



Working Paper 10

Japanese Investment in Mexico: Challenges for the 2020 Decade

by

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Made in Mexico / Hecho en México

Abstract

Japanese investment is essential for Mexico not just because it has represented a viable economic diversification option, but the investments have been made in one of the most significant Gross Domestic Product (GDP) contributing industries. One of the features that contribute to the good prestige of Japanese investment is, without a doubt, its capacity to plan for the short, medium and long-term. That means challenges such as government and technological changes are factors that both Japanese firms and different government levels take into consideration to make decisions. In this context, this article aims to reflect on the course of Japanese investment in Mexico for the 2020 year, taking into account its historical background, its current state and the international context.

Resumen

La inversión japonesa es fundamental para México no sólo porque ha representado una opción viable de diversificación económica, sino porque las inversiones se han realizado en una de las industrias que más aportan al Producto Interno Bruto (PIB). Una de las características que contribuyen al buen prestigio de la inversión japonesa es, sin duda, su capacidad de planificación a corto, medio y largo plazo. Esto significa que retos como los cambios gubernamentales y tecnológicos son factores que tanto las empresas japonesas como los diferentes niveles de gobierno tienen en cuenta para tomar decisiones. En este contexto, este artículo pretende reflexionar sobre el rumbo de la inversión japonesa en México para el año 2020, tomando en cuenta sus antecedentes históricos, su estado actual y el contexto internacional.

Japanese Investment in Mexico: Challenges for the 2020 Decade

Vania De la Vega Shiota

Japanese investment in Mexico is one of the most significant because of its contribution to the Gross Domestic Product (GDP) and its participation in key industries of the industrial policy in Mexico. Moreover, it is very prestigious, and it has managed to attach itself to local and global companies which, especially in the Bajío region, consolidate local and regional production networks.

One of the features that contribute to Japanese investment's good prestige is, without a doubt, its capacity to plan short, medium and long-term. That means challenges such as government and technological changes are factors that both Japanese firms and different government levels take into consideration to make decisions.

This article aims to reflect on the course of Japanese investment in Mexico for the 2020 years taking into account its historical background, its current state and the international context. To address it, the following structure will be used: first, there will be a very brief recount of foreign investment in Mexico in the last decades. Then, a description of the current state of Japanese investment in Mexico, emphasizing on the automotive and auto parts industry. Afterwards, challenges faced by the automotive industry in Mexico concerning institutional changes such as the T-MEC's¹ entry into force, the tech-

¹ Mexico-United States-Canada Agreement (in Spanish, *Traado entre México, EE.UU. y Canadá*)

nological revolution that Industry 4.0 entails, and changes that may arise due to the pandemic caused by SARS-CoV-2. The article concludes with final thoughts.

Foreign Direct Investment in Mexico: a historical review

The end of World War II meant a series of changes in the economy's productive processes in Mexico. The most important change was the State-led Accelerated Industrialization model. While it massified access to home appliances, automobiles and other basic and medium technology consumer goods for families in urban areas in Mexico, it was a model that did not achieve to detonate learning processes that allowed the industry to prepare for international competition, nor accumulate capital that boosted production of high-technology goods further ahead using networks dedicated to research and development activities. The Mexican government established a capitalist interventionism which, framed under a national sentiment at the time, boosted industries and strategic companies-State-owned or private-that led this industrialization stage in Mexico.

Industrial goods were not only manufactured in Mexico, they were also designed for local consumption which was to be achieved through strengthening the domestic market using labor and income policies that served populist governments' measures. This is,

due to the focus towards the inside, the industrial dynamics depended essentially on the size of the domestic demand [...] Assembly plants were profitable because prices in those captive markets highly surpassed comparative prices in industrialized countries (Esser, 1993).

International competition was restricted through tariff and non-tariff measures, meanwhile low tariffs, exonerations and a powerful decision-making privileged network were adopted for sectors and companies selected as strategic, suppliers were picked and, in general, the course of production and consumption was determined.

In the sixties, exports were also boosted. On one hand, that caused dependency on local consumption to cease and, at the same time, it exposed companies to international competition. Hence it was evident that due to the fact that companies were shielded from international competition, they had also been deprived of being able to identify improvement strategies in productivity, efficiency and capital accumulation or strategic planning aiming at innovating in its majority of stages.

In the last two decades of the 20th century, the economic model changed and the Mexican economy started betting on exports. In parallel, the world experimented the end of a bipolar regime and entered globalization with a single hegemony -with which Mexico shares a border of over 3 000 kilometers. It should not be surprising that Mexico promptly started an aggressive economic plan to redefine foreign investment. In 1993, the Foreign Investment Law entered into force and, a year later, so did the North American Free Trade Agreement, which aside from redefining the GDP composition, became the launch pad for consolidating a network of such treaties.

An economic stage under the neoliberal paradigm was beginning. In it, agricultural products would cease to be the most important component of the GDP and would make way for manufacturing and remittances from the United States, as well as -in smaller portion- tourism earnings to become such components. A series of trea-

ties were negotiated and signed which turned Mexico into one of the most open economies in the world. In 2004, the Agreement Between the United Mexican States and Japan for the Strengthening of the Economic Partnership (EPA) was signed. Aside from the elimination of tariffs and reduction of non-tariff barriers on the exchange of goods and services, it also contemplated sections such as Improvement of the Business Environment and Bilateral Cooperation, which represents a second generation of free trade agreements (Mexican government, 2005).

As for Japan, since 1985, the internationalization of Japanese economy has functioned as the engine for industrializing Asian Pacific countries and integrating the Asian Pacific production complex. This engine-like-role has resulted in an intensification of business relationships between Japan and East Asian economies, particularly China and Southeast Asia, to the detriment of the business relationship with North America, especially the United States.

The 21st century brought along a twist in the Economic Foreign Policy strategy by adding bilateral treaties as multilateral instruments. The first treaty to be concluded was the one with Singapore in 2002. It was a first one-on-one trial favored by the particular features of the Singapore economy: a city State that lacks an agricultural sector, which is a sensitive issue for the Japanese economy and also for domestic policy. Once this treaty was negotiated, the Japanese government had an interest in negotiating with other countries and regions that met two conditions: close trade relations and, at the same time, high trade barriers that made expanding Japanese economy in the host economy difficult.

In these contexts, negotiations began looking into an agreement between Mexico and Japan. Japanese companies had a significant in-

terest in achieving a trade agreement with Mexico because they were experiencing unfair competition against its Canadian, American and European peers. On the other hand, the government was fully aware that its agricultural, forest and maritime products would be difficult to negotiate due to the features of the Mexican economy.

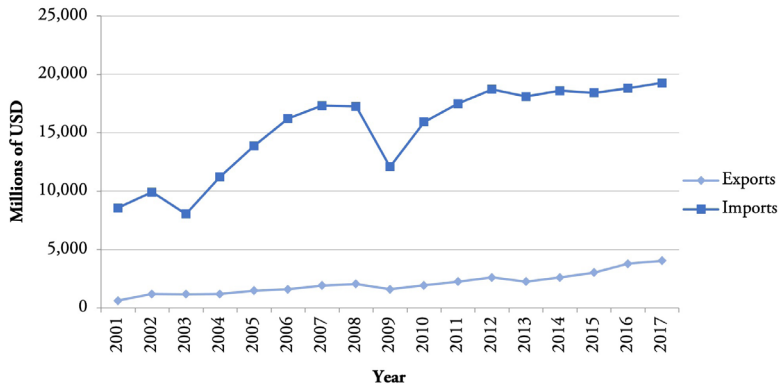
The government of President Vicente Fox identified the Japanese economy as an ideal profile because, in political terms, it possessed an equal level as his predecessors -Carlos Salinas and Ernesto Zedillo- had negotiated in terms of strengthening the free trade treaties network. Nonetheless, the private sector did not share that same enthusiasm because it had gotten affected by the economic openness.

During the agreement negotiations, regarding the agricultural sector critical products, Japanese were not willing to accept free flow of goods with minimum tariffs thus imposing specific quotas and preventing producers established in Mexico from adding value to export products. According to several authors, such as Tokoro (2006), 'Mexico is strategic so that Japanese companies may take advantage of it as the basis for the productive process through the usage of components and raw materials from Japan, the United States and Asia, and cheap Mexican labor (for example, the maquiladora industry) as well as an export platform towards the United States'.

Specialists such as Ramírez Bonilla (Uscanga, 2015), assure that the EPA has been more beneficial for Japan than for Mexico because the Mexican economy has been considered as an export market to re-export towards North America rather than a source for provisioning productive inputs or final consumer goods. This demands an effort from the Mexican government to recreate advantages for key

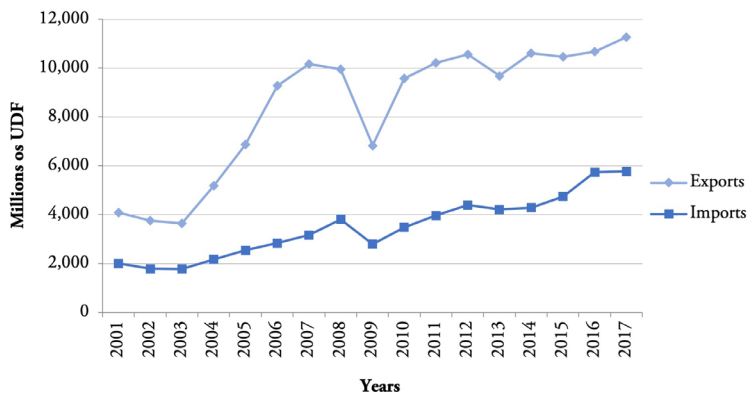
sectors in the bilateral relationship, but at the same time, taking into consideration the interests of the economic and political actors of its counterparts in North America and Asia Pacific.

Graph 1. Trade relations with Japan. Mexico 2001 - 2017



Source: Own elaboration made with information from the International Monetary Fund. Retrieved from <https://data.imf.org/>

Graph 2. Trade relations with Mexico. Japan 2001 - 2017



Source: Own elaboration made with information from the International Monetary Fund. Retrieved from <https://data.imf.org/>

The automotive and auto parts industry represents one of the most important industries in Mexico. Mexico is the seventh largest vehicle manufacturer and the fourth biggest exporting country in the world. Production chains established themselves, once the North American Free Trade Agreement entered into force, in the northern border, the Bajío region and the Mexico City Metropolitan Area. As decades have gone by and the trade agreements network strengthened, the industry has also experienced a productive capacities development: while the companies established in border states manufacture low and medium-added capital goods, the ones established in the Bajío region are beginning to integrate research and development activities, at least in its adaptive technology stage, as an answer to the third industrial revolution.

The majority of companies in Mexico that are part of production chains belong to the East Asian companies' supplier network, especially Japanese and Korean. As of this day, Mexican companies are linked to lower levels of the chains: 3 or 4. Superior levels, which supply the multinationals' demands, usually come from the same country as the multinational or other countries in the world. The immediate challenge in the automotive industry -for multinationals, the supply chain itself and the Mexican government- is achieving technology absorption that can satisfy the demands regarding autonomous vehicles, emissions and contamination, data safety and privacy, as well as adapting its business model. Vehicle development through 3D printing and augmented reality laboratories have started to become a reality.

The automotive industry in Mexico is considered as a strategic pillar because of the amount of jobs it generates, the tax collection it implies, as well as because of the potential it has to originate productive and technological spills. For a few decades, it has been one of the leading industries concerning exports and employment.

However in 2019, the Mexican automotive industry production dropped 4.1% -which represented 160 000 vehicles in comparison to the previous year. The reasons for this responded to different factors. On the demand side, one of them was the SUV sales increase. Even though production in Mexico is mostly of sedans, this does not represent a serious issue because the plant restructuring in Mexico in order to produce more vans -SUV, vans and pickups- is already underway. In addition, 2.6 million vehicles were exported to the United States -that is more than two thirds of the total production in Mexico and represented an increase in comparison to 2018.

The automotive industry has concentrated in Mexico in the last few years, especially since the Agreement Between the United Mexican States and Japan for the Strengthening of the Economic Partnership entered into force in 2005, in the Bajío region, displacing states in the northern border which had served quintessentially as maquila.

Japanese companies alone show a remarkable trajectory. In 1966, Nissan founded its first plant outside Japan which would be in charge of assembling the iconic Datsun. According to Melba Falck (2016), the factors that pushed this investment were Mexico's commercial treaties network, the Mexico-Japan EPA, as well as the Japanese economy's conditions of the last few years: experiencing slow growth, revaluation of the Japanese Yen and high labor costs. And finally, technological progress in communications which have allowed

production processes to fragment. It is in these processes where multinationals keep a wide supplier and market networks at intraregional and interregional levels.

In Guanajuato, there are 300 companies of the nearly 1 200 Japanese companies in Mexico. Mazda is located there. After 14 years of having a presence in the country, in February 2020, it reached the production of over one million vehicles in its Guanajuato plant. It employs 10 000 people. As for Toyota, it recently inaugurated its Bajío plant in Apaseo el Grande and announced an investment of 247 million USD as part of its commitments with the state. This new plant along with the Mexically plant, will together produce 266 000 Tacoma trucks per year (Medrano, 2020).

The Future of Japanese FDI in Mexico

Perspectives of FDI in Mexico

The World Bank report “Doing Business” measures the viability to do business in the world considering the regulatory environment. For 2019, Japan ranked number 39 and Mexico, 54 —the highest ranked country in Latin America— (The World Bank, 2019). Two of the main Japanese business partners, China and India, were ranked amongst the 10 economies that implemented reforms in order to simplify doing business. No Latin American countries made that rank.

The report has certain limitations in order to comprehend the specific case between Mexico and Japan. For example, the sample cities used for the study about Mexico were Mexico City and Monterrey, which do not reflect the whole of cities where Japanese investment is

settled, especially after the Mexico-Japan EPA was signed. The study states that in Mexico City's case, obtaining construction permits was complicated due to the corresponding tax becoming more expensive, deriving from the crisis caused by the 2017 earthquake. Furthermore, qualification requirements for construction industry professionals became stricter, bringing forward improvements in permits and constructions. Public access to this information improved as well.

In contrast, China made starting a business easier thanks to an online company registration and it simplified social security registrations. Regarding electricity access, there were developments for getting it quicker: the expansion of the network capacity and the decrease in wait-time for electric connection thanks to the launching of a mobile app for applying for it. Property registration paperwork became more transparent and trustworthy. Minority investors gained more protection by increasing the stake-holders' rights in corporate decisions. Regarding taxes, economic activities' tax became abolished. Finally, time and cost of exports and imports decreased through the implementation of a single window that eliminated administrative workload thus strengthening transparency and competition.

Japan's Foreign Direct Investment

Aside from the automotive sector, there are other areas in which Japanese companies have started to invest or have announced they will begin investing in. For example, in the energy sector, they have invested in both traditional sources such as oil and in upcoming ones such as renewable energies. In April 2015, representatives from the

Mexican Secretariat of Energy and the Japanese Ministry of Foreign Affairs started a binational cooperation project about the pacific use of nuclear energy. In January 2015, a technical training course was conducted by the Japanese National Corporation of Oil, Gas and Metals with the Mexican National Hydrocarbons Commission (Secretariat of Economy, 2020). Regarding the pharmaceutical industry, regulatory collaboration is foreseen. In 2017, a collaboration started between the Mexican government's Federal Commission for the Protection Against Sanitary Risks and the Japanese Agency of Pharmaceutical Products and Medical Devices. Through an equivalence agreement, it will allow the implementation of a shortened system for the review of new drugs (Mexican Government, 2017).

In spite of the above, as of the present day, the most important industry in which Japanese companies invest is still automotive and auto parts. For the next decade, Japanese investment in that industry faces the following challenges:

T-MEC: less trade and more Foreign Direct Investment

One of the reasons that caused the lack of growth in the automotive industry in Mexico was the uncertainty of the signature and ratification of the T-MEC which legislative process concluded in all three countries entering into force July 1st, 2020. The most awaited chapters of the treaty for the automotive industry were the ones about national treatment and access to markets, rules and procedures of origin, and labor. According to the Secretariat of Economy (2020), the rules of origin for the automotive sector include new requirements for applying for the preferential tariff treatment:

- Higher percentages of Regional Content Value;
- Essential originating auto parts (engine, transmission, body and chassis, axis, suspension system, direction system and advanced battery)
- North American-origin steel and aluminum purchase requirements; and
- Labor Content Value requirements.

Chapter 2, regarding national treatment and access to markets, maintains free trade for all originating goods and confirms the prohibition of taxing exports. Through this chapter, Mexico will be able to:

- Keep its exports to the American and Canadian markets free of tariffs;
- Limit the restrictions applied to imports and exports; and
- Assure more certainty and transparency in the application of non-tariff measures.

Chapter 4, Rules of Origin, contains dispositions to determine the conditions or requirements that a good must obey in order to consider it “originating” and thus having access to the negotiated preferential tariff. Chapter 5, Origin Procedures, details that in order to receive preferential treatment, a minimum of productive processes, manufacturing operations or a contribution to the added value in the countries integrating the treaty must be complied with. Finally, Chapter 23, Labor, foresees a series of rights for the workers. Even though Mexico and its employees will benefit from these, they will en-

tail challenges at an economic level both for the government and the companies, which often see Mexico's skilled labor and its low wages as an advantage.

Industry 4.0 and the supply network

Possibly, the biggest challenge for the Mexican automotive industry in the upcoming years will be the fourth industrial revolution characterized by automation, development of digital, physical and biological technologies. These breakthroughs, which are happening at an accelerated rhythm and in multiple levels, are demanding because of various reasons: their impact in employment and redistribution of workers based on their skills; their implications in the future of work and the role of educators and trainers; their repercussions in income inequality and skills development. History lessons have demonstrated that State intervention is significant in order to foster learning processes and further appropriation of new technology in the host economy.

The first three industrial revolutions took place in the following way (iED, 2019):

- The First Industrial Revolution in 1765 entailed a change from manual to machined production, thus displacing agriculture as the economy's backbone. The arrival of the steam engine and the extraction of carbon favored the development of new types of energy displacing animal labor and accelerated building railways and, later on, production and distribution.

- The Second Industrial Revolution in 1870 entailed significant technological progress by massifying electric energy, gas and oil. This allowed the development of the internal combustion engine to be possible. Communications technologies -such as the telephone and telegraph- also began to develop. Adding to those, contemporary means of transportation finally came to exist: the automobile and plane.
- The Third Industrial Revolution in 1969 entailed diversification in technological innovations and a breakthrough with the development of nuclear energy. Along with those, in the fields of electronics, telecommunications and computer science prospered thus developing biotechnology and robotics.

One of the challenges that the automotive industry faces is Industry 4.0. In Mexico's case, decisions made by the government of Andrés Manuel López Obrador and the local governments may have an impact in how the country will participate in production chains in the following decades. Industry 4.0 entails the arrival of the Fourth Industrial Revolution and includes computerized systems, robotics, automatization and the Internet of Things. It is also redefining production chains, manufacturing plants and administration processes. The automotive industry's business plans include electrification, autonomy and mobility.

Industry 4.0 is based on information production and its processing in order to make decisions in real time, especially focusing on mistakes that can avoid wastes and bottlenecks and save time. Its nine pillars are (Medrano, 2020):

- Internet of Things: Machine to Machine communications
- Big Data: giant databases
- Cloud Computing: enormous analysis and storage capacity
- Artificial Intelligence, focused on decision-making
- Advanced simulation that generates manufacture models and allows you to know their operation previous to their execution
- Augmented reality: facilitates training processes
- Additive manufacture: 3D printers that build specialized parts at low costs
- Blockchain: following of the parts and components from their manufacturing until they are assembled on the vehicle
- Cybersecurity: system's protection

International firms are already accumulating experience in order to insert themselves in Industry 4.0, however processes affect the supply chain as well. Even though in Mexico Tier 1 and Tier 2 suppliers are not Mexican, the challenge consists in SME² -that conform Tier 3 suppliers- adapting to these new necessities without losing competitiveness. In the Bajío region in Mexico, there are synergies amongst the companies, state governments and universities for creating laboratories that allow training for future employees so that they can acquire skills. However, the automotive and car part industry has not

² Small and medium-sized enterprises

found decisive government support in Mexico. This opposes what Southeast Asian countries historically have done as members of the value chains for large automotive companies. Furthermore, even developed countries import talent while the State plans and executes the development of local specialized talent.

The work of the Triple Helix: University-Industry-Government in Japan has a decisive role in its insertion in Revolution 4.0 and in the Society 5.0 model that will answer to Japanese society's pressing necessities like ageing and the very low birth rates, unipersonal families, and the shortening of the economically active population opposite to the retired population.

Japan established the Centre for the Fourth Industrial Revolution of the World Economic Forum. Amongst its priorities there are: autonomous and urban mobility, precision medicine and data policy. Regarding mobility, which is directly related to the Mexican industry, new relations between public and private transport are being analyzed. The decrease of rural population makes railway networks less necessary and the cost per passenger increases, which makes it a poor investment for the government and the companies in charge of mobility. Also, regarding freight transport, the use of freight trains has become more expensive, thus betting instead on using drones has begun.

These features of both the Japanese economy and world trends due to Industry 4.0, redefine the needs of the Japanese automotive industry and have an influence on the course of the automotive industry in North America -including Mexico. With the reorganization of production chains, actors such as universities, governments, chambers of commerce and other interested actors, have begun participat-

ing and handling raising issues regarding Industry 4.0. It will only take a short amount of time for investments made decades ago in education, science and technology to bring forward -or not- results.

SARS-CoV-2

The automotive industry in Mexico and the world did not reach 2020 on thriving conditions. On the contrary, in 2019, it was already facing a downward trend, which entailed inventory accumulation and a later decrease in vehicle production. The pandemic caused by the SARS-CoV-2 outbreak resulted in manufacturing plants shutting down: first in China and, then, in the rest of the world -including Mexico. Even though it is still too early to know what will happen, the National Auto Parts Industry's Executive President, Oscar Albin (Medrano, 2020), stated that it could mean an opportunity for foreign investment in Mexico due to tariffs set on Chinese products in the United States; the new rules in T-MEC about regional contents in automobiles and auto parts; and the new relocation of components and raw materials because of the "country-risk caused by the outbreak". Nevertheless, he explains that Mexico has a high energy cost (of electricity and natural gas) which is 50% higher than in the United States, Mexico does not benefit from an adequate amortization of capital goods, and there are big challenges in labor and security. In the following weeks and months the effects on supply chains will be identifiable, as well as any major obstacles for vehicle production.

A useful comparison is the 2011 East Japan's triple disaster which revealed the importance of SME in supply chains due to, amongst other things, the specialization of these companies. For several months it

was not possible to produce black-colored vehicles because the suppliers that produced the base compound for the black pigments had flooded.

Conclusions

Japanese investment is essential for Mexico not just because it has represented a viable economic diversification option, but because the investments have been made in one of the most significant GDP contributing industries as well as in productive clusters' relocalization and creation.

After the end of World War II and as decades have gone by, FDI in Mexico has changed in accordance with government decisions and directives. It transitioned from a State-driven accelerated industrialization to an export-oriented model which, after the NAFTA entered into force, consolidated the border zone as a maquila region and as the cradle of "born global firms", which are companies oriented from their start to export products instead of satisfying the domestic market.

The Japanese economy halted its rapid and subsequently sustained growth due to several factors: one of them was the Plaza Accord which motivated the exports as a consequence of the Japanese yen appreciation. In production terms, fragmentation and relocalization processes strengthened. That meant that in the 1990s, Japanese firms started to become more profitable due to their subsidiaries in the world instead of Japanese exports. In Mexico, the experience of Japanese investment in the automotive sector dates back to 1966, with Nissan's opening of its first manufacturing plant outside of Japanese territory in Cuernavaca, Morelos.

As the EPA entered into force, East Asian companies relocated in the Bajío region -especially Japanese ones- and began creating their supplier network clusters. However, SME have not yet been able to become part of the first two supplier levels, Tier 1 and Tier 2, instead they are ranked Tier 3 or below.

The automotive industry is transforming on a worldwide level because different transport options have strengthened in the last few years and because of changes inside the same industry. Also due to the energy model and new necessities and preferences on the demand side. These changes began having negative effects in the world's and Mexico's industry growth, but for the 2020 decade it is possible that the industry is facing bigger challenges.

Additionally, the current government faces challenges such as the ease of doing business or not in Mexico and the competition against economies that offer similar advantages as the ones in Mexico. In this regard, both the Mexican and Japanese governments have specific interests and accomplishments in order to diversify Japanese investment in Mexico.

T-MEC represents a drift in trade exchange activities and Japanese investment in Mexico. Subjects such as national treatment, origin rules and origin procedures reflected on Regional Content Value grant advantages to investment to the detriment of foreign trade. Nevertheless, companies already settled in Mexico, now face the process of adapting to labor content value requirements provided in the agreement.

Regarding Industry 4.0, there is an immediate bet for the supplier network to accomplish new skills in line with the changes multinationals are beginning to adopt. Historical challenges of adapting

to technological innovations have demonstrated that State intervention may be vital for beginning a learning process and its subsequent successful appropriation of new processes.

The effects of the pandemic arising from the SARS-CoV-2 outbreak strengthen the idea that Mexico and the world are facing an era of uncertainty. There is speculation regarding production chains' breaking and reshaping derived from risks in automobile and auto parts' production and distribution levels.

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