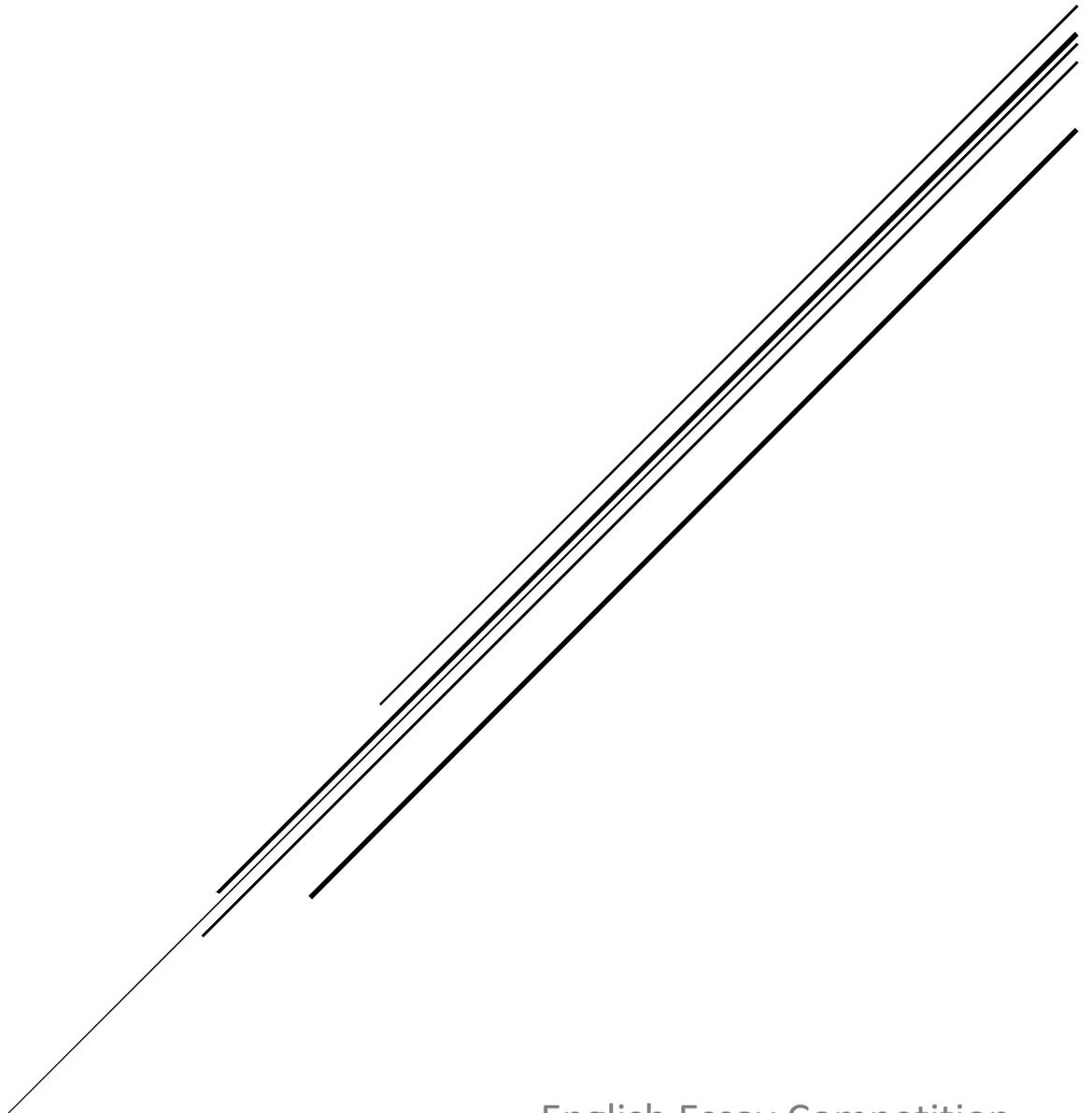


# **The industrialization challenges of the LAC region in achieving the Sustainable Development Goal 9 and an Inclusive and Sustainable Industrial Development (ISID)**

Mauricio Tong

Lima, 2016



English Essay Competition  
Latin America and the Caribbean (LAC) Programme of UNIDO

## Table of contents

INTRODUCTION .....	2
THE SIX CHALLENGES .....	3
1. BUILDING AN ADEQUATE INFRASTRUCTURE BASELINE FOR INDUSTRY .....	3
2. DEVELOPMENT THROUGH SUSTAINABLE GREEN INDUSTRIES .....	4
3. FOSTER INNOVATION AND DIVERSIFICATION TO INCREASE COMPETITIVENESS .....	6
4. EDUCATION AND TRAINING TO INCREASE INDUSTRY'S PRODUCTIVITY .....	7
5. FOSTER EQUALITY AND SOCIAL INCLUSION IN THE INDUSTRY .....	7
6. ENFORCE LAC STATES' SOCIAL AND TAX AGREEMENTS .....	8
CONCLUSIONS.....	9
RECOMMENDATIONS.....	10
BIBLIOGRAPHY .....	11

## INTRODUCTION

*“There is, brothers, very much to do”*

*César Vallejo*

These are the words written by the great Peruvian poet Cesar Vallejo that perfectly stand on the Latin America and the Caribbean (hereafter the LAC) industrialization context. Actually, there is no LAC country that truly represents an advanced economy or a first world one; and even if there are efforts on the way, there is still very much to do. In this regard, this essay presents the six challenges that industrialization has to achieve the desired sustainable development goal 9 and an inclusive and sustainable industrial development (hereafter ISID) in the LAC region.

According to Adam Smith, Marx and Engels, it is a fact that industrialization is the driver to reach development, BUT...it also brings some problems such as increased pollution, growing inequality and lower social cohesion (Federman & Levine, s.f.); which makes industrialization not always sustainable in time and not always good for every stakeholder involved. In fact, sometimes, even though industrialization is good, brings more disadvantages than advantages, thus it has to be treated as a pending matter both in the short- and long-term.

For that matter, agreeing with UNIDO's proposed vision of development in all countries in the world:

*“UNIDO aspires to reduce poverty through inclusive and sustainable industrial development. All countries should have the opportunity to grow a flourishing productive sector, to increase their participation in international trade and to safeguard their environment”.*

In LAC region seems to be utopian, however...it is definitely reachable. Despite of the actual drag on advanced-economies economic growth, a negative impact on the LAC region, it allowed the world put the eyes on its unexpectedly development, macroeconomic stability, and the drag on poverty and unemployment. To redirect the industrialization into the inclusive and sustainable paths, according to the ISID Framework, it must include all people and countries both in the private and public sectors, offer equal opportunities and a proper distribution of benefits to all the

stakeholders groups comprehended in the industry's activities, including the environment<sup>1</sup>. In other words, the industrial progress encompasses create shared prosperity, being competitive economically, and respect the environment without setting anyone aside. If any of this pillars is considered in the challenges, it is not going to be possible to contemplate an outstanding development in the region therefore any kind of initiative will be in vain.

In summary, in this essay I propose six specific challenges that Latin America and the Caribbean region has to achieve, based on the UNIDO and ISID frameworks, proposing guidelines to reach a sustainable and inclusive development. Additionally, I propose actions and policies that both private and public sector including Governments and Companies are responsible to address the industry into a proper way heading to a sustainable development through industrialization.

## **THE SIX CHALLENGES**

### **1. BUILDING AN ADEQUATE INFRASTRUCTURE BASELINE FOR INDUSTRY**

The initial challenge and the most urgent is the establishment of a proper infrastructure to set a strong base in industrialization. Since LAC region is composed primarily by commodities sector (primary sector), it has begun to have a highly degree of industrialization getting more significant in which the region is close to 25%. This is regards to the abundance of natural resources the region has (Astori, 1980). Even there are better signs of infrastructure, it is not enough because the region sadly keeps on taking the bottom places in the international rankings of infrastructure (Panama is the best LAC country in the ranking occupying the 40<sup>th</sup> place and Haiti the worst occupying the 137<sup>th</sup> place out of 140 countries) (WEF, 2015).

This abundance on resources has brought remote and provinces communities located in extractive areas become more industrialized but in a disorganized way and at a very fast rhythm but not into a sustainable way. It is in here where urbanization is needed, where infrastructure would help them to develop this communities, but also support the decentralization of countries since the majority of LAC countries centralization degree is very

---

<sup>1</sup> The Lima Declaration 2013. The new vision of inclusive and sustainable industrial development (ISID).

high and this problem brings other social and environmental problems with it. Perhaps centralization is not a greater issue in the Caribbean, there is also a lack of proper infrastructure projects because of their remoteness to the rest of the world and the likelihood of natural disasters.

If this remote communities could develop programmes of urbanization, roads systems, efficient ports, communication infrastructure, special industrial parks for each industry's sector; both communities and companies would stop worrying about delays, labor and environmental safety, productivity, and so other matters that are translated into more economic revenues too.

There is no doubt that almost every LAC country has access to the ocean, and that would mean open the gates to the world, yet there are Bolivia or Paraguay and deep inside communities in South America in the Andes or Amazon regions that have an additional challenge which is having adequate land roads and airports to make industry flourish. In that case, it is also indispensable to consider the agglomeration of industries into industrial clusters, which allows lower production costs, push companies into competitiveness and improve suppliers' chains.

Finally, to give an example of a specific action, it would be ideal that South American countries start building an interconnected train system permitting reduce time and distances between them therefore increasing the competitiveness of the region compared to others. Actually, a very good example nowadays is the interoceanic roads connecting Pacific and Atlantic Oceans through Brazil or port channels through Panama and Nicaragua. There is no doubt that those are high-cost projects, but then again there is no doubt that will bear even more fruits and benefits for the entire region altogether.

## **2. DEVELOPMENT THROUGH SUSTAINABLE GREEN INDUSTRIES**

The development of green industries is one of the pillars of ISID to safeguard the environment, and the challenge is implement production activities which include clean technologies and more efficiency to reach sustainability. This is a real pending challenge not because of the cost, but the time it can take to make people and companies aware of the nowadays problems. In this context, international efforts such as the COP meetings are on the way: in the recent

COP21 meeting (celebrated in December 2015), Government chief heads reached a historical agreement that consisted in reducing and stopping the carbon emissions in all over the world<sup>2</sup>.

It is not possible to keep the current pollution level in the industries, and that is why responsibility should exist among the production activities that could harm the environment. Hence, LAC States must consider the promotion and awards or incentives for those companies that use renewable energies or those which really try to significantly be less damaging to the environment. On the other hand, they must punish those polluting companies or those who dispose chemicals and other products that cause irreversible damage to the ground and oceans making it impossible to recover in the short- or long-term.

In LAC region, the cost and responsibility of pollution is even greater because the major resources concentrated in the region include a third of the world's fresh water, 20% of the biodiversity located in forests and 30% of the biofuels (CEPAL, 2012) could be translated in very negative economic and social impacts.

It is true that is a great challenge for industries in LAC region having respect for the environment and being globally competitive both at the same time, even more having awareness that other countries may not have the same willing to have respect for environment because they might not be affected as negative as the LAC region. Nevertheless, adopting green industries is advantageous in the future since it improves living quality (demonstrated in Costa Rica, one of the greenest countries in the world, which always promotes its Pure Life culture 'Pura Vida') through better-quality products and services that also means profitability and competitiveness.

There's still much to do in this matter, primarily because LAC is a region with low-technology economies competing in terms of price and not for the value-added, low-investment in modern infrastructure and efficient technologies; however, some initiatives have already started on focusing on consumers' awareness on green products. Actually, organic products in today's market come from LAC region agroindustry and are high valued by consumers all over the world; also, many other States have regulated the fishing industry by limiting the fishing of

---

<sup>2</sup> Source: BBC World News: "COP21: aprueban histórico acuerdo contra el cambio climático en la cumbre de París", accessed on December 31<sup>st</sup>, 2015 at 6:00 p.m. ([http://www.bbc.com/mundo/noticias/2015/12/151211\\_cumbre\\_clima\\_paris\\_cop21\\_acuerdo\\_az](http://www.bbc.com/mundo/noticias/2015/12/151211_cumbre_clima_paris_cop21_acuerdo_az))

certain fish species in order to assure reproduction, or the timber industry by applying 'red channels' to control deforestation. In conclusion, this reflects some society awareness in consuming limits and how production may impact sustainability.

### **3. FOSTER INNOVATION AND DIVERSIFICATION TO INCREASE COMPETITIVENESS**

The challenge to foster innovation and advancing in economic competitiveness is also an ISID pillar, for the reason that brings productivity improvements and is interrelated with utilization of resources efficiency. Another challenge is adopt and adapt production into modern industries, even the high-cost, brings major profits in the long-term<sup>3</sup>.

In fact, some results in LAC region could be contemplated over the years: industrialization degrees in high-technology manufactures in México, Costa Rica and Panama; and mid-technology manufactures in Brazil and Argentina have increased exponentially since the eighties (after the imports substitution for industrialization (ISI) policies). This results are due to States' stimulus that boost diversification of industrial sectors in order to deal with more value-added products (Mayer, 2004). For example, there are LAC countries that have implemented Innovation and Technology Centres and ITC Systems to train entrepreneurs in different industries including Peruvian 'CITEs', Chilean Innovation Fund, or Brazilian Welfare Law (Ghezzi, 2015). This shows some results in State's strategies to drop the production of 'copied' products and starting to have innovation and originality through technology research.

Another challenge in this matter is keep seizing the current globalization and foreign trade tools, thus the available information in Internet and other communication channels, new industries in new sectors have been born getting more and more sophisticated over time and changing the region's economic structure (CEPAL, CELAC, SELA, 2013). However, LAC still remains in a technological level below South Asia and North America, which pushes foreign direct investment aside from the region then reducing competitiveness.

---

<sup>3</sup> To give an example, in Central America, which possesses an important assembling industry, they could adopt foreign modern technologies through the incorporation in a global supply chain of automotive parts. Similarly, in the Caribbean, which possesses a vast touristic industry, they could adapt information and communication technologies (ICTs) to survive in the competitive tourism global market.

#### **4. EDUCATION AND TRAINING TO INCREASE INDUSTRY'S PRODUCTIVITY**

Education cannot be ignored in the sustainable development through industrialization, therefore an existing challenge is educating and training the involved employees in the industry's production to increase productivity for companies and raise living quality for people. As mentioned earlier, the bulk of the economic activity in the LAC region is the primary sector, but as being tempted to relocate into the secondary sector (the industry), many do not count with enough skills to properly work in these sectors.

Training will not only have a positive direct impact to living quality for workers (and so eradicate poverty in the mid- and long-term) but to industry, because it brings increased productivity then lower costs and upper profits. Educating and training should start from the workers' communities and it should be constant, holding strategic programmes that helps them introduce to the specific sector in which they work.

Is early still for States and industries in the LAC region to issue policies and promote education and training programmes in order to develop the optimal workers' performance due to the lack of mid- and high-technologies. Furthermore, the challenge to those countries that already have qualified workers in mid- and high-technology industries, is to retain those talents. In fact, is not surprising that there are many Latin American young people highly educated in its home country but working and sharing its knowledge to already advanced, developed and industrialized nations.

#### **5. FOSTER EQUALITY AND SOCIAL INCLUSION IN THE INDUSTRY**

The challenge to enforce equality and social inclusion in industry to achieve constant shared prosperity is part of one ISID's pillar, since every single stakeholder group involved with a certain industry must promote the equality of opportunities. Despite of being in a historical improvement period in matters of inequality (CEPAL, 2012), the LAC region remains to be the most unequal region in the world (PNUD, 2010).

Firstly, women record an unemployment level 1.4 more times than men (CEPAL, FAO, UN Women, PNUD, ILO, 2013); secondly, there is a trend of replacing not very old workforce for younger workers that accept to earn much less in order to find a job; thirdly, there are so few

companies that build proper infrastructure for individuals with special skills. In short, this schemes create inequalities in industry, so States must set the tone at the top to ensure equality of opportunities in companies, and inclusion to avoid discrimination.

On the other hand, industrial companies in LAC region are majorly made up of SME; for example, in Central America 90% of companies are small (CEPAL, CELAC, SELA, 2013) which 50% are informal (ILO FORLAC, 2014). So there are still adequate and coordinated incentives in these companies' industries to be developed in a more dynamic and inclusive manner.

## **6. ENFORCE LAC STATES' SOCIAL AND TAX AGREEMENTS**

The sixth and last challenge comes from the LAC States, because they are the ones that must assure political and economic stability so industrialization can create a proper atmosphere for economic, social and environmental development. In addition, industrialization may 'walk' correctly if it is responsible of assuring health to its workers and consumers by providing labor safety to its workers and food safety to its consumers. In this regard, States are actually promoting labor guidelines and laws that ensure those mentioned safeties.

By the other hand, LAC States must enforce means of conducting formalization and auditing to industries, since the benefits of becoming formal are far greater than remaining informal in some sectors (Pacheco, et al., 2008), for example, inequality increase, market distortions and lower competitiveness. It is worth mentioning about the last idea that LAC States must provide entrepreneurship programmes about production of added-value goods and services in order to seize not static comparative advantages only but dynamic competitive advantages too.

Finally, as a consolidated group or as a regional bloc, LAC States must internally establish not commercial agreements only but start working on major infrastructure projects through public/private partnerships. A good example involves Argentina and Mexico, which have increased their competitiveness through value chains from the wine industry to software industry. Foreign direct investment from Europe or other advanced-countries in LAC region is still beneficial and it should be even more profitable if the technological spillover though know-how would be learned by national companies in different business sectors like successful coffee industry in Brazil, aeronautics industry in Mexico or electronic industry in Costa Rica.

## CONCLUSIONS

All the six challenges raised in this document are interconnected in some way. While some of those can be more urgent than others, none of them excels over the others; as ISID framework proposes, every challenge take part of a unique structure. In this sense, the infrastructure and policies are the baseline to allow industrialization development in both sustainable and inclusive paths (including environment) through fostering innovation and education.

It seems to be the right time for LAC countries to integrate and adopt technologies that meet the region's needs today and in the future. Is not too late to start earning the prestige of being the world's most competitive region, so Latin America and the Caribbean countries must show that every challenge accepted is reachable. We must leave 'There is, brothers, very much to do' behind and start accomplishing the proposed goals. Additionally, nor is it late to tackle the environment issue, the solutions are raised but there is still policies that must be streamlined to raise awareness of responsibility with environment into industries and people.

The regional integration will push those countries with major difficulties into the competitive and improving process of industrialization. The importance of education to reach expertise in professionals and technicians is highlighted because production would incorporate new and added-value. In fact, innovation is essential to the productive development in a sustainable way and that is why LAC countries should redirect a greater share of their annual budget for supporting R&D. However, that does not mean that primary sector should be set aside, but the parallel development through production diversification and constant technological upgrading in both primary and industry sectors.

## RECOMMENDATIONS

- ✓ Seize the cultural similarity of the LAC region to develop regional value chains and promote internal commerce through products and services that may satisfy Latin American and Caribbean needs.
- ✓ Seize neighbor countries' R&D progress to take the know-how spillovers, supporting the improvement of innovation and productivity.
- ✓ Seize the modern technologies and new communication channels in order to let education penetrate into remote or isolated communities. In the same way, it would be easier to provide educational and social programmes to improve living quality of people. For example: entrepreneurship trainings.
- ✓ Seize the foreign direct investment boom income to start financing major and high-cost infrastructure projects such as train systems, efficient ports, communication infrastructure, industrial parks, renewable energies infrastructure and community's urbanization.
- ✓ Assure stability of markets and politics to bring a baseline to attract foreign direct investments and a prosperity among internal industries.
- ✓ Strengthen the public sector to the private sector level of effectiveness to avoid bureaucracy, speed up processes and time, traduced into economic resources for all stakeholder groups.

## BIBLIOGRAPHY

- Astori, D., 1980. *Algunas características de la industrialización en América Latina*. México, Comercio Exterior, vol. 30, núm. 12.
- CEPAL, CELAC, SELA, 2013. *Desarrollo productivo e Industrialización en América Latina y el Caribe*, Caracas: s.n.
- CEPAL, FAO, UN Women, PNUD, ILO, 2013. *Trabajo decente e igualdad de género*, Santiago: s.n.
- CEPAL, 2012. *Desafíos do desenvolvimento econômico e social de America Latina e o Caribe*. Campinas, s.n.
- Federman, M. & Levine, D. I., n.d. *Does Industrialization = "Development"? The Effects of Industrialization on School Enrollment and Youth Employment in Indonesia*, s.l.: s.n.
- Ghezzi, P., 2015. *The National Plan for Productive Diversification (NPPD) and PCP Peru*. Lima, s.n.
- ILO FORLAC, 2014. *Experiencias recientes de formalización en países de América Latina y el Caribe*, s.l.: s.n.
- Mayer, J., 2004. *Industrialization in Developing Countries: Some Evidence from a New Economic Geography Perspective*, s.l.: UNCTAD.
- Pacheco, P., Barry, D., Cronkleton, P. & Larson, A. M., 2008. *The role of informal institutions in the use of forest resources in Latin America*, s.l.: s.n.
- PNUD, 2010. *Informe Regional sobre Desarrollo Humano para América Latina y el Caribe*, s.l.: s.n.
- Prebisch, R., n.d. *El desarrollo económico de la América Latina y algunos de sus principales problemas*, s.l.: CEPAL.
- UNIDO, 2015. *Introduction to UNIDO Inclusive and Sustainable Industrial Development*, Vienna: United Nations Industrial Development Organization .
- WEF, 2015. *The Global Competitiveness Report 2015-2016*, Geneva: World Economic Forum.