



AI, Machine Learning & Big Data

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Contributing Editors:

Matt Berkowitz and Joshua Thompson

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Mexico

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Introduction

Since Alan Turing, in the middle of the 20th century, raised the possibility of machines being able to think, the world has never been the same.

Although the concept of artificial intelligence (“AI”) nowadays is no longer unrelated to a large sector of the world’s population, the fact is that it is difficult to assume the total understanding of it. In very simple terms, it is indeed the ability of machines to emulate human thinking and, in this way, to perform tasks that, until a few decades ago, could only be executed by humans.

The improvement that AI has brought to our lives is undeniable: medical procedures are more precise; it helps scientific research; it diminishes the margins of human error in almost all work environments; it allows communications between people who are separated by thousands of miles; it can overcome language barriers; and, more recently, it can make predictions or directly affect the decision-making of the members of a particular society – or even of a whole country.

However, in our opinion, there are two major problems or challenges with AI: the first is related to the vertiginous development of AI; and the second refers to the profound inequality that exists in our world.

The first problem has to do with the fact that not even AI developers are able to know the limits of it, and what is more disturbing, they have no idea how to keep it under control. Elon Reeve Musk, founder of Tesla, Inc., as well as of several cutting-edge technology companies, states that *“AI doesn’t have to be evil to destroy humanity – if AI has a goal and humanity just happens to be in the way, it will destroy humanity as a matter of course without even thinking about it, no hard feelings”*.¹ In that sense, it is essential to create laws that regulate the development and use of AI, as well as to design policies to promote ethics, education and user protection.

The second challenge abovementioned implies that the higher the level of poverty in a given country, the greater to the delay in the use of AI in the daily life of its population. Likewise, countries with low education levels fail to include people in the use of technological tools that, in many cases, are costly and difficult to understand. Finally, when the economic growth of nations is low, it is difficult to allocate investment to technological development due to the lack of resources and the high demand for basic services and products of first necessity.

However, it is paradoxical that the lack of growth of a country limits its access to technological innovation and the use and development of AI, while the technological innovation and the use and development of AI, nowadays, can accelerate its growth.

This chapter will mainly address the second challenge applied to the situation in Mexico, as an explanation of the backwardness, for many unexplainable, that is observed in Mexico in the face of the use and development of AI, and all that this entails. Likewise, the great potential that Mexico has to become the leader of Latin America in terms of AI and technology innovation will be exposed, pointing out the challenges that we believe the country must face in the following years.

Despite the economic, political and social complexity of a developing country like Mexico, it is a nation with several advantages, such as its geographical location and its demography, that it has not yet fully realised and that, if exploited in an appropriate manner, could place it at the forefront of what today some international observers call the *fourth industrial revolution* – a historic change in which AI is considered a technological element.

The situation in Mexico: trends

Unlike other leading jurisdictions in the field of AI (i.e. the US, which is in a privileged position thanks to companies such as Facebook, Amazon or Apple), Mexico is not yet distinguished by its innovation in terms of technological development, nor for an aggressive policy of AI implementation.

The use of Information and Communication Technologies (“ICT”), which is essential for the implementation of processes and tools created from AI, shows a considerable delay in Mexico compared to its northern neighbours: *“The incorporation of ICT in everyday life was slow at first, due to high costs and little penetration of networks.”*²

Certainly in a country with a population of approximately 130 million people of which 53,418,151³ are in poverty, it is difficult, on the one hand, to make the necessary investment to implement the use of AI, and on the other hand, to permeate in all – or at least in the majority – of the social levels of the population.

Thus, for example, José Luis Becerra, editor of *Cio México*, a publication of International Data Group, points out that *“the great challenge that Mexico faces, is that only a small portion of its workers have the skills that will be enhanced with the revolution of AI”*.⁴ This phrase summarises the importance of both collective education around the use of AI, and access to the relevant means for its use.

In October 2018, the Mexican company Metrics Digital, with expertise in digital transformation and automation through AI, announced the First Market Maturity Study of AI in Mexico,⁵ carried out with the collaboration of the newspaper *El Financiero*, the Employer Confederation of the Mexican Republic (Spanish acronym “COPARMEX”), the Graduate School of Business Administration and Management of the Technological Institute of Monterrey (Spanish acronym “EGADE Business School”), and the Aspen Institute.

The abovementioned study showed that, although in Mexico 42.3% of the workforce are digital natives, digital development and understanding of concepts such as Deep Learning or Machine Learning, are not yet fully adopted in Mexican companies, since the very concept of AI is known in its most basic sense and in very general terms; however, our market still shows little maturity in the country in terms of AI.

The good news is that a large percentage of the population recognises the benefits of using AI, compared to a much lower percentage that only sees risks in it. This indicates a receptive attitude and, although there is still a long way to go, in general the posture is positive; this is one of the signs of Mexico’s potential as a market for the development and implementation of AI.

On the other hand, Metric Digital's study also showed very interesting data regarding the sectors in which it is planned to invest in AI. Contrary to what happens in more mature latitudes, Mexico is thinking to invest in AI in the short term in the sectors of services, consumption and manufacturing.

Although companies understand the advantages of digitisation and of the application of AI, they do so exclusively in order to encourage consumption of the goods or products they offer, with the purpose of changing traditional business models; but they are reluctant to incorporate these techniques into their work centres. *"In Mexico, micro, small and medium enterprises (Spanish acronym "PYMES") are the backbone of the economy, generating 72% of employment and contributing up to 52% of the country's GDP. In 2015, 97% of the more than 4 million companies in the country were microenterprises, and 74% of these did not use the Internet or have a computer."*⁶

Mexico is beginning to wake up to the reality that if digitisation continues to be postponed, this will be an obstacle to its growth; however, although there are many things yet to be done, the picture is in fact encouraging.

Its geographical position, as well as the number of inhabitants within the Mexican territory, make Mexico an attractive market for the development of AI-related technologies, given that the volume of data produced in the country represents, by far, the highest of Latin America. *"It is interesting to state that language is one of the variables that can offer some advantage to the country. With 437 million speakers, Spanish is the second most spoken native language in the world, behind Mandarin Chinese with 1,284 million, and above English, with 372 million. In this regard, Mexico is the country with the largest number of people who speak Spanish, which, coupled with its ascendancy over other Spanish-speaking countries, can help it assume leadership in the collection, communication and use of data"*.⁷

Recent efforts

While it is true that Mexico's delay in terms of AI is unquestionable, in recent years encouraging efforts have been made to solve some of the problems outlined above and to include Mexico in the race of this so-called fourth industrial revolution.

On November 2013, the Government, led by President Enrique Peña Nieto, presented the public programme National Digital Strategy⁸ (Spanish acronym "EDN"), which contains the guiding principles of a project created with the aim of improving connectivity and ensuring digitalisation of the country.

The EDN arises as a result of the constitutional amendment in telecommunications that was published on June 11, 2013 in Mexico. In the words of Peña Nieto, EDN *"will be the key to democratize access to instruments such as the Internet and Broadband, and to take full advantage of the endless possibilities that they can offer."*⁹

As mentioned above, the main objective of the EDN was to digitise services and processes, as well as to allow all Mexicans access to ICT, in order to modernise the Government and to contribute to the country's development.

Five years after its creation, in April 2018, the EDN achieved the establishment of the Artificial Intelligence and Deep Learning Subcommittee and its Technical Council, under the Inter-Secretariat Commission for the Development of Electronic Government (collegiate body established by the Presidential Agreement in charge of promoting and consolidating the use and advantage of ICT), aiming to *"have a high-level digital policy"*.¹⁰ Likewise, the work of the National Chamber of the Electronic Industry, Telecommunications and

Information Technology (Spanish acronym “Canieti”) was promoted in order to make a diagnosis of the needs of AI in the industry.

The advances are related to institutionalisation and leadership, as the beginning of the construction of a structure capable of implementing AI in all areas of public life.

Results and challenges: what is next?

Thanks to the EDN, several policies were implemented to guarantee connectivity, digital inclusion and digital skills, such as the so-called “*Shared Network*”, whose objective is to ensure that more than 90% of the population has a 4G broadband connection by 2024.¹¹

Another programme promoted through the EDN was “*Code X*”, created to promote the inclusion of girls and women in the use of ICT.

Regarding changes or advances in the legislation, it is important to mention that Mexico, through belonging to a Romano-Germanic legal system (i.e. Civil Law), has more rigid concepts, categories, rules and certain doctrines for amendments than in countries with a tradition of precedents, which, in our opinion, could make it difficult to modify laws that, due to their creation at the time, did not contemplate technological assumptions.

However, in addition to the aforementioned constitutional reform in telecommunications that had as its main purposes, among others, the universal coverage of services and the deployment of infrastructure, it is important to mention the creation of the relatively new Law to Regulate Financial Technology Institutions¹² (“*Fintech Law*”).

The Fintech Law was published on March 9, 2018, in order to regulate the financial services provided by financial technology institutions. This law regulates mainly two institutions, namely: collective financing institutions; and electronic payment fund institutions. However, its provisions also foresee the use of virtual currency and novel models that are defined as those that “*for the provision of financial services use tools or technological means with modalities different from those existing in the market*”.¹³

The Fintech Law represented an important advance in terms of technological innovation, applied to the financial sector. However, the real challenge will be in its correct application in the years to come.

Together with the economic and social progress that our nation needs to achieve, it is absolutely necessary to break the paradigms that surround the concept of AI.

On the one hand, it is necessary to desensitise the working population in order to convey the fact that the use of tools associated with AI is not necessarily intended to replace human functions, but to increase their effectiveness and to improve processes. On the other hand, it is essential to invest in programs specialised in technological research so that Mexico promotes the creativity of its academic, labour and business sectors, and not only to repeat or copy models that could work better in other circumstances.

Of course, any aim without a plan of action becomes simply a good intention, so it is essential that both the Government and the private sector get involved in the law-making process, and create public policies and programmes that reinforce learning and innovation, while protecting consumers and citizens in general.

The current Government of Mexico, which took office on December 1, 2018, has the opportunity –which seems almost a responsibility – to turn Mexico into a leading country in terms of Big Data and generation of AI, either by continuing the programmes promoted by the previous administration, or by implementing a new strategy, but always with a view to understand and unleash the nation’s potential.

The proposals are still in an early stage of planning; however, the scenario is different from six years ago, due to the impact that digitisation, the use of AI technologies, the importance of Big Data and the advances in Machine Learning have had worldwide. In that sense, we trust the public sector's intentions regarding investment and research.

Urgent reforms: intellectual property, antitrust and privacy

Throughout our professional experience, we have been able to notice that in the face of the global reality of AI, there are still important obstacles and gaps in the Mexican legislation that need to be urgently addressed by the current administration led by President Andrés Manuel López Obrador, as well as the Congress, to promote reforms which could strengthen and update the legal framework in the following areas:

- (i) Intellectual property rights for AI and other emerging technologies.
- (ii) Rules to encourage fair and equitable economic competition, both in access and in the use of data.
- (iii) Measures to guarantee greater protection of personal data.

In fact, the first obstacle can be found in the Industrial Property Law ("IP Law"), which does not consider computer programs as inventions, which translates into an impediment to get them patented. However, in practice, the Federal Law on Intellectual Rights ("Copyright Law") is used to correct this omission of the IP Law, since the Copyright Law allows the protection of said programs primarily through International Law, i.e. international treaties. Therefore, Mexico needs to update its legislation on intellectual and industrial property as soon as possible, so that the specific safeguarding of emerging or novel technologies, such as AI programs, is contemplated.

A second barrier has been identified in the Federal Antitrust Law ("Antitrust Law"). AI requires data for its operation, and the data are goods – or rather, assets – that can, without a doubt, grant enormous competitive advantages to those who hold them. As such, the Antitrust Law must contain legal provisions that facilitate data access to the developers of digital services related to AI, and *"must be revised to ensure that the accumulation of data assets does not lead to the exclusion of other companies"*.¹⁴

Last, but not least, there is another problem that is not unrelated to other jurisdictions, which in Mexico can be partially traced to certain gaps in the Federal Law on Protection of Personal Data in Possession of Individuals ("Privacy Law"), among other legal systems in Mexico related to the field of data. As we have seen, AI feeds precisely from data that, in many cases, are obtained from the private – and even intimate – information of people. Therefore, it is important that the collection, storage and use of data in general are subject to laws and regulations that safeguard and give priority to the most basic rights of freedom and privacy of individuals.

Conclusions

A paradox involves a contradiction, and in the worst case, an impossibility. From our point of view, a fair part of the development of AI in Mexico could be in a paradoxical situation. On the one hand, the Mexican jurisdiction could be considered as the largest Spanish-speaking region generating data, and consequently a gigantic incubator of AI technologies; however, the economic difficulties that permeate developing countries like Mexico logically slow down the potential of their progress, contribution and technological leadership.

In recent years, the Government of Mexico has recognised the importance of AI, Big Data, Machine Learning and other essential technologies to face 21st century challenges, promoting the creation of some government entities for the formulation of public policies in this regard.

However, as the Mexican saying states: “*facts are true love, and not just the good reasons*”, there is still much to be done.

Regarding legislation, although there have been some advances in the recognition and regulation of innovative technologies (i.e. the Fintech Law or even in the most recent bills of law in the gaming field), we really consider that it is imperative that the Executive and Legislative branches in Mexico seize the *momentum* that AI is taking worldwide, and boost the necessary legislative amendments to correct the deficiencies and regulatory gaps that have been pointed out by the business and academic sectors, with a special emphasis on the urgency of intellectual property, antitrust and privacy matters.

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Endnotes

1. Martin, S. (April 10, 2019). Elon Musk WARNING: Artificial Intelligence could be an ‘IMMORTAL DICTATOR’. Retrieved May 20, 2019, from <https://www.express.co.uk/news/science/1112515/elon-musk-artificial-intelligence-ai-news-google-deepmind>.
2. Estrategia Digital Nacional 2013–2018. Retrieved May 13, 2019, from <http://cdn.mexicodigital.gob.mx/EstrategiaDigital.pdf>.
3. *Informe anual sobre la situación de pobreza y rezago social 2018*. Secretaría de Desarrollo Social. Retrieved May 23, 2019, from <https://www.gob.mx/cms/uploads/attachment/file/288958/Mexico.pdf>.
4. Becerra Pozas, J. (2019). *Inteligencia Artificial en México, ¿estamos listos para dar el salto?*. [online] Noticias, Tecnología Empresarial, Seguridad. Available at: <http://computerworldmexico.com.mx/inteligencia-artificial-en-mexico-estamos-listos-para-dar-el-salto/> [last accessed May 30, 2019].
5. Executive version available at: <http://metrics.digital/estudio-de-madurez-de-la-inteligencia-artificial-en-mexico/> [last accessed June 14, 2019].
6. Gobierno Hábil. (2019). *Hacia a una estrategia de AI en México: Aprovechando la Revolución de LA AI*. [online]. P. 11. Available at: <https://www.gobiernohabil.com/2018/09/rumbo-una-estrategia-de-inteligencia.html> [last accessed May 24, 2019].
7. Girón, M. (2019). *México puede triunfar en Inteligencia Artificial Forbes México*. [online] Forbes México. Available at: <https://www.forbes.com.mx/mexico-puede-triunfar-en-inteligencia-artificial/> [last accessed May 31, 2019].
8. Estrategia Digital Nacional 2013–2018. *Op. cit.*
9. *Ibid.*
10. Press note. (2018). Secretaría de la Función Pública. *Crea SFP Subcomisión de Inteligencia Artificial y Deep Learning de la CIDGE*. Available at: <https://www.gob.mx/sfp/prensa/crea-sfp-subcomision-de-inteligencia-artificial-y-deep-learning-de-la-cidge> [last accessed June 12, 2019].
11. Gobierno Hábil. (2019). *Op cit.* P. 20.
12. *Ley para Regular las Instituciones de Tecnología Financiera*. Available at: http://www.diputados.gob.mx/LeyesBiblio/pdf/LRITF_090318.pdf.
13. *Ibid.* Artículo 4.
14. Gobierno Hábil. (2019). *Op cit.* P. 50.



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