The industrialization challenges of the LAC region in achieving the Sustainable Development Goal 9 and an Inclusive and Sustainable Industrial Development (ISID).

Author: Julia Isabel Serrato Fonseca

Submission date: 09 January 2016

EXECUTIVE SUMMARY

The present essay synthetizes the challenges that governments and businesses face, according to their size, in Latin America and the Caribbean, so that an ambience of shared prosperity can prevail and Sustainable Development Goal #9 from the UN 2030 Agenda can be achieved. Nonetheless, the essay, which is structured upon a *systemic view*, presents *quality education* as the key factor within a net of other substantial elements for propitiating prosperity.

TABLE OF CONTENTS

I.   Introduction.

In the 2030 Agenda for Sustainable Development, adopted by the international community on September 2015, there are 17 declared Sustainable Development Goals (SDGs) which express all sustainable development aspirations in the globe that must be achieved within the next 15 years. The United Nations Industrial Development Organization (UNIDO) and the United Nations, propound to approach all SDGs by three interrelated thematic priorities, which represent different aspects of the Inclusive and Sustainable Development (ISID) and will be used as the first guiding framework:

   a) Advancing economic competitiveness.
   b) Safeguarding the environment.
   c) Creating shared prosperity.

The last priority, which refers to reach inclusive growth with equal opportunities for all people, is the key point that essentially benefits individuals in the most direct way. In addition, if society is benefited, if manual workers, clerks and office workers can prosper, then progress can be aimed. **Prosperous employees will be productive, safeguard the environment and pursue economic competitiveness**.

> *"The most productive work comes out of the hands of a happy man."*
>
> *Victor Pauchet (1869 – 1936), French surgeon and humanist.*

In a prosperous ambience, where workers are paid justly, have proper access to healthcare, social services and feel safe, they can be participative citizens, innovative employees and responsible human beings. Nevertheless, Latin America and the Caribbean is not a prosperous region: most people cannot care for climate change and development of green technologies or competitive prices and improvement of quality, because they only can worry about how they are going to make it through every day with a very small income.

II.   Challenges of big businesses and governments in the LAC region.

For achieving the SDG #9: "**Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation**." LAC industry faces different problems according to the size of businesses. In the case of Big Businesses, which may refer to Transnational companies (TNCs) with presence in the LAC region or LAC businesses with participation in the exterior, it is assumed that both work with massive production therefore, have huge utilities. Nevertheless, in LAC, private sectors like big businesses, together with governments, do not invest that much in building infrastructure, in contrast with other regions, as the Economic Commission for Latin America and the Caribbean (ECLAC) publication *European Union and Latin America and the Caribbean: Investments for growth, social inclusion and environmental sustainability* can presume. The text compares some infrastructure development indicators, between the European Union and Latin America and the Caribbean. Besides the EU and LAC have both grown their installed capacity of electricity systems since 1980, in 2010 there was still a big difference between their scopes. The EU covered a range of more than 1.6MW per 1,000 inhabitants, while LAC less than 0.6MW per 1,000 inhabitants. On the other hand, in terms of fixed broadband, as the EU and LAC have both increased their number of subscribers in the last years, there was still a big gap in 2011 between them. While, in LAC there were less than 10fixed broadband subscribers per 100 inhabitants, in the EU there were more than 25. Surfaced roads are another great indicator that can help to understand the big infrastructure differences between LAC and other regions. Mexico and Venezuela, which are the countries that top the list, had less than 40% of surfaced roads as a proportion of the whole network in 2010, while many nations like Italy, Ireland or Germany had already reached in the same year the 100%.

Additionally, private sectors and governments do not invest significantly in investigation of innovative or sustainable technologies, as it can be appreciated in the World Intellectual Property Organization (WIPO) publication *World Intellectual Property Indicators, 2015 Edition*. In a chapter of the text, dedicated to compare different regions of the world in terms of patents, it is exposed that Latin America and the Caribbean had 2.4% of the world's patent applications in 2014, while other regions like Asia had 60%, Europe 12.9% and North America 22.9%.

There are many reasons for the poor investments in infrastructure and investigation of innovative or sustainable technologies in LAC. Besides other explanations, many countries have legislations

that prohibit the implementation of infrastructure that allows the development of some services that the government can only take care of, like the extraction, processing and distribution of oil; which was the case of Mexico before the Energetic Reform that was recently declared and approved in 2013. But, there are more relevant reasons that justify the poor flows of money dedicated to infrastructure and innovation: **LAC countries are not prosperous** therefore, government cannot collaborate with big industries and destine big outcomes in investigating sustainable industrial processes because there are more urgent situations that need funding such as hunger or extreme poverty. Retaking Mexico, in 2014 only 2.4% of the GDP corresponded to the development of technology and science according to INEGI, the national institution responsible for the statistical data in Mexico, while European countries invest much more in these sectors, as it is known. Another transcendental reason refers to corruption in LAC governments. It is difficult to demonstrate that senior civil servants are corrupted, but there are some transparency studies that measure the perception of people about corruption in the government at their living countries, such as the *Corruption Perceptions Index* executed by *Transparency International* in 2014. The studies' results denote that almost every LAC nation is perceived as highly corrupted with some scarce exceptions like Chile and Uruguay, countries that curiously are the only ones in LAC that have a poverty index inferior to 20%, according to the *Socio-Economic Database for Latin America and the Caribbean* (SEDLAC). In other words, there is a high possibility that corruption and poverty are interrelated.

However, there is another important factor that limits implementation of new technologies: as an unprosperous region, LAC workforce is, sometimes, cheaper compared to the great expense that means acquiring sophisticated equipment and its installation plus proper maintenance. The *Bank of America Merrill Lynch* published an article in 2013 that stated that, besides China is well known for its low labor cost; Mexico's labor force costs were almost 20% lower. At first, this can appear to be a great economical competitive opportunity, but it has many negative repercussions: There is not a propitious atmosphere for technology, namely denoting automatization of processes, nor for investigation and more important, this probably means workers may not be paid justly. Strictly speaking, in the last couple of years, according to the Mexican *Secretariat of Finance and Public Credit* (SHCP), the minimum salary per day in Mexico has been around $61 MXN and $73 MXN, in other words, around $4 USD or less. It is hard to imagine how a labor worker can make it through with that small amount, while the minimum salary in other prosperous countries, like USA, is $7.95 USD per hour.

Briefly, it can be inferred that, with the previous data exposed, **for achieving SDG #9 in LAC, the biggest challenge for big businesses and governments, is to create a prosperous region**, that can easily permit sustainable industrialization, this means: LAC governments need to consider new legislations, deal with corruption and increase the income of their people. Therefore, solve their internal most significant problems, like extreme poverty. Big industries, on the other hand, face working along with governments, adapting to changes that favor people.

III. Challenges of small and medium enterprises and governments in the LAC region.

Besides big businesses face many challenges for achieving the SDG #9 in LAC, medium and small sized enterprises (SME) face much more. As big industries have huge utilities, it is easier for them to afford refined technologies or implement resilient infrastructure, if they wished to, than small or medium ones.

Working for big industries in LAC is not always the best choice because as seen before, salaries in LAC are small and not enough for satisfying basic people's necessities. Consequently, Latin-Americans perceive launching little businesses as a good option. Nonetheless, rarely, small businesses succeed and prosper; there are many reasons for this. At first, for starting a business, money is required, hence people usually ask for loans in banks, but they are hardly granted. It can be attributed to bank's policies, because the individual in question may not meet the bank's requirements for becoming a trustworthy client. While this is a way banks protect their saver's money, economic growth opportunities in LAC decrease. An article about tendencies in the funding of SME published by the *LatAmEconomy.org* portal in 2013, defines that less than the 15% of credit in the region is destined to this sectors, besides they are responsible for almost 80% of employment. On the other hand, if Latin American entrepreneurs can skip the inaccessible loan obstacle, they still need to face the multiple formalities. For example: In Bolivia, according to *The World Bank*, there were at least 15 procedures required to start a business and the LAC country had a 157 of 185 ease of doing business index (where 1 = easiest and 185 = most difficult) in 2015; while other European nations had much more lower indexes, like Austria, the same year.

In Austria there were by far 8 procedures required to start a business and the country had a 21 index.

Established SME, that could make it through all the barriers previously exposed, face other significant problems. It is difficult for them to have access to the same big markets and opportunities that big industries have. The *National Corporation of Consumers and Users* of Chile (CONADECUS) published an article in 2014 that stated that small and medium sized businesses were discriminated. Supermarkets applied higher margins to SME suppliers than to the same category products of big enterprises. Thus, fair competitiveness is lost because consumer prices rise in the SME merchandise. But injustice does not stop here, big industries negotiate their fees for placing on the shelves all the products they manage and publicity too.

Like if all these limitations were not enough complications, SME need to stand corruption. The first statistics about victimization of enterprises in LAC were executed in Mexico, 2012 by INEGI. The *National Inquest of Victimization of Enterprises* (ENVE) is a medium for satisfying the necessity of measuring the impact of delinquency in the private sector and next, here are some alarming data that describes, and will help to understand better, the dangerousness that implies managing a business in Mexico:

- 33.6% of enterprises had suffered a crime and the most frequent crime was theft or assault of merchandise, money, supplies and goods.
- 88.1% of the crimes committed against enterprises were not denounced or did not started a preliminary investigation.
- The cost of crime against enterprises was 110 thousand million Mexican pesos that corresponds to 0.66% of the GDP.
- Because of crime, 22.3% of the economic entities reduced their production horary or merchandising of products and services.
- The economic entities perceived in 2012 and 2014 that insecurity and delinquency were the problems that affected them the most.
- In 2014, 4% of enterprises closed because of insecurity and delinquency, which 98.2% corresponded to SME.

Then, it can be resumed that in the case of SME in LAC, they face, as big industries do, the infortune of being in an unprosperous region. **Therefore, their biggest challenge, as well, consist on propitiate a prosperous region, while working along with governments**. Accessible credits and less complicated formalities for launching a business are needed. For

example: Mexico's senate recently approved an initiative that will allow entrepreneurs constitute a business in a day and without formalities costs. The market needs to offer justly opportunities for SME in terms of distribution, partnerships and other transcendental factors, so they can be competitive. Even so, governments really need to fight corruption and delinquency. There is no way SME can aspire to be big industries, contribute to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation, if crime does not decreases.

IV.   Propitiating prosperousness in the LAC region.

As mentioned before, LAC is not a prosperous region and forcing it to be is the biggest challenge for Big Industries, Small and Medium Enterprises and Governments. If LAC does not prosper, it is unimaginable to conceive the possibility of inclusive and sustainable Industrialization and its repercussions.

A prosperous country can be understood as an inclusive nation with almost no poverty and equal opportunities for all people. For achieving this, countries internal problems need to be solved, this means that poverty, crime and corruption need to be eradicated, and equality must prevail. An article of the *World Bank Group* published in September 2014, specified that a group of investigators used databases and statistics of more than 2,000 municipalities in Mexico to figure out if crime and poverty were interrelated. Experts found out that it is true, localities with less inequality, had lower delinquency rates. As it can be appreciated, inequality, poverty and crime are associated and, as it was previously proved in the present essay, there is a high possibility that poverty and corruption are interconnected too. If all the LAC problems are linked, it means that all can have a same solution: **education**. At this point, it may seem that the analysis is going far from the core of the essay, but in reality, everything is intersected and unified. Next, there is a comparative table constructed with data obtained from *The World Bank*, which contrasts some indexes of LAC, European and Asian countries randomly chosen.

Table 1.1 Comparative table of selected indexes of randomly chosen countries in LAC, Europe and Asia.

Country	GINI index (2012).	Control of corruption: Estimate (2012).	Gross graduation ratio from first degree programmes in tertiary education, both sexes (%) in 2012.
Argentina	42.5	-0.5	12.7
El Salvador	41.8	-0.4	10.9
Finland	27.1	2.2	51.5
Italy	35.2	0	34.2
Paraguay	48.3	-0.8	…
Poland	32.4	0.6	58.1
Romania	27.3	-0.3	…
Thailand	39.3	-0.3	…

The *GINI index* measures the extent to which the distribution of income among individuals or households within an economy deviates from an equal distribution. (0 = perfect equality and 100 = perfect inequality). In table 1.1, it can be appreciated that LAC countries (red), have the highest GINI indexes, all above 40, in contrast with the rest of the nations. On the other hand, the *Control of Corruption* captures perceptions of the extent to which public power is exercised for private gain, as well as, "capture" of the state by elites and private interests. The estimate matches the units of a standard normal distribution therefore, countries can acquire a value ranging from approximately -2.5 to 2.5. In the estimate, LAC countries again have the worst scores, while European (blue) and Asian (green) countries have indexes above or equal to -0.3. For last, the *Gross graduation ratio from first degree programmes in tertiary education, both sexes (%) in 2012* defines the number of graduates from first degree programmes expressed as a percentage of the population of the theoretical graduation age most common in first degree programmes. As expected, besides Paraguay, Romania and Thailand do not count with the ratios, the remaining LAC countries have the poorest percentages.

There is a high possibility of education deficiencies and LAC problems being associated and it makes sense. Poor education opportunities lead to poor employment opportunities, inequality and obvious poverty, which can lead to crime and delinquency. At the same time, poor quality education can lead to corruptible people and corruptible senior civil servants.

"Education is the most powerful weapon which you can use to change the world."

Nelson Mandela (1918 – 2013), South African president and Nobel peace prize (1993).

LAC Governments should invest bigger amounts in education, design quality education programs and work along together with industries for beneficiating students and their professional future.

V. Conclusions.

The multiple variables mentioned along the essay can be interpreted as causal loop diagrams, because they are all interconnected and they all influence each other. After all, **it is a same system**. At first, poverty, inequality, crime and corruption have a positive polarity and work as a cycle; this means that if one increases (decreases), then the other variables increase (decrease) as well and so on. In the same causal loop diagram, education can be a negative polarity variable, this means that if quality education opportunities increase (decrease), the rest of the mentioned variables will act in the opposite way, namely decrease (increase). Nevertheless, education and prosperity have both a positive polarity relation therefore, the causal loop diagram can be conceived as figure 1.1.
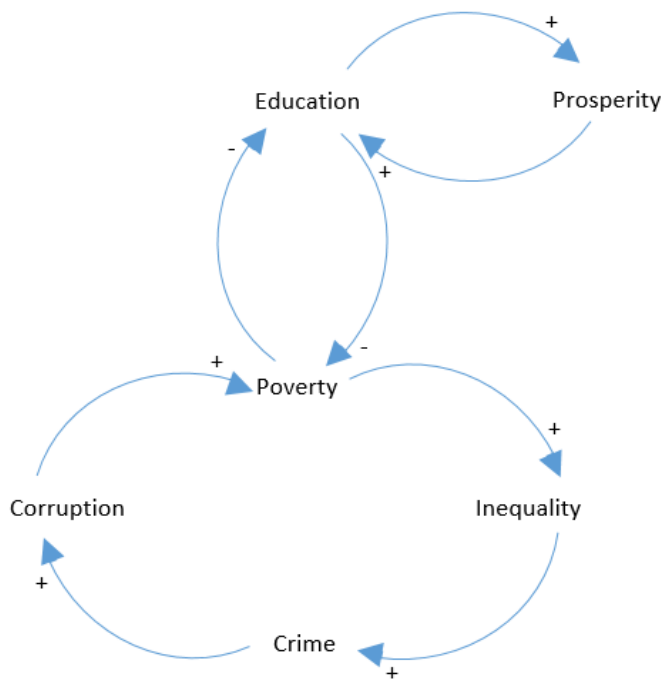

Figure 1.1

On the other hand, prosperity is the key for achieveing SDG #9 in LAC. If the region prospers then justly incomes, favorable legislations, accessible credits and justly opportunities, can be aspired. In other words, prosperity works as the main engine in the causal loop diagram of figure 1.2 and if all these benefits prevail, they contribute again to prosperity.
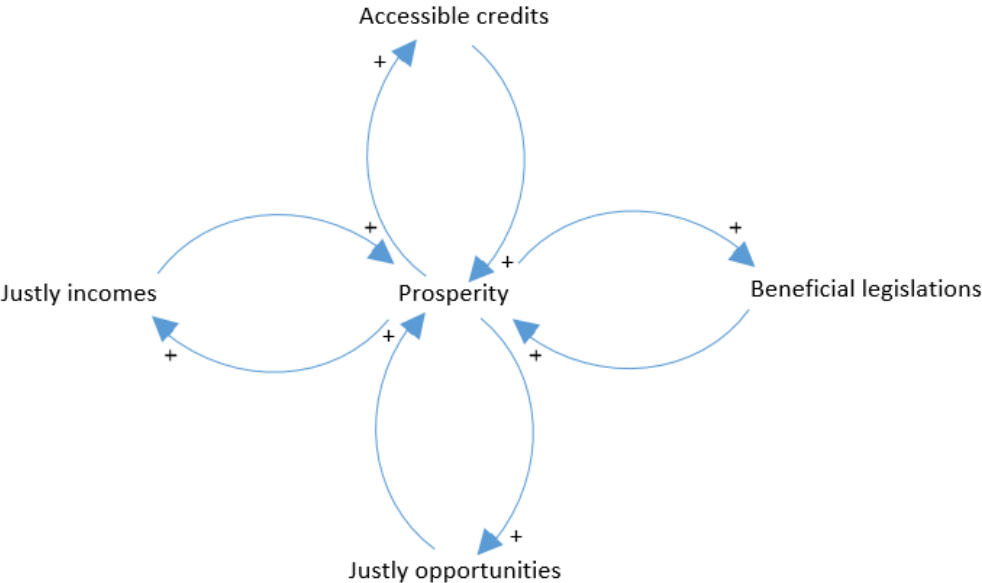

Figure 1.2

For last, as expected, all the favorable conditions that prosperity enables are the needed ones for building resilient infrastructure, promoting inclusive and sustainable industrialization and foster innovation, in Latin America and the Caribbean.

VI.   References

(2016). World Bank Data. 4 January 2016, from The World Bank Website:
http://databank.worldbank.org/data/reports.aspx?source=millennium-development-goals#

(2015). Corruption perception index 2014: Results. 4 January 2016, from Transparency
International Website:
http://www.transparency.org/cpi2014/results

(2016). Salarios mínimos 2016. 4 January 2016, from Secretaría de Hacienda y Crédito Público
(SHCP) Website:
http://www.sat.gob.mx/informacion_fiscal/tablas_indicadores/Paginas/salarios_minimos.aspx

Economic Commission for Latin America and the Caribbean (ECLAC). (2012). European Union
and Latin America and the Caribbean: Investments for growth, social inclusion and
environmental sustainability. Santiago, Chile: United Nations.

(2015). Statistics. 4 January 2016, from Socio-Economic Database for Latin America and the
Caribbean (SEDLAC) Website:
http://sedlac.econo.unlp.edu.ar/eng/statistics.php

(2013). Tendencias en el financiamiento de las pymes en América Latina. 4 January 2016, from
LatAmEconomy.org Website:
http://www.latameconomy.org/es/outlook/2013/financing-smes-in-latin-america/trends-in-the-
financing-of-smes-in-latin-america/

 (2014). Las Prácticas Discriminatorias de Supermercados Contra Proveedores Pyme. 4
January 2016, from Corporación Nacional de Consumidores y Usuarios (CONADECUS)
Website:
 http://www.conadecus.cl/conadecus/?p=8185

(2015). Estadísticas sobre la Victimización de Empresas. Aguascalientes, México: Instituto
Nacional de Estadística y Geografía.

(2014). Está demostrado: con menos desigualdad se tiene menos crimen. 4 January 2016, from
World Bank Group Website:
http://www.bancomundial.org/es/news/feature/2014/09/03/latinoamerica-menos-desigualdad-se-
reduce-el-crimen

(2014). World Intellectual Property Indicators. Switzerland: World Intelectual Property
Organization (WIPO).