

MANUFACTURING IN ACTION: **WHAT DOES IT LOOK LIKE?**

UPDATES

Mexican manufacturing
today: key data

Notes on REPSE

Notes on the
Complementary Letter
of Carriage "Carta Porte"

Legislative liaison

TIERPLUSMX

INDEX NATIONAL PRESIDENT
Luis Manuel Hernández

**GENERAL MANAGING
DIRECTOR**
Juan Antonio Vázquez Durazo

**PUBLIC AFFAIRS AND
OPERATIONS DIRECTOR**
Paulina Núñez Román

**MANAGEMENT AND DEVELOPMENT
TIER PLUS MX**

3 1 + 1

Pensamiento Político

31mas1.mx

DIRECTOR
Julián León Manjarrez

PUBLISHER
Benjamín Castro

EDITORIAL STAFF
MÍNIMO • NECESARIO
minimonecesario.com.mx

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facturera de Exportación | Ejército
Nacional 418 Piso 12, Chapultepec
Morales, CDMX, CP.11570

CONTACTS
julianleon@31mas1.mx
bcastro@31mas1.mx

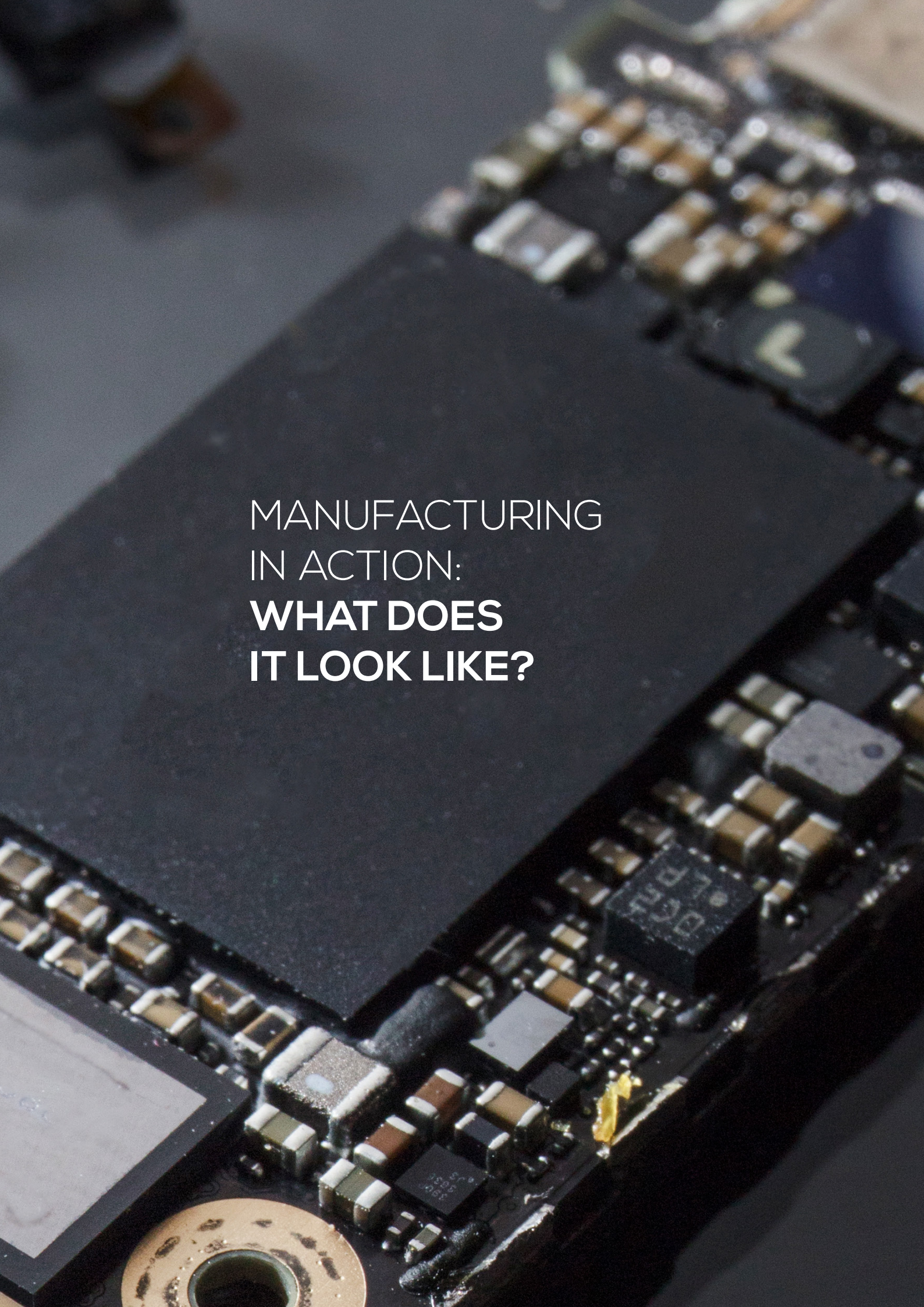
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MANUFACTURING
IN ACTION:
**WHAT DOES
IT LOOK LIKE?**

COMMUNICATIONS, THE EMBLEM OF THE DIGITAL ERA, REVEAL THE RELEVANCE OF THE EXPORT MANUFACTURING INDUSTRY. A LOOK AT THE MANUFACTURE AND DISTRIBUTION OF CONSUMER GOODS IN THIS SECTOR REVEALS COMPLEX PROCESSES, SPECIALIZED JOBS, AND DYNAMIC CONSUMERS. HERE'S HOW IT LOOKS.

INTERDISCIPLINARY PUBLIC RESEARCH TEAM¹

Export manufacturing is present in our daily lives, often indirectly. A tangible example is the smartphone, a consumer good that we have incorporated into all our activities. We use it to communicate, learn, shop, participate in society, measure our health, manage our wealth, entertain ourselves and a long etcetera. The average American spends three and a half hours a day in front of the screen and the trend is upward²; the phone accompanies people from dawn until the day ends and even beyond, when they use applications to measure the quality of sleep. This brings with it social, cognitive, and emotional changes, the consequences of which we do not yet fully perceive: the whole of life is accelerated. And like this example, there are many more: tractors, airplanes, medical machinery, etc. How did we get here?

Part of the answer lies in the development of export manufacturing and its ability to mass-produce products. It would be impossible to conceive of the expansion of cellular telephony, computing, transportation, and medicine without such development. That's one reason why owning a smartphone today is significantly cheaper and easier than it was a decade ago³. All this is linked to the development of manufacturing in its various facets: the trend toward border liberalization, population growth, new transportation, process optimization, energy efficiency, satellite deployment and logistical innovation. In this issue we explore some of these dynamics.

¹ Meet the members of our team on the last page.

² Statista Research Department, *Mobile internet usage worldwide: statistics & facts*, 2021. More information [here](#).

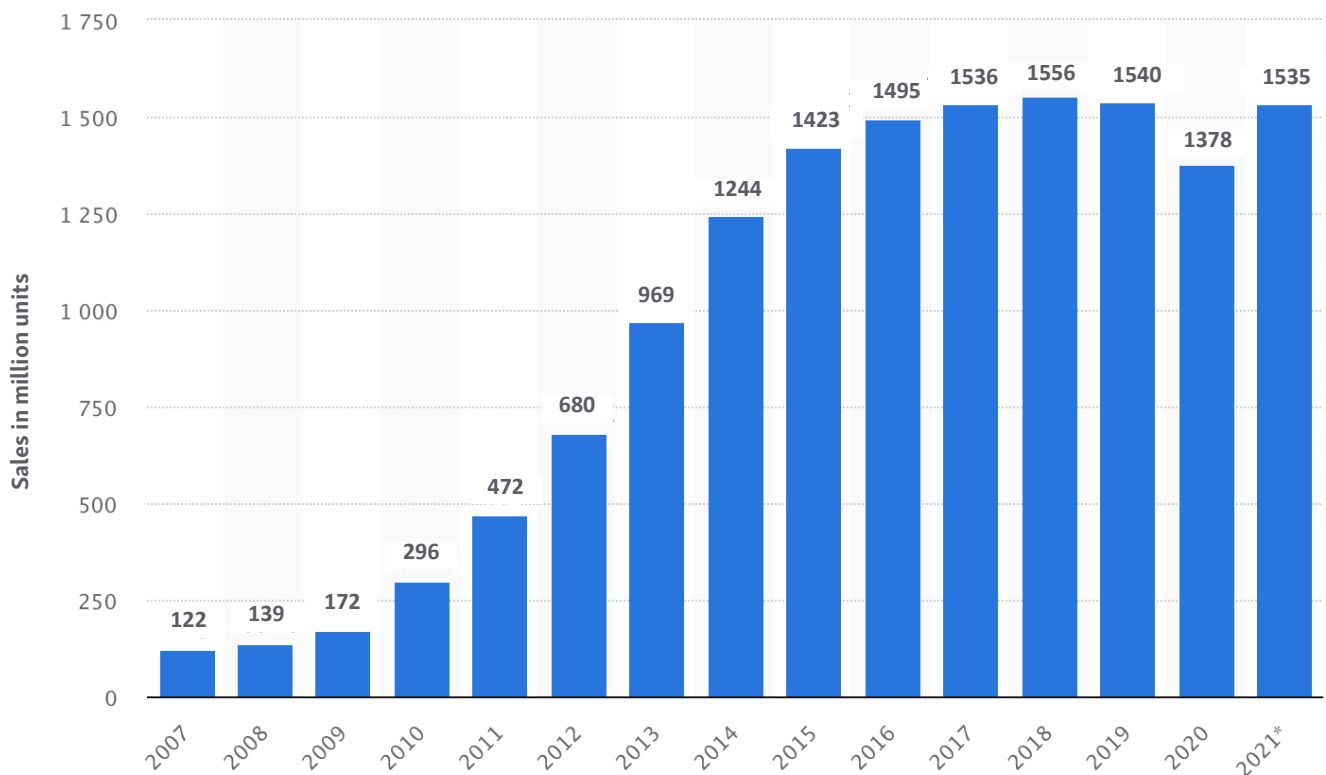
³ Ernesto Piedras, *Gasto en smartphones, in crescendo*, Forbes Mexico, 2020. More information [here](#).

THE ESSENCE OF THE ISSUE

It is easier to clarify what we mean with an example: the *smartphone*. The annual consumption of smartphones has grown exponentially since 2007 and is an unavoidable communication tool in contemporary life (see Graph 1). In Mexico, 54% of the population uses them, but few know how they are made⁴. It is worth describing some of their main

characteristics and how they are combined, broadly speaking, with modern productive capacities. This will help us to recognize how contemporary consumer goods could not exist without advanced manufacturing processes.

Graph 1. Annual worldwide smartphone sales (millions of units; 2007-2021).



The graph shows an exponential increase in smartphone sales from 2007 to 2017, with a decrease in 2020 and a forecast increase for 2021. This is a tool that has revolutionized the consumer market in the 21st century and whose impact is expected to last. Source: [Statista, 2021](#).

⁴ Nazca, *Insights Mexico H1*, Mexico, 2021. More information [here](#).

These are useful, but very complex products. Typically, these phones have touch screens, multitasking capabilities, Internet access via WiFi and 5G networks, cameras, audio and video players, accelerometer, Bluetooth, GPS and the ability to read various files. And making each of these components at the speed desired by consumers involves highly efficient industrial processes within a global logistics network. In a smartphone, components manufactured in 43 different countries are assembled from a variety of metals. For example, some of the metals used in the screens are Terbium, Gadolinium, Europium, Neodymium and Praseodymium, all "rare earth" elements, so called because of their scarcity in their pure state. It is a matter of bringing together materials, processes, work, machinery, transportation and standards from many parts of the world in an admirable coordination. In this way, smartphones, like many other consumer goods, are made all over the world: Japan, Taiwan, Israel, Korea, the United States, Mexico...

Once the component parts have been assembled, the mold is made. These components enter the cutting machines and are subjected to chemical reactions to increase their resistance. The interface where the antenna will be placed is also made, various parts are screwed together, the screens are checked one by one, dozens of microcomponents are meticulously placed, soldered, the software is installed and the operation of the speakers, microphone and batteries is checked. Finally, they are cleaned and charged for packaging and global distribution. It must be emphasized: hundreds of human hands, robotic arms and highly specialized machinery interact in the supply chain, which begins with the purchase of components, goes through assembly, and culminates with the shipment of the finished product to the points of sale.

What's next after manufacturing?

Within the process described above, there are nuances that stand out for their relevance to the consumer. This is business competition in

action. In the supply chain, for example, some companies seek to eliminate as much inventory in warehouses as possible, causing suppliers of this service to compete and drive down costs. They also use data analytics to predict sales levels of upcoming products, with the goal of accurately matching demand with supply. Forecasting also allows them to negotiate better with suppliers, as they buy a larger volume of inputs over a longer period. At the end of the day, reducing inventories and predicting future sales translates into better prices and products for the consumer.

In the process, it is also essential that critical intellectual property information is not leaked, as it could be copied before market launch. Therefore, some assembly lines are covered with curtains and some plants prevent employees from bringing cameras to work. Intellectual protection goes hand in hand with world-class technology, design, and marketing. Only in this way is an era where we can use our smartphone to connect to the Internet, order a range of diverse products online and have them delivered from a factory on the other side of the globe to our homes in just a few days viable. It is shocking.

THE BOTTOM LINE:

WITHOUT MANUFACTURING DEVELOPMENT, IT WOULD BE IMPOSSIBLE TO THINK OF THE DIGITAL ERA.

THE EPITOME OF BOTH PHENOMENA IS FOUND IN THE ELECTRONIC GOODS MARKET, WHICH IS THE ULTIMATE EXPRESSION OF GLOBALIZATION.

BY ANALYZING ITS MANUFACTURING, WE OBTAIN LINES TO KEEP MEXICAN COMPANIES AT THE FOREFRONT.

TRENDS

The global consumer electronics market sheds light on current manufacturing dynamics and opens opportunities for the Mexican market. To keep up with global demand, the following trends should be kept in mind:

- **Growth in smartphone consumption.** Never in history has there been a greater reliance on digital technology. In the wake of the pandemic, much of the business is conducted online and many will remain that way. This increase in demand represents an opportunity to invest in installed capacity and to connect to global supply chains. How can we connect to these value chains? What kind of inputs could Mexican companies offer?
- **Mexico's share of the electronics market.** Mexico's participation in this sector has grown steadily since 1995. In 2019, our country exported 92 billion dollars of electronic components for various industries. 12% of this amount is specifically for the export of phones, which places it as the fourth largest exporter worldwide, after China (41%), Vietnam (16%) and South Korea (10%)⁵.

- **Beginning of the 5G era.** Compared to the previous generation of mobile technology, 5G can deliver speeds a hundred times faster and significantly reduce signal intermittency. This will enable the use of new applications, such as Artificial Intelligence, virtual reality, and Big Data, which can radically change manufacturing capabilities. It is estimated that in the next decade this will generate a growth of 2.1% of the global economy, i.e., the spillover will be 600 billion dollars⁶.

For a country like Mexico, which has had a low economic growth rate for years, these trends are useful. The use of digital technologies will be at the forefront of the post-pandemic world, allowing the generation of new jobs and specialized sectors.



⁵ Atlas of Economic Complexity, *Who exported telephones in 2019?*, Harvard's Growth Lab. More information [here](#).

⁶ GSMA, *Mobile technology and economic growth: Lessons to accelerate economic growth and recovery*, 2020. More information [here](#).

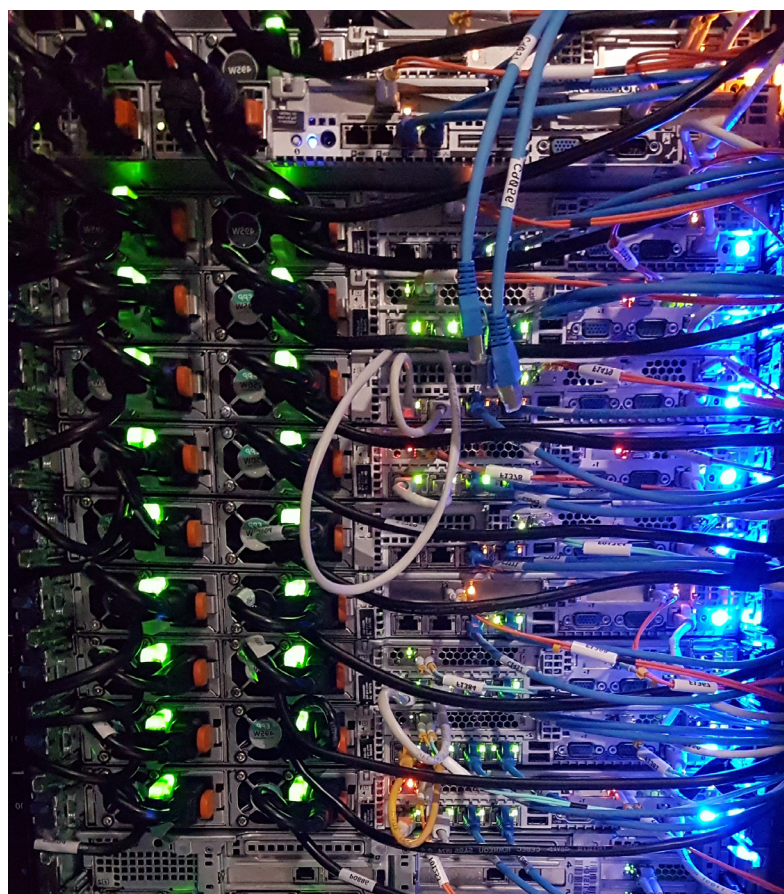
ENTRY POINTS FOR PUBLIC DISCUSSION

This analysis can be replicated for a group of leading-edge industries and complex economic activities. It is proven that the development of such industries has an overall impact on the development of the country's economy; in Latin America, for example, the implementation of these technologies accounts for 20% of the region's growth in the last two decades⁷.

1. ***The implementation of 5G technology requires regulatory support.*** Preparing for the future in mobile telephony must include effective competition in the market and conditions that incentivize the large investments needed. These conditions include access to sites, facilitation of small cell and backhaul deployment, and affordable spectrum allocation.
2. ***Development of digital skills in children and adults.*** The better educated a country's workforce is, the better it can take advantage of technological investments. The transition to more complex economic activities and greater connectivity will be more fertile if it is accompanied by useful educational policies that trigger the development of new work and service dynamics
3. ***Universal connectivity and support for lagging sectors.*** In both developing and developed economies, one of the causes of stagnant productivity growth is that businesses and consumers are not yet taking full and equitable advantage of the benefits of new technologies and applications. This suggests that policymakers should focus on economic sectors lagging in the use of mobile

technology. The trend must be towards universal connectivity.

New digital technologies are revolutionary for industries operating today. Mexican manufacturing can take advantage of this new wave to gain a greater share of the global market. It is crucial that new trends are accompanied by policies that are both consistent with the competitive global marketplace and inclusive of underserved populations. Only by addressing both aspects will cellular telephony and its manufacturing unfold its potential.



⁷ GSMA, *ibid.*

A close-up, artistic photograph of a laptop's internal keyboard mechanism. The image shows the intricate details of the key switches, including the blue and black plastic components and the metal contacts. The lighting is dramatic, with a strong teal or blue tint in the background, creating a high-tech, futuristic feel. The word "UPDATES" is overlaid in a clean, white, sans-serif font on the right side of the image.

UPDATES

MEXICAN MANUFACTURING TODAY: KEY DATA

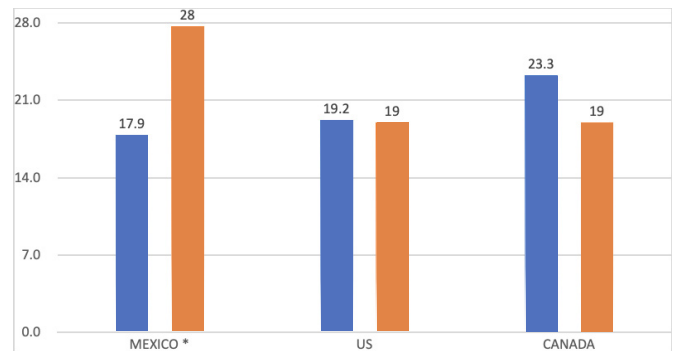
By Carlos Palencia

Partner of CEO Consultoría Estratégica & Outsourcing.

- In the fourth month of this year, 3 million 125,762 people were employed. This means that between April 2020 and April 2021, IMMEX companies generated 175,172 jobs.
- According to Social Security information (IMSS), in April IMMEX employment represented the 18.91% of permanent insured workers and the 65.5% of permanent workers in the transformation industry.
- IMMEX imports of fixed assets were 112.93% higher in the first four months of 2021 compared to the same period last year. This may reflect the investments withheld until the T-MEC was implemented.
- Given that 80% of Mexican exports are destined for the United States, a rebound in IMMEX companies' revenues could be expected due to the reopening of the U.S. economy, the increase in demand for summer products and orders for the Christmas season.
- Installed capacity in the United States has been steadily increasing, while in Mexico it has been contracting.

Let's explore two key graphs to understand Mexico's position in relation to the USMCA region.

Graph 1. Performance of the manufacturing sector in GDP and employment. USMCA region comparison (percentages).

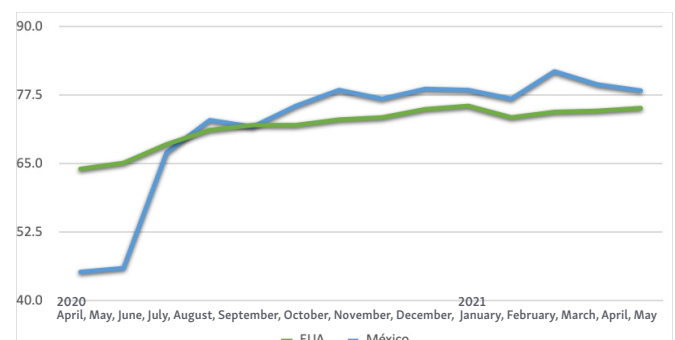


■ Manufacturing as % of GDP.

■ Manufacturing jobs as % of total employment.

The graph shows the great relevance of the manufacturing sector in employment and national income. **Source:** United States, Federal Reserve; Mexico, INEGI.

Graph 2. Industrial installed capacity (percentages).



The graph shows the recovery in both countries and the difference in the magnitude of the shock caused by the pandemic. **Source:** United States, Federal Reserve; Mexico, INEGI.

NOTES ON THE REPSE

By Alvaro Garcia

Director of the National Labor Committee of index Nacional

Following the recent subcontracting reform, companies have a new obligation to comply with the providers of specialized services they hire and with themselves, if they provide services to other companies of the same group. The reformed Article 15 of the Federal Labor Law (FLL; Ley Federal del Trabajo) establishes that companies that provide specialized services or execute specialized works must have a new registry: the Registry of Specialized Services or Specialized Works Providers (RSSSWP; Registro de Prestadoras de Servicios Especializados u Obras Especializadas (REPSE)). For such purpose, the Ministry of Labor and Social Welfare (MLSW; Secretaría del Trabajo y Previsión Social), has made available the platform for registration since last Tuesday, May 25 on the website repse.stps.gob.mx. Initially, the original deadline for companies to register was August 24. However, an extension has been approved which extends the registration 8 more days, making September 1 the new deadline. All companies under the assumptions are called to take action to comply on time.

Manufacturing companies and their suppliers have reported various complications, mainly related to the difficulty in obtaining compliance opinions (INFONAVIT stands out) and the difficulty in obtaining an appointment at the Tax Administration Service, which may be necessary to carry out the procedure. Both aspects have been overcome gradually. Apart from these complexities in registering, the central issue is whether a specialized service should register. Alejandro Salafranca, Head of the Decent Work Unit of the MLSW, who oversees the registry, explained during the session of the Export Manufacturing Industry Council practical examples of services subject to registra-

tion and cases where registration is not required. The record of this conversation is available for the entire index membership to consult. The STPS also released a video to address this issue, which can be viewed on the RSSSWP website.

The register is now available for consultation by all interested parties and the platform has improved its functionality; for example, it is now possible to register services provided by companies of the same group. The time to comply is getting shorter. Let's work the following weeks to ensure registration, where applicable, before the due date.

RSSSWP and INFONAVIT: a pending issue

By Alan Duclaud

Deputy director of Social Security of the National Labor Committee of index nacional.

A critical issue is the legislative omission on how INFONAVIT should act to migrate workers into the new subcontracting scheme and recognize their seniority for granting housing credits. Although the reform to Article 15 of the FLL has the apparent intention of favoring workers, the truth is that the story is very different at least with respect to INFONAVIT. If employers are obliged to make personnel movements, workers will be affected in their credit rights.

There is still no official pronouncement or solution from INFONAVIT or other governmental authorities regarding this issue. index Nacional Council has raised the issue with INFONAVIT and will follow up in the next editions of TIER PLUS MX.

NOTES ON THE COMPLEMENTARY LETTER OF CARRIAGE "CARTA PORTE"

By **Laura Garcia**

Member of the Fiscal Committee of index Nacional.

On May 1, 2021, the Tax Administration Service (SAT) published on its website the electronic document called Complementary Letter of Carriage "Carta Porte". These notes detail what it is and its relevance.

What is the "Letter of Carriage" Complement?

According to the Miscellaneous Tax Resolution (MTR; Resolución Miscelánea Fiscal) 2.7.1.9, the Complementary Letter of Carriage "Carta Porte" is used to incorporate to the Internet Digital Tax Receipt (IDTR; *Comprobante Fiscal Digital por Internet (CFDI)*) information related to the goods or merchandise that must be moved from one place to another by land, air, sea, or river and, if applicable, to incorporate the information for the transfer of hydrocarbons and petroleum products.

To whom does it apply?

To owners of goods or merchandise, carriers and intermediaries or transportation agents.

What types of IDTR are applicable to each of them?

Transfer IDTR

- **Owners of goods or merchandise that move goods by their own means, that is, by means of vehicles they own.** This IDTR will be used to prove ownership when goods or merchandise are moved by land cargo that travels on federal highways or by rail, sea, air, or river. The "Letter of Carriage" Complement must be added to this IDTR.
- **Intermediaries or transportation agents.** They must issue a IDTR of the transfer type given that they are responsible for managing the transportation of merchandise or goods,

for which they may use air, land, sea, river, and railroad transportation.

Income type IDTR

Taxpayers whose activity is to provide land, maritime, air, fluvial or cargo transportation services, must issue the Income IDTR that covers the provision of this type of service, to which they must add the Complementary Letter of Carriage "Carta Porte".

Transfers of goods between IMMEX companies

In merchandise transfer operations between IMMEX companies, such operations must be accompanied with the transfer type IDTR. This would also apply to persons with authorization to destine goods to the strategic bonded warehouse regime, companies of the automotive final industry or manufacturers of the heavy-duty automotive industry or auto parts. If the transfer service is subcontracted, the provider of such service would be responsible for issuing the income type IDTR.

Possible impacts on IMMEX companies

IMMEX companies should pay attention to and analyze the following points:

- Goods may not be transferred if they do not have the corresponding IDTR.
- Truck rental.
- Involve all areas: legal, fiscal, foreign trade, contracts, insurance, etc.

- Information security.
- IDTR data: validations should be done, and training should be provided to the personnel who prepare and receive it from third parties.
- Data protection, confidentiality, and internal access to all information.
- Drivers should have a smart phone for changes in invoices, errors, clarifications, etc.
- Lack of clear rules in the IDTR for overtime, errors, re-invoicing, route changes, etc.
- Transfers between Distribution Centers (CE-DIS) must have the corresponding IDTR.
- Changes of transportation equipment or drivers for various reasons such as accidents, damages, illnesses, etc.
- Each trip must have an IDTR. It is no longer possible to make consolidated invoicing with the services of the month.
- Fines for errors in the issuance of the IDTR.
- Possible embargoes or seizures.
- It is not necessary to have a printed representation of the IDTR, a digital representation is sufficient.
- The authorities empowered to review these IDTRs are the Ministry of Navy, the National Guard and the Ministry of Communications and Transportation.
- Non-deductibility of freight due to lack of requirements.

Possible amendments to the Miscellaneous Tax Resolution 2.7.1.9

Through the sixth anticipated version of the second MTR for 2021, the following changes are

intended to be made:

- a) The first paragraph is eliminated, and it refers to domestic goods.
- b) The word "federal" is eliminated.
- c) A paragraph is added to the rule, establishing that taxpayers must issue the IDTR, with its Complementary Letter of Carriage "Carta Porte" of transfer type or income type, according to their participation in the operation.

Mandatory use of the IDTR

Pursuant to the eleventh transitory article of the first MTR for 2021, the Complementary Letter of Carriage "Carta Porte" became effective as of June 1, 2021, but it will be of mandatory use as of September 30. Companies must make the necessary changes in their logistics and invoicing processes to comply in due time and form with the provisions applicable.

LEGISLATIVE LIAISON

Information provided by **Grupo Estrategia Política**

Mexico's National Customs Agency (Agencia Nacional de Aduanas)

On July 14, the Decree creating Mexico's National Customs Agency was published in the Official Gazette of the Federation (DOF). It will be a decentralized body of the Ministry of Finance and Public Credit (SHCP) and will have the character of tax and customs authority to issue resolutions within the scope of its competence.

The new agency will be independent from the Tax Administration Service (SAT). Its objective is to organize and direct the customs and inspection services, to apply and ensure compliance with the legal norms that regulate the entry and exit of merchandise into and out of the national territory. It will also apply those related to the collection of taxes and duties applicable to foreign trade operations.

This amendment responds, on the one hand, to the fact that during the first quarter of the year, customs recorded a 5.4% decrease in revenue collection in real terms compared to the previous year. On the other hand, it seeks to strengthen national security, an axis that has been implemented since the Secretariat of the Navy has been involved in the administration of national customs.

For such provisions and changes to become effective, several laws must be amended, for which reason it is expected that during the beginning of the LXV Legislature several reforms on the matter and a reform to the Tax Administration Services Law will be presented, and it is not ruled out that for fiscal year 2022 the collection rates in customs and foreign trade matters will be updated.

Towards a possible tax reform

During the last few months, various public bodies, business associations and academics have established the need to modify the tax schemes applicable worldwide. The G7 approved the imposition of a global minimum tax rate for large companies of 21%.

Although it is true that Mexico is also talking about implementing it, the public debate has focused on the need for a comprehensive tax reform that updates the income tax rates for individuals and companies, the provisions applicable to VAT in federal matters and a review of local taxes.

In the area of income tax (ISR), it has been proposed to increase the percentage of the applicable rate, given that it is the central element to increase tax collection capacity. For VAT, it has been proposed to eliminate the 0% rate.

With the arrival of Rogelio Ramírez de la O to the Ministry of Finance and Public Credit, the possibility of implementing a tax reform that, on the one hand, ensures the Federation's tax collection and, on the other hand, guarantees investment in Mexico is now open. The economic package for the 2022 fiscal year will be presented in September of this year and its discussion will cover a large part of the public debate during the first period of the first year of the LXV Legislature.

OUR TEAM

This publication is produced by a committed, multidisciplinary team. Our goal is to take the economic, political, and social knowledge of the manufacturing industry to the next level⁸. By disseminating our findings, we seek to raise the level of public debate. Share and comment freely, let's start the dialogue.



Luis Manuel Hernandez
President of
index Nacional
luismanuel@index.org.mx
TW: [@LuisMHernandezG](https://twitter.com/LuisMHernandezG)



Juan A. Vazquez Durazo
General Managing
Director of
index Nacional
dg@index.org.mx



Paulina Nuñez Roman
Public Affairs and
Operations Director of
index Nacional
asuntoscorporativos@index.org.mx

INTERDISCIPLINARY PUBLIC RESEARCH TEAM



Julian Leon Manjarrez
Master's degree in Public
Administration (Harvard).
julianleon@31mas1.mx



Benjamin Castro
B.A. in Political Science (ITAM).
bcastro@31mas1.mx



Jose Teran
B.A. in Political Science
(ITAM).
jteran@31mas1.mx

SPECIAL GUESTS



Alvaro García
Director
Labor Committee,
index Nacional



Erika Martinez Mott
Deputy Executive
Director of Grupo
Estrategia Política



Carlos Palencia
Partner of CEO
Consultoria Estrategica
& Outsourcing.



Laura Garcia
Member of the Fiscal
Committee of
index Nacional.



Alan Duclaud
Deputy Director of
Social Security of
the National Labor
Committee of
index Nacional.

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