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Boosting Competitiveness: The Role of Nearshoring in SMEs in the Auto Parts Sector in Nuevo Leon, Mexico

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Despite numerous studies focusing on supplier development and the competitiveness of SMEs in the automotive industry and other sectors, comprehensive research has yet to be conducted to analyze the impetus for the competitiveness of SMEs due to the nearshoring trend in Nuevo Leon, Mexico. Additionally, there is a need for more information regarding the effects on SMEs in Nuevo Leon's automotive parts sector. This research aims to analyze the drive generated by nearshoring in companies within the automotive parts sector in Nuevo Leon and its effects on decent work. This will be carried out through a literature review and an analysis of various semi-structured interviews with experts in the field aimed at gathering valuable insights from individuals who have had direct and indirect involvement in the current situation in Mexico and Nuevo Leon. The qualitative analysis allowed for a detailed examination of the various effects resulting from the implementation of the USMCA and nearshoring on competitiveness and decent employment in SMEs. The findings revealed different positive effects driving the competitiveness of SMEs as well as areas of opportunity for better development of SMEs in Nuevo Leon's automotive parts sector.

Keywords: Nearshoring; competitiveness; investment; SMEs; USMCA; internationalization; auto parts; Nuevo Leon, Mexico

I. Introduction

There has been a radical change in business dynamics in recent years due to globalization and the increasing interconnectedness of international markets. Because of this, small and medium-sized enterprises (SMEs), in this context, play a crucial role in the economy, particularly in regions like Nuevo Leon, Mexico, where the automotive parts sector is of vital importance.

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Competitiveness in this sector has become an increasingly pressing challenge, driving the need to explore innovative strategies that enable SMEs to maintain and strengthen their position in the global market.

The present research delves into one of these emerging strategies: nearshoring. This approach seeks geographical and cultural proximity to key markets, in contrast to the traditional global outsourcing trend. In this context, the state of Nuevo Leon, with its strategic location and significant presence in the automotive industry, becomes an ideal laboratory to examine how nearshoring can enhance the competitiveness of SMEs in the auto parts sector.

This research aims to thoroughly analyze the impact of nearshoring on SMEs in the auto parts sector in Nuevo Leon, exploring its benefits, challenges, and opportunities. An interdisciplinary approach that combines economic, business, and social elements and seeks to shed light on how companies can leverage this strategy to improve their position in a highly competitive and globalized market.

In the following study, we will examine the theoretical background of nearshoring, the characteristics of the auto parts sector in Nuevo Leon, and the obstacles and prospects of this trend. Ultimately, this research aims to contribute to both academic and business knowledge by providing valuable information for SMEs and stakeholders in the auto parts sector in Nuevo Leon, helping them make informed and strategic decisions in an ever-evolving business environment.

Finally, the research question focuses on the following: How will the relocation of companies (nearshoring) enhance the competitiveness of SMEs in the auto parts sector in Nuevo Leon from the perspective of the USMCA (United States-Mexico-Canada Agreement)?

II. Literature Review

Nearshoring is an outsourcing strategy that involves relocating business operations or production processes to a nearby country or the same geographic region instead of to more distant locations or outside the area (Lázaro 2022). This strategy focuses on leveraging the destination location's cost advantages and geographic proximity to realize benefits such as lower wages, reduced operating costs, lower transportation expenses, and greater flexibility in supply chain management. In short, nearshoring seeks to establish itself where all fees, costs, and even taxes are cheaper.

Mexico is an attractive destination for nearshoring given its geographical proximity to the United States, which is its leading trading partner since they share an extensive land border of 3,152 kilometers, facilitating transportation and logistics, which reduces costs and delivery times (CLAUT 2023a).

In the same way, according to reports, the Agreement between the United States, Mexico, and Canada (USMCA), previously known as the North American Free Trade Agreement, directly impacts the choice of Mexico over other destinations in terms of nearshoring within the automotive sector (Pineda 2022). Since free trade agreements eliminate or reduce tariffs and facilitate trade between member countries, Mexico is an attractive location to establish nearshoring operations, as it provides access to a large market and allows products to be exported more efficiently. A positive example of this could be a machining company that obtained nine new clients after the implementation of the USMCA, which represented 1 million dollars in sales.

Likewise, time compatibility plays a vital role since Mexico's time zone is similar to that of much of the United States, which facilitates coordination and communication between companies in both countries; this is crucial in nearshoring operations, where synchronization and effective collaboration are essential (Secretaría de Relaciones Exteriores 2016).

Furthermore, the competitive costs are highlighted, not only because labor costs in Mexico are lower than those in the United States but also because the quality of the labor is high, making production operations profitable without compromising product quality. Likewise, Mexico offers access to the United States and provides a platform to reach other markets in Latin America and throughout the world. This makes it an attractive hub for companies expanding their global operations and sales.

The reasons above show that nearshoring greatly influences the internationalization of small and medium-sized businesses (SMEs), mainly because they offer the expansion of activities and the high demand given the relocation of foreign companies in search of suppliers and all types of operators in the supply chain. This allows SMEs to access international markets more effectively by establishing operations or business partners in nearby countries. Nearshoring can even promote the transfer of knowledge and technology at the local level, which can foster capacity development in recipient countries and strengthen long-term business relationships (Cluster Industrial 2023b).

Nuevo Leon has built a series of competitive advantages that make it attractive for nearshoring investments, particularly for SMEs. Its strategic location, skilled labor, and advanced industrial infrastructure are key factors that drive the region's success in this phenomenon. Furthermore, the Camara de la Industria de Transformacion de Nuevo León (CAINTRA) and other local business organizations promote collaboration between local and foreign companies, which creates a favorable business environment for SMEs seeking to settle in the region (Cluster Industrial 2023a).

On the other hand, Cluster Automotriz de Nuevo León, A.C. (CLAUT) is an organization composed of leading automotive manufacturers and academic and governmental institutions associated with this field. Its primary mission is to enhance the competitiveness and development of the automotive sector in the region through collaboration, partnerships, and synergies among government, academia, and industry. CLAUT encompasses vehicle assembly companies, first, second, and third-level suppliers, commonly referred to as “Tier 1,” “Tier 2,” and “Tier 3” suppliers, as well as support companies for the automotive industry, such as logistics and consulting services. The Tier 2 segment comprises small and medium-sized enterprises (SMEs) specializing in automotive parts (CLAUT 2023b).

It is important to understand that in the automotive industry, suppliers are normally organized in “tiers.” In a modern supply chain like the ones used in the automotive industry, suppliers are organized in sequential levels called tiers. The original equipment manufacturer (OEM), for example Nissan or Honda, relies on Tier 1 (module and system suppliers), Tier 2 (component manufacturers), and Tier 3 (parts suppliers). The manufacturers of Tier 2 tend to be smaller than Tier 1 companies but are indispensable for the creation of specialized components (Walterpack 2023).

A 2023 report mentions that 78 Tier 2 companies are within the cluster (Cluster Industrial 2023a). Tier 2's primary objective is to foster the competitiveness and growth of its affiliated companies through collaboration, partnerships, and synergies with government, academia, and other businesses. Critical projects for Tier 2 companies include generating business opportunities with OEMs and Tier 1 suppliers, participating in best practices training programs, gaining access to government funds and bank credits, and engaging in trade missions (CLAUT 2023a).

Correspondently, three years after the implementation of the United States-Mexico-Canada Agreement (USMCA), exports reached \$89,224 million, with the primary market being the United States at 87.9%. Imports of automotive parts, primarily components, amounted to \$60,717 million, mainly sourced from Asia. Therefore, the current goal of the automotive industry is to reduce imports from Asia by almost 30% to allow Tier 2 and SMEs to capitalize on component production (Cluster Industrial 2023a).

Additionally, each year, an automotive supplier event, Proveedor Automotriz, takes place, featuring business meetings, conferences, and exhibitions to identify new opportunities for Tier 2 companies with potential future clients (Proveedor Automotriz 2023). In 2022, more than 250 supplier companies, over 47 buying companies, and an estimated 700 business meetings were confirmed, with a demand of over 380 different components and automotive parts from Tier 1 and OEM companies (Pineda 2022).

In addition to that, the USMCA facilitates internationalization in different forms for Mexican SMEs in Chapter 25 titled “Small and Medium Enterprises” (Secretariat of Economy 2020). This chapter states that the Parties (USA, Mexico, and Canada) need to cooperate in order to promote jobs and the growth of SMEs (U.S. Congress 2020). Before the USMCA came into effect, Tier 1 manufacturers and automotive companies imported over 80% of their components compared to regional content, as it was more convenient and cost-effective. This is the primary reason for Mexico’s significant shortage of Tier 2 companies. Although there are around 600 Tier 1 and Tier 2 companies in Mexico, there should be a substantially higher number of Tier 2 companies, estimated at 2,500 (CLAUT 2023a).

However, there is a high demand for automotive parts from Tier 1 and OEM companies. Still, local Tier 2 companies do not provide an adequate supply, prompting these companies to seek foreign suppliers to meet their needs. Therefore, there is an urgent need to increase supply by boosting the production of existing companies, establishing new enterprises, and exploring companies in other industries that can meet specific requirements (CLAUT 2023a).

It is crucial for companies to be aware of the current situation and invest in becoming attractive to Tier 1 and OEM companies despite high interest rates. This will enable them to improve long-term productivity and position themselves at higher levels (Cluster Industrial 2023a).

Additionally, an analysis conducted by CLAUT involving 247 companies during the “Automotive Supplier 2022 Edition” found that the shortage of Tier 2 companies in the industry is mainly due to a lack of certifications and insufficient installed capacity. Tier 2 companies typically hold ISO 9000 and IATF 16949 certifications, but only a limited number possess these and other certifications that could expand their customer base (CLAUT 2023a).

To address this issue, CLAUT, in collaboration with the Ministry of Economy and the Directorate of Productive Chains, is promoting training programs to ensure that 100% of Nuevo Leon’s companies obtain the necessary certifications to integrate into the supply chains of OEMs and Tier 1 companies. Four critical processes, identified by some significant companies within the cluster, have been selected for this purpose: cold forging, high-pressure aluminum injection, steel casting, and gravity aluminum casting (CLAUT 2023a). Additionally, SMEs must prepare for IATF 16949 certification to earn the trust of Tier 1 and OEM companies (Coronado 2023).

Experts emphasize that while, technically, SMEs can become suppliers, they need to continue growing at the same pace as new investments (Flores 2020). As a result, investment funds are interested in participating in the industry and supporting Tier 2 companies. Therefore, it is essential to focus on developing local suppliers in Nuevo Leon or exploring potential suppliers in other industries that can contribute to the automotive sector (Coronado 2023).

In the automotive industry, there are notable challenges, particularly in meeting globalized standards aimed at fostering a sustainable planet. The United Nations responded to these challenges by formulating the Sustainable Development Goals (SDGs), which serve as a universal imperative for societal transformation amidst pressing issues like poverty, climate change, social injustice, and rapid urbanization. Central to this agenda is the imperative for companies to integrate the 17 SDGs into their operations, ensuring progress toward peace and prosperity for all by 2030 (UNDP 2015). This imperative extends to sectors such as the automotive industry and auto parts manufacturing.

On the other hand, the International Organization of Motor Vehicle Manufacturers (OICA 2023) mentions that the automotive industry is the most significant engine of economic growth globally. It is a crucial factor in the economy of many countries worldwide, and it has registered a 30% increase over the past decade (1995-2005).

To visualize its impact, building 60 million vehicles requires about 9 million directly in the making and creating of parts and cars themselves, so its impact falls upon the economic growth and employment of millions of people worldwide (OICA 2023). With this in mind, the automotive industry has to implement the agenda proposed by the United Nations to promote sustainability and a better lifestyle for our society. In the following research, we will study the growth of the automotive industry in northern Mexico and the measures it should follow under the Social Development Goals (SDGs).

For instance, the automotive industry is the best prospect industry sector for Mexico. It is a significant market for U.S. passenger vehicles, trucks, buses, auto parts, and supplies. This industry provides economic growth advantages and foreign direct investment, so it is a significant employer around Mexico. This impact comes with great responsibilities that Mexico must follow, such as the United States-Mexico-Canada Agreement (USMCA) and the SDGs (ITA 2023).

To meet the goals of Agenda 2030, the SDGs come together to tackle different problems. SDG 8, “Decent Work and Economic Growth,” considers the need for a safe work environment for humanity and links the need for creating new forms of work, social dialogue, and access to social protection (Kreinin and Aigner 2022).

Therefore, defining what constitutes decent work is crucial to understanding the relevance of this SDG. The International Labour Organization (ILO) considers decent work to encompass various facets of individuals’ working lives, including employment, social protection, workers’ rights, and social dialogue. This definition extends beyond safeguarding formal economy workers to include unregulated wage workers, the self-employed, and home workers. Crucially, the concept was formulated by the ILO’s tripartite constituency, comprising governments, employers, and unions (Ghai 2003).

Considering this perspective, experts argue that nearshoring has had a positive impact on Mexican SMEs by providing them with access to international markets and enhancing their competitiveness (Martinez Castillo 2023). Consequently, this has led to the creation of new jobs through increased productivity (Garrido 2022). Mexico’s significant inflow of foreign direct investment, ranking among the top 10 countries globally, underscores the growing reality of nearshoring in the country, highlighting the competitiveness of the Mexican labor force (Secretariat of Economy 2023). Therefore, it is crucial to recognize the challenges that may arise in ensuring that nearshoring practices align with globally strategized standards, particularly regarding labor conditions and sustainability.

Additionally, the automotive industry has faced significant challenges in recent years that have substantially impacted its sales. These challenges include the arrival of COVID-19, trade wars, and tensions between the United States and China. One of the main issues that has arisen is the emergence of bottlenecks in the supply chain.

Therefore, nearshoring is growing in popularity as a viable alternative. More and more companies and factories have begun to adopt it in response to the need for a safe and efficient supply chain (Fonseca and da Rocha 2021). Consequently, this series of events has raised greater awareness among companies, executives, workers, and other stakeholders about the importance of the location of manufacturing plants and their relationship with the automotive market in which they operate.

The nearshoring approach has become increasingly popular in countries such as the United States, Mexico, Canada, and Germany, among others. A study shows that 33% of companies are moving or planning to move their manufacturing activities out of China in the next three

years (Gartner 2020). This reflects how the nearshoring strategy is being adopted in various regions as an effective way to strengthen their positions in the global market, reduce commercial risks, and diversify their supply chains to achieve more efficient and profitable production. Furthermore, this trend demonstrates how countries seize this opportunity to enhance their business models and bolster their economies (Zaga and Ortiz 2024).

III. Methodology

We conduct a qualitative research with a descriptive-explorative focus. This election is justified by the need to recollect firsthand information and its many points of view, allowing a thorough and comprehensive analysis of the topic. It is stated that exploratory studies are followed when there's little information and research about a specific topic, or it has yet to be studied (Alesina et al. 2011).

Additionally, an inductive method will be conducted, seeing that an interpretation of various observations and particular experiences of the theme is being followed (Palmero Suárez 2019). The main instrument utilized to gather relevant information consists of secondary sources, encompassing various studies and analyses related to the phenomenon of nearshoring, the automotive and auto parts industry, the USMCA, small and medium-sized enterprises involved in the industry, the SDGs in the auto parts sector, the internationalization of SMEs, and national and international organizations and institutions relevant to the topic.

The literature review was carried out by consulting various sources obtained from the University of Monterrey's digital library and scientific papers from Google Scholar. The national and international organizations cited previously include the Institute of National Statistics and Geography (INEGI), the Automotive Cluster of Nuevo Leon (CLAUT), the Government of Mexico, United Nations Development Program (UNDP), Secretariat of Economy (Mexico), International Organization of Motor Vehicle Manufacturers (OICA), and other sources that played a crucial role in obtaining relevant and current data.

In addition, the second instrument of recollection is the performance of semi-structured interviews of individuals, very well positioned in the auto parts industry, who possess profound knowledge of the topic of nearshoring and have provided valuable perspectives on the matter. One interview was conducted with Guillermo Malpica Soto, the former Head of the Commercial and NAFTA Office of Mexico in Washington, D.C. Another interview was conducted with Miguel Bravo, the current Commercial Manager of CLAUT, the Automotive Cluster of Nuevo Leon. CLAUT is an organization dedicated to advancing the competitiveness and growth of the automotive sector in the region, constituting its primary mission.

IV. Results

The interviewees agreed that the strategic location of Nuevo Leon has a significant influence on companies since this region is close to the border, and the Laredo (USA)-Colombia (Mexico) Solidarity Bridge brings advantages to efficient supply management.

Some other noteworthy factors include the advanced industrial development in Nuevo Leon, which enables companies to procure local supplies. It is also crucial to highlight that other significant factors involve the disruption of supply chains in recent years due to global situations, such as the pandemic and the recent tightening of regulations imposed by the USMCA treaty, which includes an increase from 66% to 75% in regional content.

Both perspectives show that the USMCA and its changes have attracted second-level suppliers to the Nuevo Leon region. Therefore, international Tier 1 companies invite Tier 2

companies to establish themselves in the USMCA region. Thus, Mexico is becoming a more attractive location for companies in the region, adding to the nearshoring phenomenon.

Although both respondents recognized that small and medium-sized enterprises have a great opportunity if they establish themselves in Nuevo Leon because of its placement in the region, one does add that it is not instantaneous due to the strict regulation of the automotive sector. There are requirements to become a supplier in the automotive industry, one of them being certifications. That limits the possibilities for SMEs since not many of them can get the certifications.

Taking this into account, the simple fact that there is a lot of foreign direct investment promotes economic contribution not only through suppliers in the second and third levels but also through indirect suppliers and service providers. This reaction boosts the opportunity for many SMEs.

In the USMCA treaty, Chapter 25 was explicitly negotiated for small and medium-sized enterprises (SMEs), marking the second instance where Mexico, in all its treaties, has dedicated a specific chapter to SMEs. One of its primary objectives is to foster collaboration between large and small enterprises across the three countries, aiming to enhance the prospects of SMEs in the export market. While the chapter reflects positive intentions and serves as a starting platform for collaborative efforts between both enterprises, it currently lacks enforceable obligations.

Typically, established companies already have competitive and standardized processes, so collaboration with SMEs occurs more organically rather than creating a significant impact on the supply chains of large enterprises.

The Secretary of Economy at both the municipal (Monterrey) and state levels has various programs to promote the integration of supply chains and foster the growth of SMEs. For instance, the launch of the Supply Hub by the Productive Chains Directorate serves as a multisectoral linkage platform, allowing leading companies to submit their requirements while enabling SMEs to offer their RFQs quickly and seamlessly. The Clusters Directorate has allocated 50 million pesos in the past year to encourage import substitution through SMEs. The Productive Chains Directorate recently called 35 SMEs to join international markets through training, diagnostics, and personalized advisory services, with 90% of the cost being covered.

It is crucial to identify and cultivate companies from various industries that have the potential to migrate processes and manufacture products for the automotive sector. The initial steps involve assessing existing production capacities, evaluating the feasibility of converting certain sectors to serve the automotive industry, addressing specific certifications, and ultimately fostering partnerships between companies. The significant role played by the existing clusters in Nuevo Leon becomes crucial in facilitating synergy among businesses for collaborative efforts. There is a need to proactively develop strategies to capitalize on emerging opportunities aligned with the nearshoring trend.

There are challenges, for example, the standard of quality in the automotive sector is extremely high; so, the first constraint SMEs can face is the certifications needed to become a supplier in the automotive industry, like the IATF 16946 certification, which is mandatory, and to achieve it, a large amount of money, resources, and time is needed. The company must also have great quality products that match the competition and a constant production rhythm, which could be difficult for a small enterprise with irregular cycles.

CLAUT supports SMEs in seamlessly integrating into Industry 4.0, aiming to enhance their efficiency and quality in processes. This is particularly crucial given the substantial volumes within the industry and the increasingly limited availability of human resources which are becoming progressively more strategic.

Lastly, Mexico has a great labor force because of its cost structure and availability, compared to the U.S. and Canada which have higher paying salaries, making them secondary options and transforming Mexico into the first choice.

The effects nearshoring has on employment are mostly positive but challenging. If a company from another country establishes itself in Mexico, initially, it may bring a percentage of workers or executives from that home country. However, over time, it will strive to develop a local workforce, if available, to reduce reliance on expatriates. Opportunities arise but are not automatic; they heavily depend on Nuevo Leon's workforce competitiveness. Developing specific competencies to compete in the automotive market, which is transitioning to electric vehicles, is crucial. If these competencies are successfully cultivated, it will have a positive impact not only on employment but also on wages. Traditionally, it has been found that export-oriented sectors in Mexico, on average, pay 40% more than jobs in non-exporting sectors.

Also, it was found that a challenge of nearshoring is the need for skilled labor. In Mexico, it is estimated that nearly 2 million people work at some level within the automotive parts sector, representing almost 60% of employment in North America, with a projected growth rate of nearly 2% by 2024.

V. Discussion

The results confirm that Mexico's proximity to the United States is a critical factor that makes it attractive for nearshoring. This country provides economic advantages, such as cost reduction due to the ease of transportation and logistics, and benefits from the free trade agreement shared with the United States and Canada.

Similarly, a factor of utmost importance, though not mentioned by the interviewees, is that Mexico and the United States share a similar time zone, unlike Mexico and Europe. This facilitates better coordination and communication for all business operations, an aspect that is not always acknowledged but contributes significantly to the success of collaborative activities.

The opportunity to establish operations in the state of Nuevo Leon is evident within the competitive advantages for small and medium-sized enterprises in the automotive parts sector, as indicated by the conducted interviews. However, a challenge persists concerning certifications, which slows the process. This aspect poses a difficulty, as obtaining an international certification from a third-party organization is essential to demonstrate compliance with the requirements for provisioning in the automotive sector by the IAFT 16949 regulation and the IATF 16946 certification.

The United States-Mexico-Canada Agreement (USMCA) plays a significant role in nearshoring in Mexico. Its positive influence is notable because it establishes low tariff rates, yielding various benefits. These include boosting the country of origin's supply, economic advantages related to raw materials used in production, exclusivity, and lower logistical costs (PwC 2023).

Similarly, institutional trade barriers have been reduced through the USMCA, resulting in the benefit of facilitating the transit of products among member countries. Companies contacted by the Bank of Mexico revealed that, in 2022, there was a noticeable increase in the arrival of foreign organizations to Mexico. These companies express a clear interest in capitalizing on its proximity to the United States and the rules of origin, especially when compared, for example, to the trade relationship between China and the United States, where the benefits above were absent. It was found that a significant percentage, 49%, of surveyed companies commented that one of the main reasons why more businesses have chosen Mexico for the implementation of nearshoring is due to the rules of origin established by the USMCA.

The synergistic collaboration between local and international companies in the automotive parts sector within Nuevo Leon has evolved due to numerous companies establishing their presence in the region. The rationale behind global companies forging commercial ties with local entities stems from a series of supply chain challenges experienced on a worldwide scale in recent years, primarily attributed to the impacts of the COVID-19 pandemic and geopolitical conflicts. In response to these challenges, corporations opted to establish operations near their end customers, leveraging the inherent advantages that ensue. This strategic proximity enables swift responsiveness to unforeseen events, mitigates challenges associated with long-distance transportation, and capitalizes on the benefits derived from the proximity of suppliers to key consumer markets. Furthermore, this collaborative approach provides additional advantages, including diminished logistics costs, expedited and secure supply chains, access to a skilled labor pool, and favorable tax and tariff considerations.

A potential transformative and enhancing impact on the automotive sector resulting from the USMCA and the trend of nearshoring involves the assessment of prospective suppliers within the current automotive industry and across other sectors capable of adapting to participate in the automotive industry. As emphasized by CLAUT in Nuevo Leon, there is a critical need to concentrate on developing local suppliers and, when necessary, actively seek out potential contributors to the automotive industry. This strategic approach aims to attract new investments and bolster the competitiveness of SMEs on a continuous basis.

There is support from the government and industrial clusters to help make these companies more competitive. There are different types of support, such as governmental programs dedicated to advancing the integration of supply chains and nurturing the expansion of small and medium-sized enterprises (SMEs). A notable initiative in this regard is the introduction of the Supply Hub by the Productive Chains Directorate, which functions as a versatile multisectoral linkage platform. The Productive Chains Directorate recently called 35 SMEs to embark on international ventures, offering comprehensive support encompassing training, diagnostics, and personalized advisory services, with an impressive 90% coverage of associated costs. This is what CLAUT provides to SMEs: participation in best practices training programs, access to government funds and bank credits, and involvement in strategically aligned trade missions. These proactive measures underscore a dedicated commitment to fostering SMEs' prosperity and global competitiveness within the region. CLAUT is also helping to implement new technology, integrating it into the industry to increase the efficiency and quality of its processes and products.

Nearshoring has positively impacted employment in the automotive parts sector in Nuevo Leon, Mexico. As companies from other countries establish themselves in Nuevo Leon, they create new jobs for both skilled and unskilled workers. These jobs are primarily in manufacturing, engineering, and logistics. Nearshoring is also having a positive impact on economic development in Nuevo Leon. The influx of new companies and the creation of new jobs are leading to increased economic activity and growth. Nuevo Leon has received billions in investment in the span of two years. These investments are helping to modernize the automotive parts sector and make Nuevo Leon a more competitive player in the global market. In addition, nearshoring is also helping to attract new talent to Nuevo Leon. As the automotive parts sector grows, there is a growing demand for skilled workers. This attracts young people from other parts of Mexico to Nuevo Leon, where they can find good jobs and opportunities for advancement.

While nearshoring presents a number of opportunities for Nuevo Leon's automotive parts sector, some challenges need to be addressed. One challenge is the need for a skilled workforce. As the automotive sector transitions to electric vehicles, there is a growing demand for workers with specialized skills. Nuevo Leon needs to invest in education and training initiatives to ensure the proficiency of its workforce to compete in the global market. Another challenge is

the need to improve its infrastructure. Nuevo Leon needs to invest in its transportation and logistics infrastructure to ensure that it can efficiently support the automotive parts sector.

Regarding the effect on the creation and increase of decent work in SMEs in the automotive parts sector, both the literature and results agree that nearshoring has had a positive impact, especially concerning competitiveness and productivity. Nearshoring has generated new jobs, improved productivity, and increased the competitiveness of Mexican SMEs. This is related to the data obtained from the interviews, being the most relevant in this regard, confirming the industry's impact within North America, representing 60% of employment in the region.

Likewise, the challenges and opportunities of nearshoring for the industry are highlighted, although the results indicate that the Mexican challenge focuses on qualified labor and the opportunity to access international markets and technological resources for nearshoring.

VI. Conclusion

This study analyzed the opportunity of nearshoring on small and medium-sized enterprises (SMEs) in the auto parts sector in Nuevo Leon, Mexico, and found how this strategy enhances competitiveness under the United States-Mexico-Canada Agreement (USMCA). It underscores the changing dynamics in global business due to globalization and the interconnectedness of international markets, emphasizing the crucial role SMEs play in Nuevo Leon's automotive sector.

This study delves into the auto parts sector in Nuevo Leon, focusing on Tier 2 SMEs affiliated with the Cluster Automotriz in Nuevo Leon (CLAUT). The analysis reveals the challenges these SMEs face, such as a shortage of certifications and insufficient capacity, impacting their ability to meet the demand from Tier 1 and OEM companies. Efforts are underway to address these challenges, including training programs and initiatives to enhance certifications and capacity. The effects of nearshoring on SMEs in the auto parts sector are evaluated through the lens of the eighth SDG. The analysis aligns with existing literature, indicating that nearshoring positively impacts SMEs by improving productivity, generating new jobs, and enhancing competitiveness. The nearshoring strategy allows SMEs to access international markets and resources, contributing to their growth and sustainability.

Limitations

This study underscores the automotive industry's challenges, such as supply chain disruptions, and highlights nearshoring as a viable solution. The proximity of suppliers to major consumer markets, which reduces logistics costs, and access to qualified labor are cited as benefits of nearshoring in the automotive parts sector. In summary, the research contributes valuable insights into how nearshoring impacts SMEs in the auto parts sector in Nuevo Leon, shedding light on the benefits, challenges, and opportunities. The findings provide a basis for informed decision-making by SMEs and stakeholders in the rapidly evolving and globalized business environment.

To enhance future studies, it would be advisable to broaden the sample through a more significant number and diversity of interviews with local businesses, the state's economic department, and organizations supporting established and emerging investments. Including local businesses would allow for a more comprehensive comparative analysis, offering a broader perspective on the effects they are experiencing and how they are driving their competitiveness. Additionally, supplementing quantitative data could enhance the analysis and provide a more robust foundation for drawing well-founded conclusions. Forecasting the long-term impact of nearshoring on SMEs in the automotive parts sector in Nuevo Leon, considering

aspects such as local economic development, job creation, and social factors, would also contribute to a more thorough understanding.

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