and interaction process. Glencoe: The free press. (The process of learning and interaction processes in the family).

Platón (387 aC). Diálogos. http://www.filosofia.org/cla/pla/azcarate.htm

Pohjanheimo, E. (1997).Arvojen muutos, työ ja sosiaalinen tausta. Tutkimus työikäisistä pyhtääläisistä 1982–1993. Helsingin yliopiston sosiaalipsykologian laitoksen tutkimuksia. Helsinki: Hakapaino Oy

Prince – Gibson, E. & Schwartz, S. (1998). Value priorities and gender, Social Psychology Quaterly. Vol. 61, No. 1. pp. 49 – 67.

Prince-Gibson, E. & Schwartz, S. (1988). Value priorities and gender. Social Psychology Quarterly, Vol.61, No. 1. pp. 49 – 67.

Puohiniemi, M (2006). Täsmäelämän ja uusyheisöllisyyden aika. Limor Kustannus

Rokeach, M. (1973). The nature of human values. New York: Free Press.

Rokeach, M. (1979). Value theory and communication research: review and commentary. En Nimmo, D. (Ed). Communication. Yearbook III. New Brunswick, NJ, Transactions Books.

Sacconi, L. (2004). Corporate social responsibility (CSR) as a model of "extended" corporate governance. An explanation based on the Economic Theories of Social Contract, reputation and reciprocal conformism. Liuc Paper, No. 142. Serie Etica. Diritto ed Economia 10, supplement di febbraio.

Saéz, O. (2001). La responsabilidad social universitaria. http://www.udec.cl/~rsu

Sala – i – Martin, X., et al. (2011). The global competitiveness Index 2011 – 2012, setting the foundations for strong productivity. En Schwab, K. (Ed). The global competitiveness report 2011 – 2012. , pp. 3 – 50. Geneva. World Economic Forum.

Scheler, M. (1919). Von umsturs der werte. Leipzig, Neue Idee.

Schuman, H. & Scott, J. (1989). Generations and collective memories. American Sociological Review, Vol. 54, No. 3, pp. 359 – 381.

Schwartz, et al. (2001). Extending the cross – cultural validity of the theory of basic human values with a different method of measurement. Journal of cross – cultural psychology, Vol. 32, No. 5, pp. 519 – 542.

Schwartz, S. & Bilsky, W. (1987). Toward a psychological structure of human values. Journal of Personality and Social Psychology, 53, 550-562.

Schwartz, S. & Bilsky, W. (1990). Toward a theory of the universal content and structure of values: Extensions and cross-cultural replications. Journal of Personality and Social Psychology, 58, 878-891.

Schwartz, S. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In Zanna, M. (Ed.), Advances in experimental social psychology (Vol. 25, pp. 1-65). New York: Academic Press

Schwartz, S. (1994). Beyond individualism and collectivism: New cultural dimensions of values. In U. Kim, H. C. Triandis, Ç. Kagıtçıbası, S. Choi, and G. Yoon (Eds.), Individualism and collectivism: Theory, method, and applications (pp. 85-119). Thousand Oaks, CA: Sage.

Schwartz, S. (1999). A theory of cultural values and some implications for work. Applied Psychology: An International Review, 48, 23-47.

Schwartz, S. (2004). Mapping and interpreting cultural differences around the world. In Vinken, H., Soeters, J. y Ester, P. (Eds.), Comparing Cultures, Dimensions of Culture in a Comparative Perspective (pp. 43-73). Leiden, The Netherlands: Brill.

Schwartz, S. (2005). Basic human values: Their content and structure across countries. In Tamayo A. & Porto, J. (Eds.), Valores e trabalho [Values and work]. Brasilia: Editora Universidade de Brasilia.

Schwartz, S. (2005). Validity and applicability of the theory of values. In A. Tamayo, A. y Porto , B. (Eds.), Valores e comportamentos nas organizações (pp. 56-95). Petrópolis, RJ: Vozes

Schwartz, S. (2006a). Les valeurs de base de la personne: théorie, mesures et applications. Revue Française de Sociologie, 47, 249- 288.

Schwartz, S. (2006b). Value orientations: Measurement, antecedents and consequences across nations. In Jowell, R., Roberts, C., Fitsgerald, R. and Eva, G. (Eds.), Measuring attitudes cross-nationally-lessons from the European Social Survey. London: Sage.

Schwartz, S. & Bardi, A. (1997). Influences of adaptation to communist rule on value priorities in easter Europe, Political Psychology, 18 (2):385 – 410.

Schwartz, S. & Bardi, A. (2001). Value hierarchies across cultures: taking a similar perspectives. Journal of cross – cultural psychology, Vol. 32, pp. 268 – 290.

Schwartz, S. & Huismans, S. (1995). Value priorities and religiosity in four Western Religions. Social Psychology Quarterly, 58, 88-107.

Schwartz, S. & Rubel, T. (2005). Sex differences in value priorities: Cross – Cultural and multimethod studies. Journal of Personality and social psychology, Vol. 89, No. 6, pp. 1010 – 1028.

Schwartz, S. & Sagie, G. (2000). Value consensus and importance: A cross – national study, Journal of Cross – Cultural Psychology. Vol. 31, pp. 465 – 497.

Schwartz, S., et al. (2000). Value adaptation to the imposition and collapse of Communist regimes in Eastern Europe. In Renshon, S. & Duckitt, J. (Eds.), Political Psychology: Cultural and Cross Cultural Perspectives (pp. 217-237). London: Macmillan.

Scott, J. (1988). Gender and the politics of history. New York, Columbia University Press. EEUU.

Sheldon, O. (1924). The philosophy of management, Sir Isaac Pitman and Sons, Ltd. London, England, pp. 70 – 99.

Shin, K. (2014). Corporate Social Responsibility Reporting in China. Springer Briefs in Business. DOI: 10.1007/978-3-642-54152-0_1

Simon, H. (1945). Administrative behavior: a study of decision – making processes in administrative organization. New York: Free.

Spranger, E. (1964). Las ciencias del espíritu y la escuela. Editorial Lozada, S.A. Buenos Aires, Argentina.

Stone, C. (1975). Where the law ends: the social control of corporate behavior. New York: Harper Colophon Books.

Suárez, L., et al. (2011). Desarrollo y validación de una escala de valores para el desarrollo positivo adolescente. Psicothema, Vol. 23, No. 1, pp. 153 – 159.

Urzua, R. (2001). La responsabilidad social de la universidades: una guía para la discusión. Documento presentado en el talles "Elaboración de estrategia para la expansión de la responsabilidad social en las universidades chilenas". Santiago de Chile, 4 y 5 de Octubre 2001.

Vera, J. y Martínez, C. (1994). Preferencias de valores en relación con los prejuicios a exogrupos, Anales de psicología, Vol. 10, pp. 29 – 40.

Waddock, S. (2002). Leading corporate citizens: vision, values, value added. McGraw Hill, New York.

Wang, L. (2010). Factors affecting perceptions of corporate social responsibility implementation: an emphasis on values. Academic Dissertation. Department of Forest Sciences Faculty of Agriculture and Forestry University of Helsinki

Wilburn, K. & Wilburn, R. (2011). The growing importance of integrated reporting for corporate social responsibility. Review of business & finance studies, Vol. 7, No. 2, pp. 75 – 89.

Wren, D. (2005). The history of management thought. Hoboken NJ, John Wiley & Sons Inc.

Xertatu (2007). Beneficios de la RSE. http:www.xertaty.net.

Yang, L. & Gou, Z. (2014). Evolutions of CSR concept in the West and China. International Review of Management and Business Research, Vol. 3, No. 2, pp. 819 – 826

Zaratustra (1767 aC). Los Gathas.

http://www.caissoas.com/CAIS/Celebrations/introduction_to_khshatra_vairya_jashn_e_sharivar gan.htm

Evaluación del impacto social de la investigación

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Resumen

Conocer el valor que la investigación tiene para la sociedad se ha convertido en una prioridad en el contexto actual, por ello diversas metodologías buscan identificar su impacto social.

El impacto social de la investigación es el resultado de un sistema complejo, indirecto y multidireccional, que dificulta vincular un impacto social en particular con un esfuerzo de investigación específico, entre otras razones, por el tiempo que transcurre entre el momento en que se generan los resultados de la investigación y el logro de los beneficios sociales. Por ello se plantea la pertinencia de hablar de contribución de la investigación más que de atribución, ya que la investigación es solo un factor influyente entre muchos otros que sustentan los resultados. Por otro lado, las diferentes acepciones que los "beneficios sociales de la investigación" tienen para los diversos actores -instituciones de educación superior, agencias financiadoras, gobierno, originadas en perspectivas, visiones e intereses propios se convierten en otra dificultad para evaluar el impacto de la investigación.

En este contexto, el enfoque de interacciones productivas es un enfoque alternativo que intenta reducir las dificultades presentes en la evaluación del impacto de la investigación. La idea detrás del concepto de interacciones productivas, es que el conocimiento académico no puede simplemente ser entregado; se desarrolla en interacción con las partes interesadas, en un contexto particular, y ese impacto es el resultado de una contribución colaborativa. Por lo tanto, el proceso de construcción y de transferencia depende de los investigadores y de las partes interesadas.

Utilizando la metodología de interacciones productivas, se identificó el impacto social de la investigación. Se aboraron de forma retrospectiva 33 proyectos realizados de 1999 a 2020. Mediante entrevistas semiestructuradas con los responsables técnicos se analiza cómo diferentes actores del proyecto —investigadores, gobierno, sociedad civil y sector privado— se involucran e interactúan. Los resultados mostraron patrones y tendencias que dan cuenta de la fuerte orientación a asociarse con miembros del mismo sector de investigación, de la misma institución y la participación de una misma persona en distintos proyectos. Esto limita la posibilidad de lograr un impacto de los proyectos a través de interacciones productivas. En términos generales, ha habido una diferencia significativa en el grado, la intensidad, el modo y el tiempo de interacción con otras partes interesadas. Éstas dependen del monto del financiamiento, del tipo de proyecto, de la duración y significativamente del perfil del responsable técnico.

Palabras clave: Impacto social; interacciones productivas; evaluación

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Caracterización de la virtualidad académica universitaria en tiempos del COVID-19: Un estudio de caso

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Resumen

El confinamiento debido a la pandemia por COVID-19 obligó a las instituciones educativas mexicanas a suspender las clases presenciales en marzo de 2020. Directivos, administradores y docentes realizaron ajustes a sus planeaciones e incorporaron medios virtuales para continuar con las actividades de enseñanza y aprendizaje. Diversas plataformas tecnológicas se implementaron en distintas modalidades para brindar atención a los estudiantes. La presente investigación se realizó con el objetivo de caracterizar las actividades y las percepciones estudiantiles sobre la virtualidad en los tiempos del COVID-19 en la Facultad de Comercio, Administración y Ciencias Sociales de la Universidad Autónoma de Tamaulipas. Se aplicó un cuestionario electrónico a alumnos de cinco programas académicos. Para el análisis de los datos se utilizaron estadísticos descriptivos calculados en el paquete estadístico SPSS. Los resultados permitieron evaluar las percepciones de los participantes sobre sus clases en línea y reflexionar sobre las problemáticas que tuvieron que enfrentar.

Palabras clave: Educación superior; educación a distancia; pandemia

Abstract

Confinement due to the COVID-19 pandemic forced Mexican educational institutions to suspend face-to-face classes in March 2020. Managers, administrators, and professors adjusted their planning and incorporated virtual media to continue teaching and learning activities. Different technological platforms were implemented in various modalities service students. The present research was carried out with the objective of characterizing student activities and perceptions about virtual learning during COVID-19 at the School of Commerce, Administration, and Social Sciences of the Autonomous University of Tamaulipas (Universidad Autónoma de Tamaulipas). An electronic questionnaire was applied to students from five academic programs. Descriptive statistics calculated in the SPSS statistical package were used for data analysis. The results made it possible to evaluate the participants' perceptions of their online classes and to reflect on the problems they had to face.

Keywords: Higher education; distance education; pandemic

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Un acercamiento a la educación superior en la etapa post-pandemia

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Resumen
Debido a la suspensión de clases presenciales en México a causa de la pandemia por COVID-19, la virtualidad fue el medio que permitió continuar con las actividades de enseñanza-aprendizaje en la educación superior. Hoy, a casi un año de que se inició con este esquema de trabajo, las autoridades educativas se preparan para el retorno presencial. Sin embargo, todavía no se sabe cuándo existirán las condiciones necesarias para que esto ocurra. La presente investigación aborda diversos escenarios posibles en la era posterior a la pandemia, así como también la aceptación que estos tendrían en la comunidad estudiantil universitaria. Se reflexiona sobre los aprendizajes obtenidos con la educación en línea en los tiempos del COVID-19 y cómo estos podrían potenciar las actividades académicas después del confinamiento.

Palabras clave: Post-pandemia; educación superior; COVID-19

Abstract
Due to the suspension of face-to-face classes in Mexico because of the COVID-19 pandemic, virtual learning was the means that allowed the continuation of teaching and learning activities in higher education. Today, almost a year after the beginning of this organizational scheme, educational authorities are preparing for the return of face-to-face classes. However, it is not yet known when the necessary conditions will exist for this to occur. This research addresses various possible scenarios in the post-pandemic era, as well as the acceptance that these would have in the university student community. It reflects on the lessons learned from online education in the COVID-19 era and how these could enhance academic activities after confinement.

Keywords: Post-pandemic; higher education; COVID-19

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Desempeño académico vs correlación redes sociales: Un análisis comparativo Mexico – Chile en tiempos de Pandemia

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Resumen

Las redes sociales se han convertido en una herramienta de comunicación y consulta diaria para compartir o producir cualquier tipo de contenido y más en esta temporada de confinamiento por el COVID -19. Sin embargo, las redes sociales también tienen efectos negativos, los cuales podrían ser una variable de distracción de tiempo e inutilidad en los estudiantes universitarios y por consiguiente un efecto causal en el bajo rendimiento escolar que impacta directamente el desempeño académico de los países de México y Chile.

Por ello, la presente investigación de educación comparada ha determinado conjugar las siguientes áreas analíticas de campo de indagación:

- El enfoque mixto basado en técnicas cuantitativas y cualitativas.
- La estrategia metodológica del estudio de casos.
- El estudio empírico que pretende comprobar la hipótesis de la correlación del uso de las redes sociales y la interferencia con el bajo desempeño académico y las habilidades-hábitos de estudio de los alumnos universitarios chilenos y mexicanos.

El diseño de la investigación se inscribe también en el método comparativo en políticas públicas, con tales elementos de estudio se permite enriquecer la información obtenida sin ser excluyentes, ni sustituirse, sino complementarse e incluirse entre sí, para generar resultados de relación entre las variables y los objetos de estudio de la Educación Superior en América Latina, particularmente a alumnos de Universidad TecMilenio campus Nuevo Laredo de México y la Universidad de las Américas campus Santiago de Chile.

I. Introducción

Las redes sociales se han convertido en una herramienta de comunicación y consulta diaria para compartir o producir cualquier tipo de contenido y más en esta temporada de confinamiento por el COVID -19. Sin embargo, las redes sociales también tienen efectos negativos, los cuales podrían ser una variable de distracción de tiempo e inutilidad en los estudiantes universitarios y por consiguiente un efecto causal en el bajo rendimiento escolar que impacta directamente el desempeño académico de los países de México y Chile.

La educación superior hoy en día es de vital importancia para el desarrollo integral y holístico de los seres humanos, las universidades plasman las competencias adquiridas en la trayectoria académica conformando los perfiles de ingreso y egreso de los futuros profesionistas de Universidad TecMilenio campus Nuevo Laredo de México y la Universidad de las Américas campus Santiago de Chile.

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La recopilación de información como la historia, fundación, políticas, retos y alcances de la educación superior constituyen un pilar importante para la comprensión y conocimiento intelectual; así como conocer sobre las diferentes casas de estudio universitarias en América Latina es una riqueza intelectual incalculable; particularmente esta investigación de educación comparada se enfocará en los países de México y Chile, en sus prácticas pedagógicas, políticas educativas, características de los estudiantes, uso-manejo de redes sociales y estrategias educativas. Cuestionando el desempeño académico de los alumnos universitarios con la finalidad de hacer un balance en la relación entre estudiante: vida virtual de redes sociales y la escuela.

Por ello, la presente investigación de educación comparada ha determinado conjugar las siguientes áreas analíticas de campo de indagación:

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El diseño de la investigación se inscribe también en el método comparativo en políticas públicas, con tales elementos de estudio se permite enriquecer la información obtenida sin ser excluyentes, ni sustituirse, sino complementarse e incluirse entre sí, para generar resultados de relación entre las variables y los objetos de estudio de la Educación Superior en América Latina, particularmente a alumnos de Universidad TecMilenio campus Nuevo Laredo de México y la Universidad de las Américas campus Santiago de Chile.

II. Desarrollo

Planteamiento del Problema

En la actualidad la redes sociales se han convertido en un medio de socialización, así mismo un espacio de ocio e informativo que conlleva a la pronta emisión y recepción de información (Tiempo real).

Las redes sociales se han vuelto una nueva especie de adicción para los jóvenes. Las diferentes redes sociales, se han convertido en un gran fenómeno que distrae a los jóvenes de sus tareas cotidianas, como el estudio y por ende esto conlleva a que su rendimiento académico no sea el adecuado o el óptimo para generar un aprendizaje significativo.

Antecedentes del Problema

Los trabajos que consideran redes sociales y bajo rendimiento académico, se centran en analizar y descubrir su impacto a partir del uso que se les da a dichas redes. Por ejemplo, en (Quiroga) se trata de determinar un conjunto de reglas que se apliquen a determinados atributos que describan la interacción del usuario, sin necesidad de hacer ningún estudio previo. Otro trabajo relevante (Alfonseca, Carro, Paredes, Ortigosa y Martín, 2006) hace un estudio del impacto de los estilos de aprendizaje y los distractores en los jóvenes donde resalta el uso de las primeras redes sociales. Este trabajo demuestra con una serie de experimentos el rendimiento de los estudiantes y como se ve afectado por los estilos de aprendizaje y sus distractores.

Por lo tanto, los trabajos existentes no determinan el impacto en el rendimiento de los estudiantes usando redes sociales. Considerando la necesidad de mejorar el rendimiento de los alumnos, sobre todo en el aprendizaje, este trabajo se centra concretamente en el estudio de la influencia de los estudiantes universitarios al usar una red social con el fin de determinar si esto influye en su rendimiento académico.

Referente empírico: Análisis comparativos de políticas de educación

Análisis comparativo de costos y colegiaturas

Desde 1952 existió una dictadura militar en Chile que provoco que la educación del estado, se volviera privatizada desde entonces la educación universitaria municipalizada es para la clase social baja considerada "pobre" y estudian allí los hijos de trabajadores informales o poco calificados del país.

Las universidades privadas la integran los alumnos de clase media de padres con trabajo formal ya sea técnicos o profesionistas que hacen el esfuerzo por darles una mejor educación a sus hijos.

Las universidades internacionalizadas matriculan a los hijos de directivos y profesionales de alto nivel que integran la clase alta, lo que en México coloquialmente decimos "los ricos", los alumnos que no forman parte de esa clase social, pero ingresan a este tipo de universidades buscan un cofinanciamiento educativo para ingresar porque las colegiaturas son muy altas. Existen también problemas de financiamiento ya que existen muchas desigualdades, la mayoría de los estudiantes han tenido que recurrir al crédito bancario para pagar sus estudios, generándose un gran problema de endeudamiento de las familias.

Por Ejemplo los precios de la carrera de periodismo o comunicación en diferentes universidades privadas de América Latina son:

- Universidad Católica de Chile: US$8.400
- Universidad TecMilenio, en México: US$6.200.
- Universidad Pontificia Javeriana de Colombia: US$4.300.
- Universidad Católica de Perú: US$3760 (según número de créditos que inscriba).
- Universidad Católica Andrés Bello, de Venezuela: US$3.200 (a tasa de cambio oficial).

Fuente: páginas web de cada universidad

Los costos de la educación han dado pie a numerosas protestas por parte de estudiantes chilenos como en el año 2006 se produjo un movimiento estudiantil chileno, donde 100,000 personas se movilizaron por las calles exigiendo al gobierno la reducción de costos del transporte escolar y evitar las desigualdades sociales entre universidades.

En México, el nivel de educación superior está integrado por más de dos mil instituciones públicas y privadas, agrupadas en cuatro sectores: las instituciones tecnológicas, las escuelas normales encargadas de la formación de maestros para la educación básica, las universidades públicas y las universidades privadas, ambas elementos integran la cadena de escuelas privadas y públicas; donde cada una ofrece planes de estudios para cada licenciatura y costos, que en muchos casos superan lo estimado, pero en sí, el tipo de educación es decisión de cada familia y lo que desean invertir en ella, todas las universidades dan una buena calidad de educación como los Institutos Tecnológicos o las Universidades Autónomas que son públicos y egresan exitosos profesionistas o un prestigiado Tecnológico de Monterrey de carácter privado, con la mejor educación y con las colegiaturas más caras del país, pero que otorga becas de excelencia del 90% a los mejores promedios de las preparatorias o créditos educativos a familias de clase media .

En este país la ley considera a la educación pública obligatoria de forma "gratuita", aunque en cada escuela se mantienen "cuotas de inscripción", las cuales cubren los gastos de mantenimiento de las escuelas y el semestre o ciclo escolar del estudiante.

Las universidades privadas tienen resultados superiores en las pruebas estandarizadas, sus alumnos suelen tener padres con mayor nivel educativo y más recursos económicos lo que también muestra cierto estatus inferior a los demás.

De acuerdo con un análisis del Instituto Mexicano para la Competitividad (IMCO), el costo promedio por carrera en una universidad privada, va de 125 mil a 930 mil pesos; la más cara es la carrera de medicina. Por otro lado, se estima que el estado eroga 70 mil pesos anuales por estudiante de educación superior.

Análisis comparativo de rendimiento académico

Según un estudio del *Foro Económico Mundial*, que publicó una lista de los mejores países del mundo en materia de educación, los países europeos ocupan los primeros puestos, con Finlandia a la cabeza, seguida por Noruega, Suiza, Canadá y Japón.

En cuanto al ranking con los 10 países latinoamericanos con mejor educación se encuentran:

1. Chile (puesto 45 en la clasificación mundial)
2. Uruguay (puesto 47 en la clasificación mundial)
3. Argentina (puesto 48 en la clasificación mundial)
4. Panamá (puesto 49 en la clasificación mundial)
5. Costa Rica (puesto 53 en la clasificación mundial)
6. México (puesto 58 en la clasificación mundial)
7. Perú (puesto 61 en la clasificación mundial)
8. Colombia (puesto 62 en la clasificación mundial)
9. Trinidad y Tobago (puesto 67 en la clasificación mundial)
10. El Salvador (puesto 70 en la clasificación mundial

En Chile el ranking de las mejores universidades es la vitrina para que los padres elijan a que escuela ingresar a sus hijos.

Las universidades internacionalizadas y las privadas en su tiempo libre presionaban a los estudiantes para estudiar y practicar las pruebas estandarizadas y así posicionarse mejor en el ranking escolar.

Una similitud que encontré en ambos países fue la relacionada con:

- *La Estructura del Sistema Educativo* cuenta con las mismas fases: educación inicial, educación básica, educación media y educación superior.
- Los dos países cuentan con órganos rectores del Estado encargados de fomentar el desarrollo de la educación en todos sus niveles en México se le conoce como la *Secretaria de Educación Pública* y en Chile es el *Ministerio de Educación*.
- Reformas educativas: en Chile año 2010 se promulgó la ley de Calidad y Equidad que consistió en incentivos para Docentes y Directivos, esta misma reforma fue adoptada por México en el año 2013 bajo el nombre de Ley General del Servicio Profesional Docente, ambas leyes fueron derogadas por ser consideradas reformas laborales que perjudicaban los derechos de los docentes y no colaboraban en el mejoramiento de la calidad educativa.
- Asimismo los 2 países en todos sus niveles educativos integran la revisión de documentos y conformación de estándares educativos recomendados y emitidos por organismos internacionales como la UNESCO, el Banco Mundial, la OEI, UNESCO, IESALC, y la ANUIES.
- Brindan apoyo para la formación técnico profesional, que es el nivel educativo orientado al desarrollo de aptitudes, competencias, habilidades y conocimientos, desde un enfoque de aprendizaje práctico, en Chile se concentran 945 liceos técnico-profesionales y en México existen 260 Colegios de Educación Profesional Técnica y 200 Centros de Capacitación para el Trabajo Industrial (CECATI), en todo el país.

Mas contenido sobre la brecha diferencial entre los países comparados

- La Duración del ciclo escolar y la carga horaria escolar desde educación inicial hasta educación medio superior es la siguiente:

Chile: 13 años de estudios y utiliza 4.5 horas diarias de carga académica.
México: tiende a usar 15 años de estudios obligatorios y 4 horas diarias en promedio.

Chile desarrollo el Consejo de Rectores Universitarios de Chile conocido como CRUCH, donde todas las universidades están obligadas a acreditarse y los posgrados deberán ser certificados.

La ley garantiza la gratuidad como derecho universal, si están adscritas al Sistema de Acceso a las instituciones de Educación Superior.

Tabla 1: Análisis comparativo de índices de alfabetización

Educación	Chile	México
Gasto público en educación (%) en 2017	**5.40 %** 1,10 %	**4.91 %** -6,22 %
Índice de alfabetización, adultos (%) en 2017	**96.40 %** -0,49 %	**95.38 %** 0,43 %
Índice de alfabetización, juventud (%) en 2015	**99.15 %** 0,10 %	**98.94%** -0,06 %

Fuente: Knoema fuente web de datos de inteligencia empresarial global del mundo.

Tabla 2: Análisis comparativo de telecomunicaciones

Telecomunicaciones	Chile	México
Usuarios de internet, % de la población en 2017	**82.3%** -1,47 %	**65.8%** 3,01 %
Proporción de hogares con Internet (%) en 2017	**87.5%** 66,03 %	**52.9%** 12,55 %
Abonados a telefonía móvil celular por cada 100 habitantes (por cada 100 habitantes) en 2018	**134.4%** 7,90 %	**95.2%** 3,93 %

Fuente: Knoema fuente web de datos de inteligencia empresarial global del mundo.

Navarro, M. (2010) señala:

Obj   El propósito de ofrecer una mirada comprehensiva sobre las acciones que los distintos estados nacionales realizan para garantizar el derecho a la educación, y sobre las decisiones y capacidades que demuestran para reducir las brechas educativas.

Objetivo General

Demostrar que las redes sociales disminuyen el tiempo de estudio de los alumnos de la Universidad TecMilenio de México y la Universidad de las Américas de Chile e influyen negativamente el rendimiento académico.

Objetivo Particular

Conocer de qué manera influye en el desempeño académico el uso de redes sociales por parte de los estudiantes.

Justificación

Las redes sociales en Internet han ganado su lugar de una manera vertiginosa convirtiéndose en promisorios negocios para empresas, artistas, marcas, FreeLancer y sobretodo en lugares para encuentros humanos.

La política educativa está siendo creada por nuevos actores que establecen nuevas fuentes de autoridad. Se trata de una arquitectura global de relaciones políticas que incluye a los estados nacionales y sub-nacionales, organizaciones internacionales (como la OCDE, UNESCO y el Banco Mundial), empresas multinacionales, organizaciones de la sociedad civil, consultoras y otras organizaciones hibridas, como las empresas que usan mecanismos de mercado para abordar problemas sociales o ambientales. (Beech, J. y Meo, A. I. 2016).

En las Jornadas sobre Gestión en Organizaciones del Tercer Sector en la Universidad Di Tella de Buenos Aires, Argentina, en noviembre de 2001 llegaron a la siguiente conclusión:

> "Las Redes son formas de interacción social, definida como un intercambio dinámico entre personas, grupos e instituciones en contextos de complejidad. Un sistema abierto y en construcción permanente que involucra a conjuntos que se identifican en las mismas necesidades y problemáticas y que se organizan para potenciar sus recursos".

En el ILCE (2016) se nos dice:

> "Muchas veces los alumnos pueden llegar a distraerse por la gran variedad de aplicaciones que las páginas suelen presentar".

Tomando lo anterior esta investigación nace con la finalidad de cuestionar el hecho del por qué los estudiantes de preparatoria dedican más tiempo a las diferentes redes sociales que al estudio o consulta de la plataforma de estudio Blackboard (BB), por lo que en base a esto se cuestiona si su uso habitual es síntoma de adicción que provoca mal rendimiento académico en estudiantes que pasan gran parte del tiempo en redes sociales, pero también sirve como base para tomar lo mejor de las redes sociales y en medida de lo posible lograr aplicarlo en la plataforma de estudio BB, con esto conseguir que los estudiantes visiten más este sitio de estudio para mejorar el aprovechamiento de los estudiantes de la Universidad TecMilenio Campus Nuevo Laredo y la Universidad de las Américas Campus Santiago Centro.

Los actores escolares "hacen" las políticas, significando y resignificando los textos de las políticas en relación con sus biografías profesionales, su contexto histórico, institucional y social, y su ubicación en el sistema educativo local (Braun, Ball, S., Maguire, M. & Hoskins, K. et al., 2011b)

Metodología

El nombre del proyecto de investigación que desarrollaré se denomina: "Desempeño Académico Vs Correlación Redes Sociales: Un Análisis Comparativo México - Chile"; el enfoque que presenta esta investigación es cuantitativo debido a que se utiliza la recolección de datos para probar la hipótesis, con base en la medición numérica y el análisis estadístico, para así establecer patrones de comportamiento.

La investigación tiene las siguientes características:

- Es de campo, ya que se considera la aplicación de una encuesta a una muestra seleccionada de una población objetivo de los estudiantes de la Universidad TecMilenio Nuevo Laredo y y la Universidad de las Américas Campus Santiago; se realiza con objeto de recopilar datos veraces entre la población estudiantil.
- Estudio empírico, es una investigación auténtica y original que busca comprobar la hipótesis del bajo rendimiento académico y la correlación existente entre la utilización de

las redes sociales en los estudiantes; se realiza por etapas de proceso que incluyen introducción, antecedentes, desarrollo, procedimientos, análisis y conclusión.

Los datos serán recopilados para esta investigación, mediante la aplicación de una encuesta que tiene las siguientes características:

- Encuesta aplicada de forma indirecta.
- Cuestionario formado por 11 preguntas.
- Éstas se clasifican en 4 preguntas de opción múltiple y 7 dicotómicas.
- Objetivo: Demostrar que las redes sociales disminuyen el tiempo de estudio de los alumnos influenciando negativamente en el rendimiento académico.

Alcances de la Investigación

En la Universidad TecMilenio campus Nuevo Laredo y la Universidad de las Américas Campus Santiago se cuentan con una infraestructura tecnológica de primer nivel que les permiten a los estudiantes desarrollar su preparación académica en el manejo de las tecnologías educativas, contando con la posibilidad del manejo de medios electrónicos dentro del las aulas y teniendo como su principal plataforma de estudio al sistema Blackboard; el cual contiene la totalidad de los cursos por semestre de los estudiantes, donde consultan, estudian y entregan sus tareas.

Investigar cuantos de los estudiantes han ingresado en alguna red social dentro del aula mientras sus maestros imparten clase.

Determinar si la plataforma Blackboard es tediosa para el estudio e interacción con los estudiantes y maestros que la utilizan.

Limitaciones de la Investigación

Las limitaciones que se pueden presentar en este proyecto de investigación dentro de la Universidad TecMilenio campus Nuevo Laredo y la Universidad de las Américas Campus Santiago serian las siguientes:
- La escasa experiencia en el ámbito de la investigación.
- Falta de artículos así como información de este tema en medios escritos o digitales.
- La falta de honestidad de parte del entrevistado al contestar la encuesta por miedo a una reprimenda de parte del profesorado de la institución.

Investigación cualitativa

Características de la aplicación

El instrumento de recolección principal que se utilizará en esta investigación causal, será la encuesta o entrevista es una Técnica de Investigación Cualitativa.

El muestreo que se mostrará forma parte del proceso de investigación fue realizado en base a un cuestionario o muestra piloto que se empleó, en las preguntas se expondrán las opciones "SI" o "No", las cuales el alumno según su criterio tendrá que responder; el cuestionario es una forma de realzar de manera específica el resultado de la muestra realizada en la población en el que se menciona la categoría de respuesta, la frecuencia de personas que contestaron según el número de opciones, después se tabula y se captura cada uno de las respuestas que contenga el cuestionario mediante un grafica para poder obtener la media del resultado del muestreo y para darle mayor detalle y realce a la situación del proyecto de investigación.

Para ello realizaré 2 tipos de encuestas:

Encuesta Descriptiva: se realizará mediante una hoja blanca impresa para México y en línea para Chile conteniendo las siguientes características:
- Encuesta aplicada de forma indirecta.

- Cuestionario formado por 11 preguntas.
- Éstas se clasifican en 4 preguntas de opción múltiple y 7 dicotómicas.

Encuesta Analítica: que será una encuesta en línea por medio de google forms, más amplia con la finalidad de conocer los hábitos, técnicas y habilidades de estudio Por medio de esta encuesta sobre habilidades de estudio, conoceré:

La Motivación para el estudio que tienen los jóvenes y la organización del estudio que utilizan los alumnos de Universidad TecMilenio de México y la Universidad de las Américas de Chile.

III. Resultados

Instrumento de Recolección de Datos Encuesta Descriptiva

Nombre de la encuesta: Usos y Aplicación de Redes sociales

Objetivo: La presente encuesta tiene como objetivo recabar información acerca del uso de redes sociales y plataforma de estudio BB.

Edad: _____ Sexo: M ( ) F ( ) Semestre: _____   Promedio: ___.___

1.- ¿Has usado alguna red social?
  Si ( ) No ( )
2.- ¿Que redes sociales utilizas?
  Facebook ( ) Youtube ( ) Twitter ( ) Instagram ( ) Tik Tok ( )
  Otra: _____
3.- ¿Cuanto tiempo que permaneces en las redes sociales?
  Menos de 30 min ( )   30 min – 1 hora ( )
  2 horas ( )   Más de 2 horas ( )
4.- ¿Cuántos días a la semana ingresas a alguna red social?
  1-2 ( ) 3-4 ( ) 5-6 ( ) Todos ( )
5.- ¿Has utilizado alguna red social mientras estabas en clase?
  Si ( ) No ( )
6.- ¿Has dejado de hacer tarea por preferir alguna red social?
  Si ( ) No ( )
7.- ¿Has utilizado las redes sociales para consultar dudas en trabajos, tareas e investigaciones?
  Si ( ) No ( )
8.- ¿Te has visto beneficiado por utilizar las redes sociales para consultar dudas en trabajos, tareas e investigaciones?
  Si ( ) No ( )
9.- ¿Cuánto tiempo dedicas a la plataforma de estudio BlackBoard?
  Menos de 30 min ( )   30 min – 1 hora ( )
  2 horas ( )   Más de 2 horas ( )
10.- ¿La plataforma de estudio BlackBoard es fácil de utilizar?
  Si ( ) No ( )
11.- ¿Si se incluyera a la plataforma de estudio BlackBoard aplicaciones de las diferentes redes sociales incrementaría tu interés para permanecer más tiempo en ella?
  Si ( ) No ( )

Encuesta Analítica sobre habilidades de estudio.

Contesta *si* o *no* trazando una **X** en la casilla correspondiente de tu hoja de respuestas. No hay preguntas *"correctas"* o *"incorrectas*", ya que **LA CONTESTACIÓN ADECUADA ES TU JUICIO**

SINCERO. Responde tan rápido como puedas, pero sin caer en el descuido, y no dediques demasiado tiempo a una sola pregunta. No omitas ninguna de ellas.

	Organización del estudio	SI	NO
1.	¿Sueles dejar para el último momento la preparación de tus trabajos?		
2.	¿Crees que el sueño o el cansancio te impiden estudiar eficazmente en muchas ocasiones?		
3.	¿Es frecuente que no termines tus tareas a tiempo?		
4.	¿Tiendes a emplear tiempo en leer revistas, ver televisión o platicar cuando debieras dedicarlo a estudiar?		
5.	Tus actividades sociales o deportivas ¿te llevan a descuidar, a menudo, tus tareas escolares?		
6.	¿Sueles dejar pasar un día o más antes de repasar los apuntes tomados en clase?		
7.	¿Acostumbras dedicar tu tiempo libre a otras actividades que no sean estudiar?		
8.	¿Descubres de repente que debes entregar una tarea antes de lo que creías?		
9.	¿Te retrasas frecuentemente en una materia debido a que tienes que estudiar otra?		
10.	¿Te parece que tu rendimiento es muy bajo en relación con el tiempo que dedicas al estudio?		
11.	¿Está situado tu escritorio directamente frente a una ventana, puerta u otra fuente de distracción?		
12.	¿Sueles tener fotografías, trofeos o recuerdos sobre tu escritorio?		
13.	¿Acostumbras estudiar recostado en la cama o arrellanado en un asiento cómodo?		
14.	¿Produce resplandor la lámpara que utilizas al estudiar?		
15.	Tu escritorio ¿está tan desordenado que no dispones de sitio suficiente para estudiar?		
16.	¿Suelen interrumpir tu estudio personas que te visitan?		
17.	¿Estudias frecuentemente frente a la televisión u oyendo música?		
18.	En el lugar donde estudias ¿se ven fácilmente revistas o materiales de tu afición?		
19.	¿Interrumpen frecuentemente tu estudio ruidos del exterior?		
20.	¿Se retrasa tu estudio porque no tienes a mano los libros y materiales necesarios?		

	Técnicas de estudio	SI	NO
1.	¿Tiendes a comenzar la lectura de un texto sin hojear los subtítulos y las ilustraciones?		
2.	¿Te saltas generalmente las figuras, gráficas y tablas?		
3.	¿Te es difícil seleccionar los puntos centrales del tema en estudio?		
4.	¿Te sorprendes con frecuencia pensando en algo que no tiene nada que ver con lo que estudias?		
5.	¿Sueles tener dificultad en entender tus apuntes de clase cuando los repasas después de cierto tiempo?		
6.	Al tomar notas ¿te retrasas por no escribir con suficiente rapidez?		
7.	Poco después de iniciado un curso ¿sueles encontrar que tus apuntes son un revoltijo?		
8.	¿Tomas tus apuntes con las palabras exactas del profesor?		
9.	Cuando estudias de un libro ¿acostumbras copiar palabra por palabra?		
10.	¿Te es difícil preparar un temario para un examen?		
11.	¿Tienes problemas para organizar los datos o la resolución de un problema?		
12.	Al repasar el temario de un examen ¿haces un resumen escrito?		
13.	¿Te preparas para un examen memorizando fórmulas, definiciones o reglas que no entiendes claramente?		
14.	¿Te resulta difícil decidir qué y cómo estudiar cuando preparas un examen?		
15.	¿Sueles tener dificultad en organizar lógicamente los temas por estudiar?		
16.	Al preparar examen ¿acostumbras estudiar todo el material en el último momento?		
17.	¿Sueles entregar tareas y exámenes sin revisarlos detenidamente?		
18.	¿Te es imposible con frecuencia terminar un examen en el tiempo prescrito?		
19.	¿Sueles perder puntos por no haber leído detenidamente el enunciado?		
20.	¿Empleas normalmente mucho tiempo en la primera mitad de la prueba y tienes que apresurarte en la segunda?		

	Motivación para el estudio	SI	NO
1.	Después de las primeras clases ¿tiendes a perder interés por el curso?		
2.	¿Crees que en general basta estudiar el programa del curso para aprobar?		
3.	¿Te sientes frecuentemente confuso e indeciso sobre tus metas formativas y profesionales?		
4.	¿Sueles pensar que no vale la pena el tiempo y el esfuerzo necesarios para una educación secundaria?		
5.	¿Crees que es más importante divertirte y disfrutar de la vida que estudiar?		
6.	¿Sueles pasar el tiempo de clase divagando o soñando despierto en lugar de atender al profesor?		
7.	¿Te sientes habitualmente incapaz de concentrarte en tus estudios debido a que estás inquieto, aburrido o de mal humor?		
8.	¿Piensas con frecuencia que las materias que estudias tienen poco valor práctico para tí?		
9.	¿Sientes frecuentemente deseos de abandonar la escuela y conseguir un trabajo?		
10.	¿Sueles tener la sensación de que la secundaria no te prepara para afrontar los problemas de la vida adulta?		
11.	¿Sueles dedicarte al estudio de modo casual, según el ánimo que tengas?		
12.	¿Te fastidia estudiar libros de texto porque son insípidos y aburridos?		
13.	¿Esperas conocer la fecha de examen para comenzar a estudiar?		
14.	¿Sueles pensar que los exámenes son pruebas inevitables que uno debe soportar?		
15.	¿Sientes con frecuencia que los profesores no comprenden las necesidades de los estudiantes?		
16.	¿Tienes normalmente la sensación de que tus profesores exigen demasiadas horas de estudio fuera de clase?		
17.	¿Acostumbras llegar a clase sin tener idea de qué temas se tratarán?		
18.	¿Sueles pensar que tus profesores no tienen contacto con los temas y sucesos de actualidad?		
19.	¿Sientes confianza, para hablar con tus profesores de tus proyectos futuros profesionales?		
20.	¿Prefieres quedarte con la duda a preguntar a los profesores?		

A continuación se representan los gráficos que se derivan de la tabulación de los resultados de la aplicación de encuestas propia a los alumnos de Universidad TecMilenio de México y la Universidad de las Américas de Chile.

Figura 1: Representación grafica de los resultados consencientes a las preguntas de organización en el estudio por parte de los alumnos
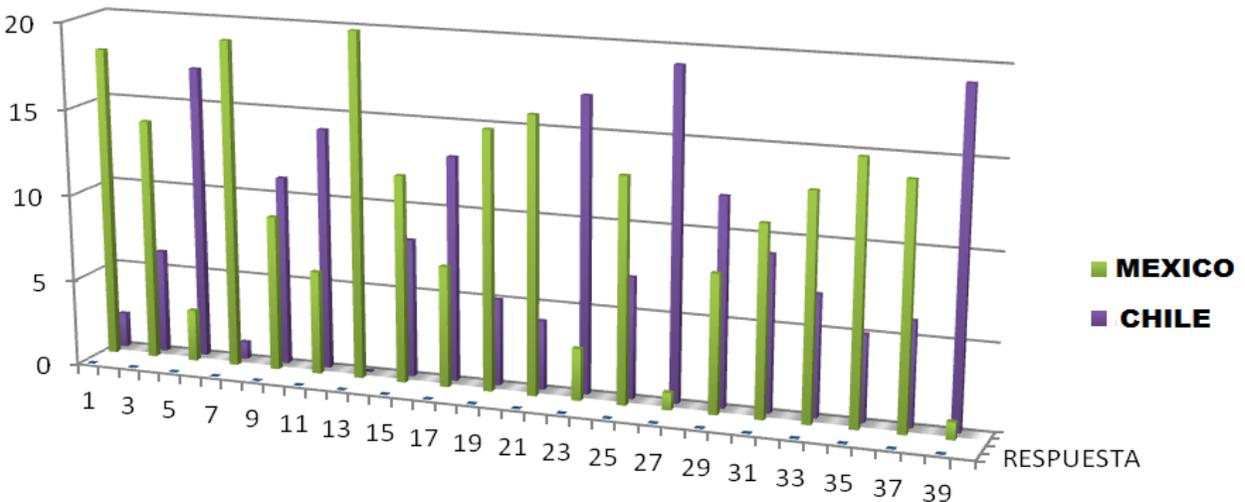
Figura 2: Representación grafica de los resultados de las preguntas de técnicas de estudio que emplean los alumnos
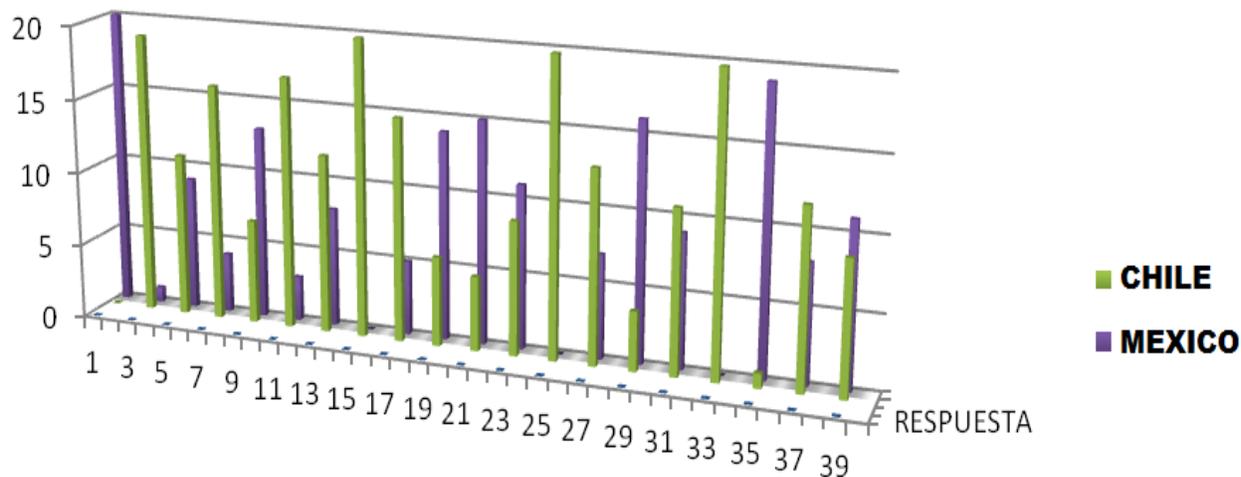

Figura 3: Representación grafica de los resultados correspondientes a las preguntas de motivación para el estudio por parte de los alumnos
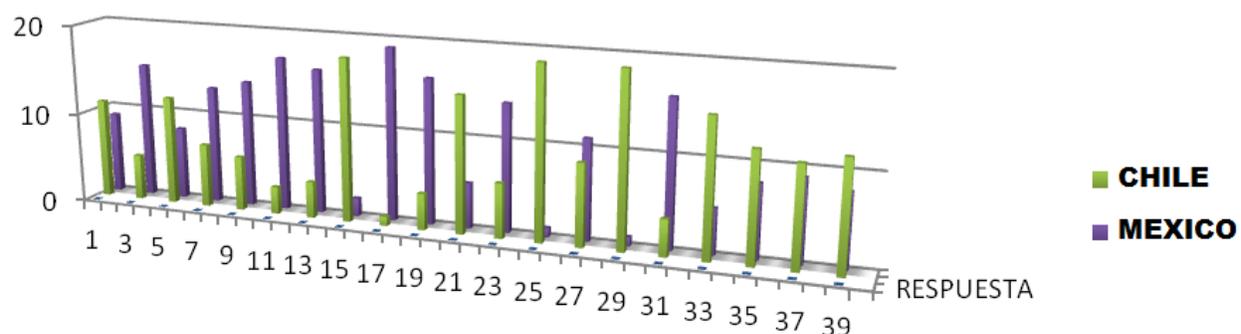
Determinación Estadística del Tamaño de la Muestra

La muestra extraída de la población objetivo será de 20 alumnos de Universidad TecMilenio de México y 20 alumnos de la Universidad de las Américas de Chile, en igualdad de condiciones estudiando en una universidad privada, de la carrera de periodismo o comunicación de 5to semestre.

La muestra de este estudio fue elegida basada en un 50% de la población total con la finalidad de que ésta sea representativa y cuente con las mismas características de la población, esta norma de probabilidad llamada Azarizada, determina que cada elemento de la población tiene una idéntica probabilidad de ser elegida.

Investigación Cuantitativa

Los resultados de la tabla demuestran una correlación negativa baja, del coeficiente de Pearson, que indican a las variables estudiadas: Uso excesivo de redes sociales y el rendimiento

académico tienen una relación negativa inversa, es decir entre más tiempo pasan los estudiantes en las redes sociales su rendimiento académico disminuye considerablemente.

Figura 4: Representación grafica de resultados de la correlación de Pearson entre el Rendimiento Académico y el Uso Excesivo de redes sociales
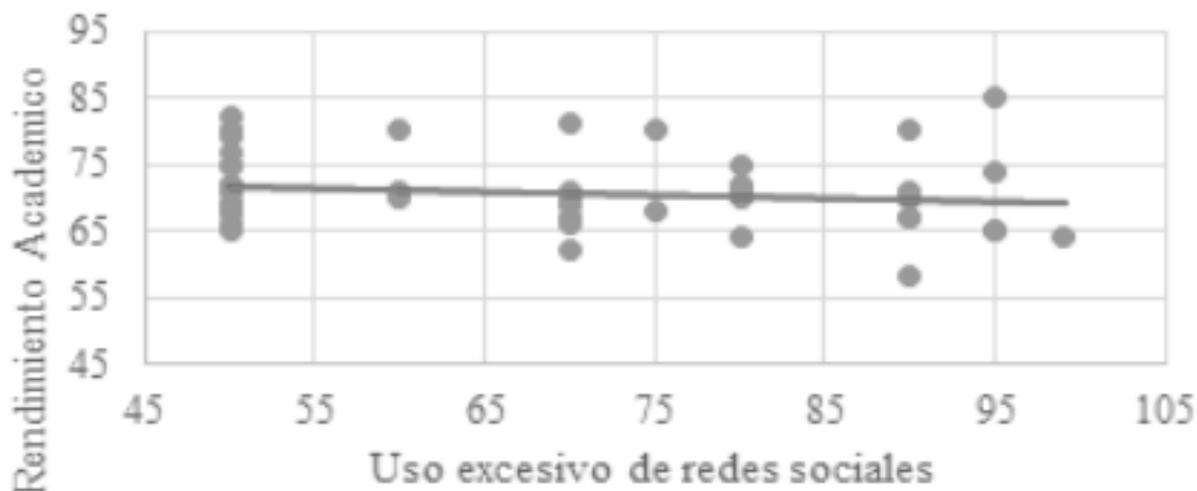

Tabla 3: Resultados numéricos de la correlación de Pearson

Correlaciones		Redes Sociales	Rendimiento Académico
Redes Sociales	Correlación de Pearson	1	-,158
	Sig. (bilateral)		,278
	N	49	49
Rendimiento Académico	Correlación de Pearson	-,158	1
	Sig. (bilateral)	,278	
	N	49	49

IV. Discusión

El diseño de la presente investigación se inscribe en el método comparativo en políticas públicas, la aplicación y uso de las redes sociales; así como la organización, hábitos y motivación de estudio de mis alumnos y alumnas de otro contexto nacional y con tales elementos de estudio se permite enriquecer la información obtenida sin ser excluyentes, ni sustituirse, sino complementarse e incluirse entre sí, para generar resultados de relación entre las variables y los objetos de estudio de la Educación Superior en América Latina, particularmente mis alumnos de la Universidad TecMilenio campus Nuevo Laredo de México y la Universidad de las Américas campus Santiago de Chile.

De los resultados de esta investigación surgen nuevos interrogantes como:

- ¿Cuáles son las limitaciones de las políticas educativas en los gastos PIB de los países de Chile y México?
- ¿De qué manera intervienen los organismos internacionales con el uso de las TIC en la población estudiantil universitaria?

V. Conclusiones

El presente proyecto de investigación de educación comparada tomo énfasis en mi País de origen México y el País que admiro por sus reformas e innovaciones educativas: Chile.

Resolviendo el análisis de dichos países sobresale el avance tecnológico y educativo de Chile, por ejemplo, se encuentra en el 1er lugar del ranking de los 10 países latinoamericanos con mejor educación, mientras que México se encuentra en el lugar 6.

A la vez gracias a los métodos estadísticos y de recolección de datos que se incluyeron en la presente investigación se logró comprobar la hipótesis el uso excesivo de redes sociales y el rendimiento académico tienen una correlación de Pearson inversa es decir entre más tiempo pasan los estudiantes en las redes sociales su rendimiento académico disminuye considerablemente.

También conocimos la aplicación y uso de las redes sociales; así como la organización, hábitos y motivación de estudio de los alumnos de Universidad TecMilenio campus Nuevo Laredo de México y la Universidad de las Américas campus Santiago de Chile.

De los países de Chile y México se obtuvo un análisis de educación comparada de políticas educativas, colegiaturas, estructuras del sistema educativo, índice de alfabetización, rendimiento académico, telecomunicaciones, entre otros.

En opinión personal me gustaría que mi país México genere alianzas significativas en el desarrollo académico con Chile, y que este a su vez adopte las condiciones económicas de estudios accesibles que México brinda a sus ciudadanos; trabajando en conjunto se garantizan calidad educativa, vinculación gubernamental, ampliación de apoyo a la labor educativa y de investigación, con retos de crecimiento, desarrollo y combate a la desigualdad; lo cual genera grandes beneficios en el crecimiento intelectual de las naciones y la formación integral de jóvenes universitarios unidos en globalización.

Referencias

Alfonseca, Carro, Paredes, Ortigosa y Martín, . (2006). The impact of learning styles on student grouping for collaborative learning: a case study. EUA: Kluwer Academic Publishers.

Beech, J. y Meo, A. I. (2016). Explorando el uso de las herramientas teóricas de StephenBall en el estudio de las políticas educativas en América Latina. Archivos Analíticos de Políticas Educativas, 24(23). http://dx.doi.org/10.14507/epaa.24.2417

Braun, A., Ball, S., Maguire, M. & Hoskins, K. (2011b). Taking context seriously: Towards explaining policy enactments in the secondary school. Discourse: Studies in the Cultural Politics

ILCE (2016). Estudio de seguimiento de la implementación del Modelo de profesionalización dual para las figuras educativas, 2016. Informe sobre el seguimiento a la formación inicial previa del Ciclo Escolar 2016-2017, así como al arranque de los estudios de las figuras educativas en la educación media superior o superior. Recuperado el 17 de diciembre de 2018

Navarro, M. (2010). Educación comparada. Perspectiva Latinoamericana. México: Planea

El impacto económico de las inversiones en energías renovables realizadas en el estado de Tamaulipas

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Resumen

El constante aumento en el precio de los combustibles fósiles y los crecientes daños provocados al medio ambiente han intensificado el aprovechamiento de las energías renovables; Tamaulipas es uno de los principales estados del país que contribuye a la generación de energías renovables en los últimos años, el estado ha sumado relevancia en cuanto a las inversiones extranjeras.

El principal objetivo de este escrito es el de documentar el crecimiento de las inversiones extranjeras en el área de las energías renovables, específicamente la eólica, debido a que con la constante llegada de nuevas inversiones se estima que el estado pueda ser el líder del país en la producción de energías limpias, contribuyendo al crecimiento económico del mismo.

Dentro del estado operan 12 parques eólicos los cuales representan una inversión de más de 3 mil millones de dólares, gracias a la operación de estos parques se generaron más 3 mil empleos de manera directa e indirecta. Sumándole por separado los beneficios ambientales y económicos, la creación de los parques eólicos trae consigo una importante derrama económica de inversiones sociales, particularmente en las comunidades ubicadas en su área de influencia, algunos ejemplos de las inversiones sociales se dan en la rehabilitación de caminos, donación de materiales de construcción para el mejoramiento de vivienda e infraestructura comunitaria, entre otros. Gracias a la construcción de parques eólicos y al impulso de las energías renovables, Tamaulipas ocupa el sexto lugar del país en inversiones extranjeras.

I. Introducción

Debido a los altos costos de electricidad, el incremento de los precios en los combustibles fósiles y el aumento de la contaminación es un fenómeno que con el trascurso del tiempo ha ido dañando el medio ambiente, por estas principales razones se han implementado medidas para disminuir costos y daños. En muchos lugares del mundo se ha apostado por las energías renovables, las cuales serán obtenidas de fuentes naturales para generar energía de manera inagotable. Principalmente la energía se obtendrá del sol y viento, al llevar a cabo la implementación y uso de energías renovables se pretende disminuir el impacto en el medio ambiente y hacer notar los beneficios que estas traen consigo.

En el caso de México se ha visto un gran potencial en la implementación de energías renovables, principalmente de las energías eólica e hidroeléctrica. Dentro del país Tamaulipas es uno de los estados que más le apostado a las energías renovables. En los últimos años el Estado

de Tamaulipas ha invertido en parques eólicos, contando con un total de 12 parques eólicos, este estado es uno de los principales aportadores de energías renovables en México y se pretende incrementar su aportación en el país con la implementación de más parques eólicos.

II. Antecedentes

La principal fuente de energía en México son los hidrocarburos que representa la mayor parte de energía eléctrica en el país, esta fuente de energía produce emisiones nocivas como gases de efecto invernadero, bióxidos de azufre entre otros.

La región de Reynosa en el estado de Tamaulipas se abastece principalmente de energía eléctrica que utilizan gas natural y combustóleo. En el estado se reportó un incremento del 43% de gases de efecto invernadero entre 1990 y 2005.

Según la Secretaría de Energía de México los estados de Tamaulipas, Oaxaca y Baja California tienen las áreas con mayor recurso de viento para generar energía.

Con el propósito de sustituir la energía que se consume en el estado de Tamaulipas un grupo de investigadores de la Universidad Autónoma de Tamaulipas (UAT) desarrollaron un proyecto de energía Eolo-eléctrica en el año 2004, que con el apoyo del Gobierno estatal y del Banco de Desarrollo de América del Norte (Nadbank), la UAT, a través del Centro de Proyectos Estratégicos para el Desarrollo Sustentable (Ceprodes), encaminó sus pasos a concretar el proyecto, después de que se aprobara el crédito del proyecto al comienzo del año 2006 se inició con la instalación de torres de medición en la zona norte de Tamaulipas finalizando en el mismo año un estudio preliminar de factibilidad. Durante los años 2006 y 2007 se registraron las condiciones necesarias del viento con el objetivo de conocer el potencial eólico de la zona. Cinco sitios en el norte de Tamaulipas fueron sometidos a dichas pruebas.

III. Las energías renovables en Tamaulipas

Tamaulipas se confirmó como una de las tres entidades en las cuales existe un gran potencial eólico en México, al salir este dato a la luz desde el 2007 el estado de Tamaulipas se ha consolidado como una de las entidades que tiene una significativa aportación de energías renovables, especialmente de energía eólica después del estado de Oaxaca.

Desde el año 2007 el estado ha buscado llevar a cabo la implementación de proyectos que tienen que ver con las fuentes de energía y disminuir los costos e impactos que conlleva el uso de hidrocarburos como fuente de energía eléctrica.

En Tamaulipas se busca promover el aprovechamiento de las energías renovables, es por eso que se ha estado trabajando con políticas que impulsen el desarrollo y aplicación de tecnologías que ayuden a la creación e implementación de empresas que contribuyan al aprovechamiento de energías renovables. El estado de Tamaulipas tiene el segundo lugar a nivel nacional en la producción de energías renovables, contribuyendo con el 13% en el consumo que hay en el país. Según María Antonieta Gómez López quien es la comisionada de Energía del Estado de Tamaulipas, se busca que el estado sea la entidad que genere la mayor cantidad de energía eólica en el país, ya que, cuenta con un gran potencial eólico. Actualmente cuenta con 12 parques eólicos en operación ubicados en los municipios de Reynosa, Llera y Güémez los cuales generan un total de 1,572 MW; la expectativa que se tiene es el gran aporte que habrá en la conservación de los recursos naturales ya que habrá una reducción en la demanda de combustible fósil y en la reducción a la demanda de agua. Además, habrá aporte a los desplazamientos de gases de efecto invernadero lo cual son producidos por la electricidad que se genera mediante los procesos tradicionales.

IV. Resultados

Según la Asociación Mexicana de Energía Eólica (AMDEE) de los 54 parques eólicos repartidos en 15 estados del país, 12 son los que operan actualmente en el estado de Tamaulipas, los cuales poseen un total de 473 generadores en funcionamiento.

Los parques que operan en el estado reportaron 2,025 MW de capacidad instalada abriendo así el año 2021, logrando posicionarse como el segundo estado con mayor capacidad instalada en MW del país, el gobernador del estado señaló que las inversiones en el campo energético al cierre de año lograran la operación de 15 parques eólicos al concluir con la construcción de 3 parques más, dos ubicados en el municipio de Reynosa y el otro en San Carlos. Estos tres proyectos en construcción representan una inversión de más de 2,700 millones de dólares y generaran 453 MW.

En la actualidad Reynosa cuenta con el parque eólico más grandes de Latinoamérica, solo este proyecto ofrece energía limpia, confiable y asequible que es equivalente al suministro de energía de para 64,634 hogares y aporta con un ahorro de CO_2 equivalente a plantar 22.8 millones de árboles, generando un aproximadamente de 400 empleos de forma directa de los cuales el 90% son para los mexicanos, solo este parque cuenta con una capacidad instalada de 424 MW.

Ubicando al estado en el octavo puesto en inversión extranjera debido a los 3 mil millones de dólares de inversión que se registraron a finales de 2020, sin embargo se espera un incremento en de la inversión extranjera ya que en la actualidad el estado de Tamaulipas cuenta con 9 proyecto en puerta que se estiman con una capacidad instalada de 2,811 MW que proyectará al estado con una capacidad de producción de energía eólica de 19% del consumo total de energía del país.

V. Conclusiones

Se espera que para el año 2024, México pueda generar el 35% de energías limpias para su consumo por otra parte se estima que el estado de Tamaulipas está destinado a convertirse en la capital energética de México, por su liderazgo en materia energética y producción de energías limpias ya que se espera que sea el estado que contribuya mayoritariamente al cumplimiento de este objetivo proyectado para 2024. A pesar de que en la actualidad la energía eólica en su totalidad es comercializada con los parques industriales ubicados en territorio tamaulipeco se busca que con el aumento de la producción de MW se pueda ampliar también el mercado al que se ofrece para que en un futuro este tipo de energía sea la que cubra una mayor parte del consumo de los hogares.

En el arranque del parque eólico Reynosa el gobernador del estado García Cabeza de Vaca menciono en su discurso que "Deseamos crear un Centro de Investigación Eólica en Reynosa a través de la Universidad Tecnológica de Tamaulipas (UTT) y la Universidad Autónoma de Tamaulipas (UAT) que nos permita certificar técnicos que coadyuven a impulsar este tipo de proyectos". Al incluir la participación de las mencionadas universidades la Secretaría de Energía no solo se espera que los proyectos de esta materia incrementen sino también que los municipios puedan desarrollar capital humano que cuente con las capacidades adecuadas para ocupar los puestos de trabajo que se generen a lo largo de los proyectos impulsando al sector energético local, regional y nacional.

Referencias

Asociación Mexicana de Energía Eólica. (2021). Mapas eólicos. Recuperado de: https://amdee.org/mapas-eolicos.html

Banco de Desarrollo de América del Norte. (2014). Parque eólico El Porvenir. Recuperado de: https://www.nadb.org/es/nuestros-proyectos/proyectos-de-infraestructura/parque-eolico-el-porvenir

Banco de Desarrollo de América del Norte. (2015). Proyecto de Energía Eólica "Victoria" en Güémez Tamaulipas. Recuperado de: Proyecto De Energía Eólica "Victoria" En Güémez, Tamaulipas | BDAN: Banco de Desarrollo del América del Norte (nadb.org)

Beltrán, A, Morena, M; López, F; Villela, R. (2017). Prospectiva de las energías eólica y solar fotovoltaica en la producción de energía eléctrica. Recuperado de: https://www.redalyc.org/pdf/4419/441949672008.pdf

Calderón, L. (2008). Será la energía eólica una realidad en Tamaulipas. Recuperado de: https://www.redalyc.org/pdf/4419/441942912002.pdf

Delgado, L; García, J. (2019). Economía-medio ambiente-energía: uno de los mercados del futuro. Recuperado de: http://revistaedutam.tamaulipas.gob.mx/Revista/Modelo_Educativo/2019/5/1

Galván, G. (2019). Tamaulipas invierte en proyectos de energía eólica. Recuperado de: https://cceea.mx/blog/energia-eolica/tamaulipas-invierte-en-proyectos-de-energia-eolica

Gobierno de México. (2009). Energía eólica en México. Recuperado de: https://www.gob.mx/cms/uploads/attachment/file/31621/eolico.pdf

Gobierno del Estado de Tamaulipas. (2018). Inicia operaciones en Tamaulipas el parque eólico más grande de México y Latinoamérica. Recuperado de: https://www.tamaulipas.gob.mx/2018/08/inicia-operaciones-en-tamaulipas-el-parque-eolico-mas-grande-de-mexico-y-latinoamerica/

Gobierno del Estado de Tamaulipas. (2019). Tiene Tamaulipas nuevo parque eólico. Recuperado de: https://www.tamaulipas.gob.mx/2019/08/tiene-tamaulipas-nuevo-parque-eolico/

Gómez, A; Suarez, J. (2021). Ventajas logísticas y oportunidades de inversión. Recuperado de: https://www.tamaulipas.gob.mx/energia/wp-content/uploads/sites/34/2021/01/cetam_2021_espanol.pdf

Herrán, J. (2008). El viento: fuerza viva para generar electricidad. Recuperado de: https://www.redalyc.org/pdf/4419/441942913001.pdf

Reve. (2013). Energías renovables en Tamaulipas: desarrollo de la energía eólica con la instalación de aerogeneradores. Recuperado de: https://www.evwind.com/2013/06/02/energias-renovables-en-tamaulipas-desarrollo-de-la-energia-eolica-con-la-instalacion-de-aerogeneradores/

Códigos QR

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Resumen

En esta investigación hablaremos sobre los códigos QR, el cómo ha transformando nuestras vidas a lo largo de este tiempo. Hoy en día, los códigos QR se pueden ver en restaurantes, tiendas comerciales, carteles, revistas y en un sinfin de aplicaciones etc. Los códigos QR permiten interactuar con el mundo a través de sus dispositivos móviles.

Quick Response Code (QR-Code, Código QR) son un sistema para almacenar información en una matriz de puntos o un código de barras bidimensional creado por la compañía japonesa Denso Wave, subsidiaria de Toyota, en 1994. Sus creadores fueron Euge Damm y Jaoca pretendían conseguir un sistema de rápida lectura para la información. Actualmente, su uso más habitual está en el marketing y los servicios. Fueron creados en el año 1998. Se caracteriza por los tres cuadrados que se encuentran en las esquinas y que permiten detectar la posición del código al lector.

Existen múltiples lectores QR gratuitos para la mayoría de dispositivos móviles que se encuentran con el lector apropiado para tu terminal o sistema operativo y empieza desde ya a descubrir lo que esconde un código QR.

Hablaremos de uno de los grandes problemas que están enfrentando los códigos QR es que la gente todavía no se ha familiarizado con estos "cuadros", por lo que su uso y la adopción van a ser influidos. Es una herramienta que hoy en día la sociedad lo utiliza di a día y ha impactado de una manera muy eficaz dentro de la población joven sin embargo es muy complicado para los adultos mayores ya que no saben utilizarlos o que sin embargo algunos de ellos no tienen teléfonos inteligentes.

Los códigos QR han sido una revolución desde que su invención salió al mercado. Sin embargo, el uso y la adaptación por parte del consumidor final todavía no llegan a niveles óptimos. En la mayoría de los casos el problema radica en el tipo de dispositivos móviles y lectores, no obstante, al parecer la culpa está más en los profesionales de mercado y publicidad que todavía no saben bien cómo usarlos y explotarlos. Ante una nueva tecnología tan potente y práctica, es nuestro deber difundirla para que más gente se beneficie de los servicios asociados con ella. A medida que el internet móvil está desarrollándose rápidamente, las funciones que tiene el Smartphone son cada vez más potentes al igual su precio.

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Los códigos QR es una manera de facilitar la vida cotidiana en las personas, pero existe esa parte donde hay personas que aún no saben ni siquiera que es un QR y mucho menos cómo se usa. La manera sería informar a las personas acerca de los códigos QR y cómo se utilizan así esto mismo facilitaría su vida en muchas ocasiones.

Se realizaron encuestas en las cuales un 70% es de género femenino y un 30% masculino, entre una edad de 18 a 40 años, en la cual las personas saben lo que es un código QR y lo han utilizado en su vida.

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