CONVENED BY GEORGE P. SHULTZ

GOVERNANCE IN AN EMERGING NEW WORLD

LATIN AMERICA IN AN EMERGING WORLD

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A PUBLICATION OF THE HOOVER INSTITUTION

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FALL SERIES, ISSUE 418

A Letter from the Conveners

Sharp changes are afoot throughout the globe. Demographics are shifting, technology is advancing at unprecedented rates, and these changes are being felt everywhere.

How should we develop strategies to deal with this emerging new world? We can begin by understanding it.

First, there is the changing composition of the world population, which will have a profound impact on societies. Developed countries are experiencing falling fertility and increasing life expectancy. As working-age populations shrink and pensions and care costs for the elderly rise, it becomes harder for governments to afford other productive investments.

At the same time, high fertility rates in Africa and South Asia are causing both working-age and total populations to grow, but that growth outpaces economic performance. And alongside a changing climate, these parts of the world already face growing impacts from natural disasters, human and agricultural diseases, and other resource constraints.

Taken together, we are seeing a global movement of peoples, matching the transformative movement of goods and of capital in recent decades—and encouraging a populist turn in world politics.

Second is automation and artificial intelligence. In the last century, machines performed as instructed, and that "third industrial revolution" completely changed patterns of work, notably in manufacturing. But machines can now be designed to learn from experience, by trial and error. Technology will improve productivity, but workplace disruption will accelerate—felt not only by call center responders and truck drivers but also by accountants, by radiologists and lawyers, even by computer programmers.

All history displays this process of change. What is different today is the speed. In the early 20th century, American farm workers fell from half the population to less than five percent alongside the mechanization of agriculture. Our K-12 education systems helped to navigate this disruption by making sure the next generation could grow up capable of leaving the farm and becoming productive urban workers. With the speed of artificial intelligence, it's not just the children of displaced workers but the workers themselves who will need a fresh start.

Underlying the urgency of this task is the reality that there are now over 7 million "unfilled jobs" in America. Filling them and transitioning workers displaced by advancing technology to new jobs will test both education (particularly K-12, where the United States continues to fall behind) and flexibility of workers to pursue new occupations. Clearly, community colleges and similarly nimble institutions can help.

The third trend is fundamental change in the technological means of production, which allows goods to be produced near where they will be used and may unsettle the international order. More sophisticated use of robotics alongside human colleagues, plus additive manufacturing and unexpected changes in the distribution of energy supplies, have implications for our security and our economy as well as those of many other trade-oriented nations who may face a new and unexpected form of deglobalization.

This ability to produce customized goods in smaller quantities cheaply may, for example, lead to a gradual loss of cost-of-labor advantages. Today, 68 percent of Bangladeshi women work in sewing, and 4.5 million Vietnamese work in clothing production. Localized advanced manufacturing could block this traditional route to industrialization and economic development. Robots have been around for years, but robotics on a grand scale is just getting started: China today is the world's biggest buyer of robots but has only 68 per 10,000 workers; South Korea has 631.

These advances also diffuse military power. Ubiquitous sensors, inexpensive and autonomous drones, nanoexplosives, and cheaper access to space through microsatellites all empower smaller states and even individuals, closing the gap between incumbent powers like the United States and prospective challengers. The proliferation of low-cost, high-performance weaponry enabled by advances in navigation and additive manufacturing diminishes the once-paramount powers of conventional military assets like aircraft carriers and fighter jets. This is a new global challenge, and it threatens to undermine U.S. global military dominance, unless we can harness the new technologies to serve our own purposes. As we conduct ourselves throughout the world, we need to be cognizant

that our words and deeds are not revealed to be backed by empty threats. At the same time, we face the challenge of proliferation of nuclear weapons.

Finally, the information and communications revolution is making governance everywhere more difficult. An analogue is the introduction of the printing press: as the price of that technology declined by 99 percent, the volume grew exponentially. But that process took ten times longer in the 15th, 16th, and 17th centuries than we see today. Information is everywhere—some accurate, some inaccurate, such that entire categories of news or intelligence appear less trustworthy. The "population" of Facebook now exceeds the population of the largest nation state. We have ceaseless and instantaneous communication to everybody, anybody, at any time. These tools can be used to enlighten, and they can also be used to distort, intimidate, divide, and oppress.

On the one hand, autocrats increasingly are empowered by this electronic revolution, enabled to manipulate technologies to solidify their rule in ways far beyond their fondest dreams in times past. Yet individuals can now reach others with similar concerns around the earth. People can easily discover what is going on, organize around it, and take collective action.

At present, many countries seek to govern over diversity by attempting to suppress it, which exacerbates the problem by reducing trust in institutions. Elsewhere we see governments unable to lead, trapped in short-term reactions to the vocal interests that most effectively capture democratic infrastructures. Both approaches are untenable. The problem of governing over diversity has taken on new dimensions.

The good news is that the United States is remarkably well-positioned to ride this wave of change if we are careful and deliberate about it. Meanwhile, other countries will face these common challenges in their own way, shaped by their own capabilities and vulnerabilities. Many of the world's strongest nations today—our allies and otherwise—will struggle more than we will. The more we can understand other countries' situations, the stronger our foundation for constructive international engagement.

This is why we have set off on this new project on Governance in an Emerging New World. Our friend Senator Sam Nunn has said that we've got to have a balance between optimism about what we can do with technology and realism about the dark side. So we aim to understand these changes and inform strategies that both address the challenges and take advantage of the opportunities afforded by these transformations.

To do so, we are convening a series of papers and meetings examining how these technological, demographic, and societal changes are affecting the United States (our democracy, our economy, and our national security) and countries and regions around the world, including Russia, China, Latin America, Africa, and Europe.

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Foreign policy starts in the neighborhood. The three papers included in this volume take on the challenge of trying to understand the changing Latin American landscape through the lens of underlying demographic and technological trends. And they suggest new insights for how the United States may usefully engage in the region as it navigates similar forces of history. On demographics, workforces in Mexico, Central America, and South America continue to expand, for many countries at rates well above the global average. But changes are underway, with the current rate of workforce expansion in Mexico, for example, already half what it was 20 years ago, and trending towards no growth by mid-century. What will be the domestic labor, governance, and international migration implications of this dramatic break with historical norms? In our first paper, Victor García Guerrero, Silvia Giorguli-Saucedo, and Claudia Masferrer of El Colegio de México in Mexico City (COLMEX) update their previous report on the demographic and migration histories of Mexico and the Northern Triangle of Central America ("A Migration System in the Making," 2016). Their new essay observes how population dynamics point to Mexico stabilizing as a net-neutral international migration country, but also to continued or even rising rates of youth emigration from Central America through Mexico towards the United States given poor conditions in the region. Responding to this change will mean new policy choices for our southern neighbor.

Our next paper takes on this very issue of Central American living conditions. Former Guatemalan minister of the economy and of public finance Richard Aitkenhead and technology entrepreneur Benjamin Sywulka look at the specific conditions of Central American counties to ask what opportunities 21st century technologies may offer in this region of generally weak governments, poor institutions, and underdeveloped labor markets. They argue

that digital mobile platforms that efficiently connect workers to those demanding goods and services offer the chance to leapfrog institutional development, broaden labor participation, and reduce the informal sector. It is an optimistic vision of how a region that is not at the forefront of underlying technological advances may nonetheless be able to adapt these tools to local circumstances, with dramatic impact. We hope that creative efforts such as these to use new technologies to overcome the stubborn working and living conditions of the people of Central America, particularly the troubled Northern Triangle, can be successful.

This volume concludes with a piece by Hoover visiting fellow and Chilean politician Ernesto Silva's observations on the historical roots of and current trends in governance of Latin America, particularly South American states. Silva decries the tendency for electorates to fall back on "strong man" *caudillos* over sustainable institutional reform and development, and he wonders how a growing, politically-moderate consuming middle class across many Latin American countries will intersect with the dramatic adoption of digital communications and social media, which offer a direct connection from politician to citizen. Can these tools be used to improve governance, and lead to economic growth and better living conditions, or will they be limited to popular appeals during elections?

The authors came together in December 2018 for a roundtable at the Hoover Institution to discuss their ideas, to challenge each other's perspectives, and to carry that conversation to the broader Stanford University and Silicon Valley community. We conclude this examination of Latin America in an emerging world with summary observations of that discussion, prepared by us and Hoover research analysts David Fedor and James Cunningham. We wish to extend our thanks to our colleagues at the Hoover Institution who have worked to support this project, particularly to Shana Farley and Rachel Moltz for the creation of this booklet.

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Emerging Demographic Challenges and Persistent Trends in Mexico and the Northern Triangle of Central America

By Víctor M. García Guerrero, Silvia Giorguli-Saucedo, and Claudia Masferrer

Introduction

Population dynamics, often conceived only by looking at its size or volume, has defined opportunities and challenges throughout history. However, the evolution and changes of the demographic components of a population (fertility, mortality, and migration) are key for understanding the nature of these challenges and opportunities. In this document we analyze past and future demographic dynamics of the countries of the Northern Triangle of Central America (Guatemala, El Salvador and Honduras) and Mexico, the Latin American country of North America. Together, these four countries define an important social and political region, although they are not free of differences. Located at a key geographic position, Mexico has had an ambiguous identity, both as a North American and Latin American country, whereas the Northern Triangle countries have a longer history of shared cultural identity as Central American countries.

The four countries of this study differ in population size and economic development. History and geography have defined much of their current state. Political instability, violence, civil wars and *coup d'états* during the 1980s and 1990s in Central America defined current socioeconomic and political conditions with scars felt still today. More recently, the *coup d'etat* in Honduras in 2009 created a complex socio-political environment. Hurricanes (e.g. Mitch in 1998, Stan in 2005), earthquakes, and other environmental shocks also affected the NTCA countries and had health, economic, and social effects. Mexico, the richest country of the four, went through an earlier urbanization and industrialization process and, although there is diversity within the territory, economic development is higher than its southern neighbors.

What demographic trends suggest is that the four countries have experienced a rapid change driven by the decline of fertility. Moreover, they suggest that they will face challenges related to an aging society in the near future. Different from the experience of more developed countries, there are paradoxes along the process. For example, for the young population (15 to 29 years of age) the high prevalence of teenage pregnancies and the high risk of death—especially for men—illustrate the uncertainty they face when entering the adult life and anticipate adverse conditions later in their lives. At the same time, international migration seems to be no longer an option for the youth in Mexico but remains high for El Salvador, Honduras and Guatemala. The demographic data presented in this paper suggest stable trends in population dynamics for the near future for the four countries. However, these factors, along with prevailing inequality and the climate of persistent violence in the region, will determine the interaction of population dynamics with broader social change and the possible improvement of the living conditions and welfare of the population.

An Overview of Population Size and the Components of the Demographic Change in Mexico and NTCA

Population Size, Change, and Age-Structure

With a population of 168 million in 1950, Latin America represented 6.6% of the total world population, whereas in 2015 it represented 8.5% of the world's population, with a total of 664 million. It is expected that by 2050 such share will drop to 7.9% with 779 million people. In 2015, one out of five Latin Americans lived in Mexico. Although this share is not expected to change by 2050, the Mexican population is expected to increase from 125 million to 164 million between 2015 and 2050. Interestingly, by this year, Mexico will have the same population size that Latin America had 100 years ago.

Putting numbers in context, in 2015, the total population size of the three NTCA countries was 31 million (Figure 1). This is less than one quarter of the Mexican population. Moreover, in 2015 the whole population of Central America, considering the NTCA countries along with Nicaragua, Costa Rica, Panamá and Belize, reached 46 million, and represented 7% of the Latin American population. With 6 million in 2015, El Salvador is the smallest NTCA country, followed by Honduras with 9 million and Guatemala with 16 million. By 2050, it is expected that these populations

will increase to 7, 13, and 27, respectively. In addition to being the smallest country, El Salvador is the one with the smallest growth rate (below 1%) since the mid-1990s and will be zero by 2050. On the other hand, Guatemala's growth rate is the fastest since 2005. Mexico had a fast increase in the 1960s with 3.1% but has declined to 1.2% in 2015, and is expected to decrease further. (See Figure 1)[1]

Another demographic dimension that needs to be analyzed jointly with population size is population structure. It refers to the sex and age distribution at a certain period of time and allows us to determine the sex balance by age and the stage of the aging process of a population at a given time. It is also useful to anticipate needs of specific age groups and to plan accordingly. Figure 2 shows the dynamics of age-structure for the four countries analyzed for the years 2015, 2030, and 2050. (See Figure 2)[2]

All countries are going through an aging process. However, Guatemala is the country with the youngest population today and in the coming years, followed by Honduras, Mexico, and El Salvador. Except for Guatemala, the other three countries are at the beginning of the aging process: they show an incipient reduction in the young-age groups in 2015. In 35 years (between 2015 and 2050), the population of 15 years and younger will be reduced by 13%, 20%, and 30% for Honduras, Mexico, and El Salvador, respectively. In contrast, in Guatemala this young-age group will still increase 3% in the 2015-2050 period.

Looking at this reduction in the youngest group only, it would seem that El Salvador is aging faster than the other countries. However, analyzing the change in the elderly population (aged 65 years and older) in each country, data show an increase of 3%, 3.4%, 3% and 1.3% in Guatemala, Honduras, Mexico, and El Salvador, respectively. Therefore, putting these two pieces together comparing young and old populations allows us to understand better the aging process. By 2050, there will be 110 people aged over 65 per hundred children 15 years old and younger in Mexico, whereas this is expected to be 94, 68, and 48 in Guatemala, Honduras, and El Salvador respectively. Thus, the old age dependency ratio suggests that Mexico will age faster than the other countries in the next 35 years. Moreover, the Salvadoran case shows an interesting example of how civil war scars have long-effects in sex-age structure: there is a gender imbalance with more women than men that carries over time, concentrated in those aged 50 and older in 2050.

Fertility

Since the 1950s, most Latin American countries have shown a downward trend in birthrates, together with a sustained increase in life expectancy at birth, although at different rates. The four countries that we analyze are not the exception. The total fertility rates (TFRs) of these countries are converging to the Latin American TFR (Figure 3). In 2015, El Salvador had the lowest total fertility rate[3] (TFR), very close to the rest of Latin America (both equal to 2.0) and slightly lower than Mexico (2.1). In fact, TFR at El Salvador is below replacement since 2005. Honduras has a lower TFR than Guatemala since 1980.

Although we see this convergence, the explanations for fertility decline differ between countries. For example, fertility decreased in the United States, Canada and other developed countries throughout the second half of the 20th century as the result of increasing secularization and female labor force participation. In Mexico, however, this was driven by policies in the 1970s that explicitly were designed to control population growth (García Guerrero, 2014). In the NTCA countries, along with the intervention of international organizations, nongovernmental organizations (NGOs) provided free birth control and family planning information campaigns that effectively reduced fertility. By 2050, the four countries will have fertility rates below replacement level required to sustain population growth.

The rapid decrease in fertility in the four countries anticipates less demographic pressure to provide health, education, and other services to the whole population in the near future. Nonetheless, there are two pending issues that demand urgent attention. According to the prevailing socioeconomic inequality, there remain large disparities in fertility trends within the countries. For example, fertility rates and the unattended demand for contraceptives have decreased less rapidly and remain high among rural areas and indigenous populations (ECLAC-CELADE, 2014). Secondly, in spite of the changes mentioned above, the four countries show high levels of teenage fertility (PAHO-UNFPA-UNICEF, 2018; Rodriguez, 2017 and 2004). In fact, the age at first birth has stayed almost constant in time, suggesting that, differently from the experience of other countries, the decrease in fertility is not related to a delay in marriage and the arrival of the first child (Zavala and Páez, 2013; Menkes and Suárez, 2013). (See Figure 3)[4]

Mortality

Health has been improving in Latin America since the 1950s when health systems were created. Despite civil wars, dictatorships, and violence, the increase in life expectancy at birth[5] (LE) has continued. Between 1950 and 2015, the four countries increased their male and female LE around 30 years (Figure 4). Guatemala, Honduras, and El Salvador increased their female LE more than 30 years, slightly more than Mexico with an increase of 27 years. For the case of male LE, the increase in the NTCA was lower than for females: male LE increased more than 30 years in Honduras, whereas in the other countries

it did so by 27 years. Mexico had the lowest increases because it started with higher LE than the other countries. In general, this is the case for countries that transition from high mortality rates from infectious diseases to lower mortality rates driven by chronic-degenerative diseases. For example, more developed countries started in 1950 with a female LE of 67 years and male LE of 62 years, reaching in 2015 a female LE of 81 years and male LE of 75 years, such that the increases in female and male LE were 14 and 13 years; a smaller increase than Mexico and the NTCA countries.

Projections suggest that female and male LE will increase between 2015 and 2050, around 6 and 8 years, respectively. The country with the highest LE for men and women is Mexico. This is true since the 1950s and is expected to continue in the future. The main cause of this improvement in survivorship in the region is driven by the reduction of infant mortality. In 1950, there were around 128 deaths of newborn children per thousand births in Latin America. In Mexico, 121 deaths of newborn per thousand births occurred in the same year; lower levels than in Guatemala, Honduras, and El Salvador where these infant mortality rates[6] (IMR) were 168, 169, and 150. These figures changed dramatically by 2015. Mexico reported an IMR of 16, Guatemala of 22, Honduras 24, and El Salvador 14. Therefore, El Salvador had the fastest decline of infant mortality since 1950, (around 90%), although the rest of the countries also had a significant decrease of around 86%. By 2050, it is expected that Mexico will have an IMR close to the Latin American average (7), El Salvador will have an IMR below the Latin American average (6) and Honduras and Guatemala will remain with the higher IMRs than the average (10 and 8, respectively). Although the progress in infant mortality has been large, the four countries are still lagging behind compared to other countries in Latin America and in 2050 they will not have reached yet the levels of infant mortality of countries such as Japan, Finland and Italy, who have today IMRs below 4. This fact illustrates that the four countries are at least three decades behind compared to the progress reported in other regions in the world. (See Figure 4)[7]

In addition, there are two unusual changes in the mortality trends. First, El Salvador showed a stagnation of its male LE between 1975 and 1985 possibly due to the civil war and violence. Second, Honduras showed a faster increase of male and female LEs than the rest of the countries before 2000, but it suddenly slowed down after 2005. During the 1990s, Honduras' male LE was higher than the Latin American average.

Another factor influencing mortality, especially among men, in the four countries are homicides due to violence, especially drug and gang-related violence. According to UN data, the rate at which Mexican LE has been historically increasing (Figure 4) changed in 2005 but still remained growing and above the Latin American average. However, other studies have shown that Mexican male and female LE has stagnated and, for men, has actually decreased since 2006. This effect is attributed to the increase of homicides related with organized crime driven by the war on drugs initiated by President Calderón in 2007 (Canudas-Romo, García-Guerrero and Echarri, 2014, Canudas-Romo et al, 2016 and Aburto et al 2017). If this is found for Mexico, we expect similar effects of violence on the LE for the other NTCA countries where homicide rates have been higher and have changed more abruptly than in Mexico over time (see Figure 5)[8], particularly since 2000 (Williams, 2016).

Violence and insecurity do not impact everyone alike. Young men (between 15 and 29 years of age) show the highest rates of deaths due to homicides (Canudas-Romo, García-Guerrero and Echarri, 2014; Mendoza, 2018; Williams, 2016). Future gains in LE, especially for men, will be largely defined by how the four countries deal with violence and how effective they are in decreasing the risk of death due to homicides among their young populations.

International Migration

Mexico and the NTCA are considered emigration countries and have significant shares of their nationals living abroad, primarily in the United States. According to the 2017 revision of the United Nations DESA International Migrant Stock Data, there were 15.6 million people from Mexico (12.6 million) and the NTCA (Guatemala 940,000, Honduras 630,000 and El Salvador 1.4 million) living in U.S. Together, they account for about a third of the foreign-born population in United States. From the perspective of the sending countries, this means that the population living abroad represents 10% of Mexico's population, 6% for Guatemala, 6.5% for Honduras and 22% for El Salvador. Migration is the most uncertain component of demographic dynamics and the hardest to measure. However, based on the projections of the expected population growth, different studies point out to a future deceleration of emigration from the four countries (Hanson and McIntosh, 2016).

Figure 6 shows the net migration—that is, the balance between the total number of people that emigrated and immigrated to/from a given country—for five-year periods from 1950 to 2050. The period with the highest emigration was notably between 1995 and 2005. Net migration in 2000-2005 represented a loss of almost 3 million people for Mexico, but the greatest losses of population for the NTCA occurred earlier: -402,000 in 1995–2000 for Guatemala, -326,000 in 1995–2000 for El Salvador, and -78,000 in 1990–1995 for Honduras. These periods of largest negative net migration coincide with periods of high emigration to the

United States due to political turmoil in Central America and labor-driven migration from Mexico.

For all countries, net migration changed dramatically in the 2005–2010 period. This was due to a huge decline in emigration from these countries, as well as an increase in return migration from the United States driven by economic hardship after the 2008-2009 Great Recession and an increase in deportations and immigration enforcement. For Mexico, the observed net migration of almost -3 million in 2000-2005 reduced itself almost ten times and reached less than -300,000 in the 2010–2015 period. In the coming future, levels around this net migration are expected to remain stable for Mexico. This means that total net migration of Mexico still will be dominated by emigration, and it will be close to 50,000 people per year, considering emigrants to all countries of the world as well as arrivals both from Mexican returnees and foreign-born immigrants.

In contrast with the ten-year period of low outmigration from Mexico, the NTCA still shows changes in the size of the flows. El Salvador is the NTCA country with the highest projected negative net migration, expected to change from -202,000 in 2015–2020 to -116,000 by 2045–2050. In the same periods, Guatemala and Honduras are expected to have a similar trend, changing from -46,000 to -34,000 and -14,000 to -2,000, respectively. When compared with recent data on migration flows from the NTCA to United States, we find divergent trends compared to Mexico. The flows have been increasing in the past three years and are close to the high levels observed before the Great Recession (D'Vera Cohn, Passel and Gonzalez-Barrera, 2017). However, when analyzed on a long-term perspective as the one shown in Figure 6, projections suggest stability and even a trend towards a decrease in the size of the outmigration flows.

The population in Latin America is highly mobile. We can trace dynamic intrarregional flows and persistent migration to Europe and to North America. The specificity of Mexico and the NTCA is the concentration in United States as the main destination of migrants. In 2017, more than 90% of the Mexican population living abroad was in the United States. For Guatemala, Honduras, and El Salvador, the percentages were 87.3%, 83%, and 89.3% respectively. To a certain extent, this fact has two advantages. It allows us to use U.S. sources—which are frequent and reliable—to get a broad and immediate sense of changes in migration. On the other hand, it may facilitate the search of alternatives towards a regular, ordered and documented migration.

One additional remark has to do with the changing profile of international migrants. While it remains as a very young population— most of the first-time migrants are between 15 and 29 years of age—they come more often from urban areas compared to twenty years ago, and their educational attainment is higher than prior generations. (See Figure 6)[9]

Finally, another specific characteristic of the region is the constant in-transit migration from the NTCA through Mexico. Beyond what the media points out every day, in transit migration through Mexico has been persistent for decades. Recent data suggest that we are close to reaching the peak high numbers of in transit migration observed in 2005, right before the Great Recession (Rodriguez, 2016), which coincides with the estimates on the increase in the flows to the United States (D'Vera Cohn et al, 2017). In addition, the flows show the increasing participation of women and children—accompanied and unaccompanied—which pose a challenge in terms of the orderly management of this type of migration. Aside from reasons related to labor opportunities and the demographic pressure, this flow is highly motivated by the political instability and the climate of violence in the NTCA. Thus, the motivation to leave their countries will persist as long as the political context at the national and local conditions remain without change.

Emerging Challenges in a Context of Persistent Inequalities

The four countries analyzed here were studied because they are part of the surrounding neighborhood of North America. Mexico is the only Latin American country of North America. Because of its geographic location, its size, and its socio-cultural ties, linked with both, United States and the rest of Latin America, it is a key piece in the region. The NTCA countries are, on the other hand, the first neighbors in the southern border of North America. The NTCA has been tied with Mexico and the United States in many ways. Moreover, they have been providing an important amount of labor force in many economic sectors, especially in the United States but also in Mexico.

Mexico and the NTCA, as many other of the countries in Latin America, have gone through a dramatic change in the population dynamics. Nobody challenges the success in the four countries in bringing down fertility and mortality rates, which occurred simultaneously with advancements in educational attainment and in other health indicators. Nonetheless, these changes occur parallel to the persistence of social, political and economic old inequalities and uncertainties. Thus, the four countries face at the same time the challenges of a new demographic dynamic and the persistence of social and economic gaps from the past.

Regarding the population dynamic, the four countries have entered, or will enter in the near future, and at different paces, the transition into aging societies. This is also true for Latin America as a region: its aging process will occur in a context of low fertility, a slowing down

in survivorship (by different reasons) and a dynamic international mobility. All this is happening at the same time that challenges to improve the wellbeing and respond to the needs of a young population have not been met yet but—on the contrary—persist. The youth faces very disadvantageous scenarios as shown by the prevalent high teenage fertility rate and the high mortality due to homicides for young men. These two facts will also determine how the young cohorts of today will age.

The demographic pressure for migration has been declining, but as long as the uncertainty and the context of political turmoil and unrest persist, young people from the NTCA will have an incentive to migrate mainly to the United States and, probably and to a less extent, to Mexico. We can expect that flows will remain at the levels that we are seeing today (as high as before the Great Recession). Interestingly and in contrast, outmigration from Mexico has stabilized and has a large component of documented migration that has increased since 2008, and includes citizens, legal residents and migrants with temporary work and study visas (Giorguli-Saucedo, García-Guerrero & Masferrer, 2016). In addition, and probably with a different face than before, family ties, social networks, and the economic relations between Mexico and the United States anticipate that mobility between both countries will be a constant in the short and medium term.

An example of the new face of Mexico-U.S. migration can be traced in the flows from the United States to Mexico. Migration to Mexico has transformed itself, due to changes in the characteristics and the number of Mexicans that are returning from the north, as well as the number of foreign-born immigrants, especially U.S. born children under age, who have arrived to Mexico since the Great Recession (Masferrer 2018). Still, Mexico can hardly be considered a country of immigration. Around 1 percent of the population is foreign-born, and this contrasts sharply with the 14 percent observed in the United States, or the 20% in Canada. For Central Americans, Mexico does not seem to be an option as a destination. It remains an open question whether this will change in the future, but—as long as the climate of violence prevails in the NTCA—Mexico should be prepared for an increasing number of arrivals, driven not only by economic factors but in search of refuge and asylum.

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[1] World Population Prospects, 2017 Revision.

[2] *Ibid.*

[3] The Total Fertility Rate (TFR) for a given year represents the number of children that would be born in average if women were subject to the age-specific fertility rates observed for that year.

[4] *Supra*, note 1.

[5] Number of expected years that a newborn would live if observed mortality conditions of its year of birth remain along its life.

[6] Number of infant deaths per 1,000 live births.

[7] *Supra*, note 1.

[8] *Supra*, note 1.

[9] *Supra*, note 1.

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Supporting Data

Figure 1. Total past and projected population, 1950-2050[1]

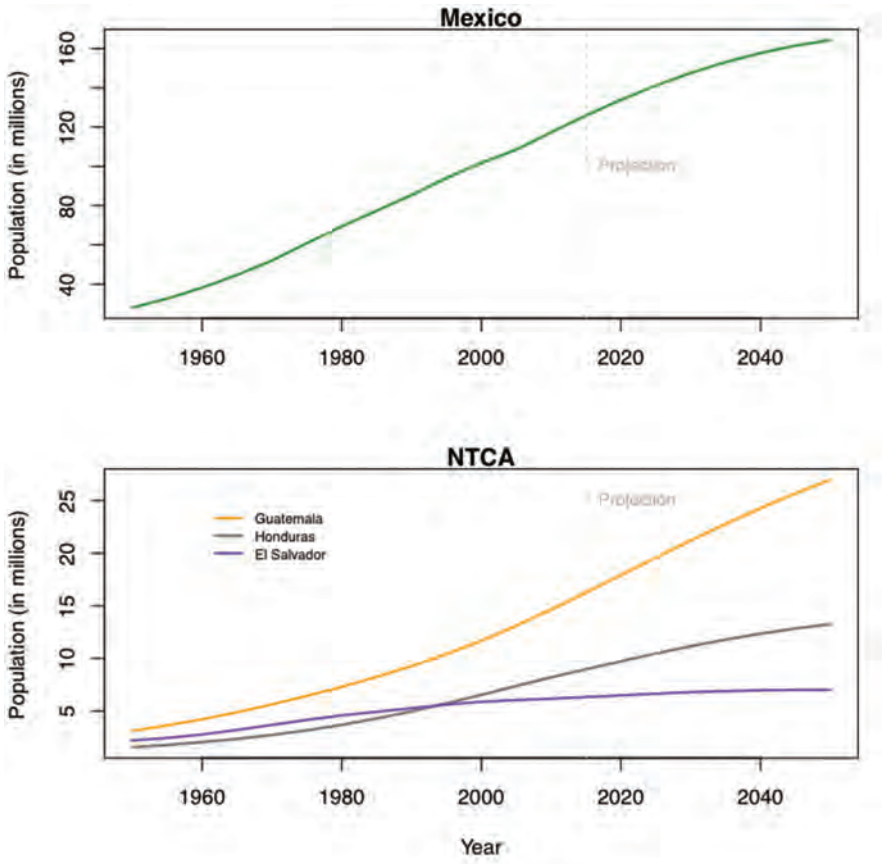


Figure 2. Past and projected population age-sex structure, 2015, 2030, 2050[2]

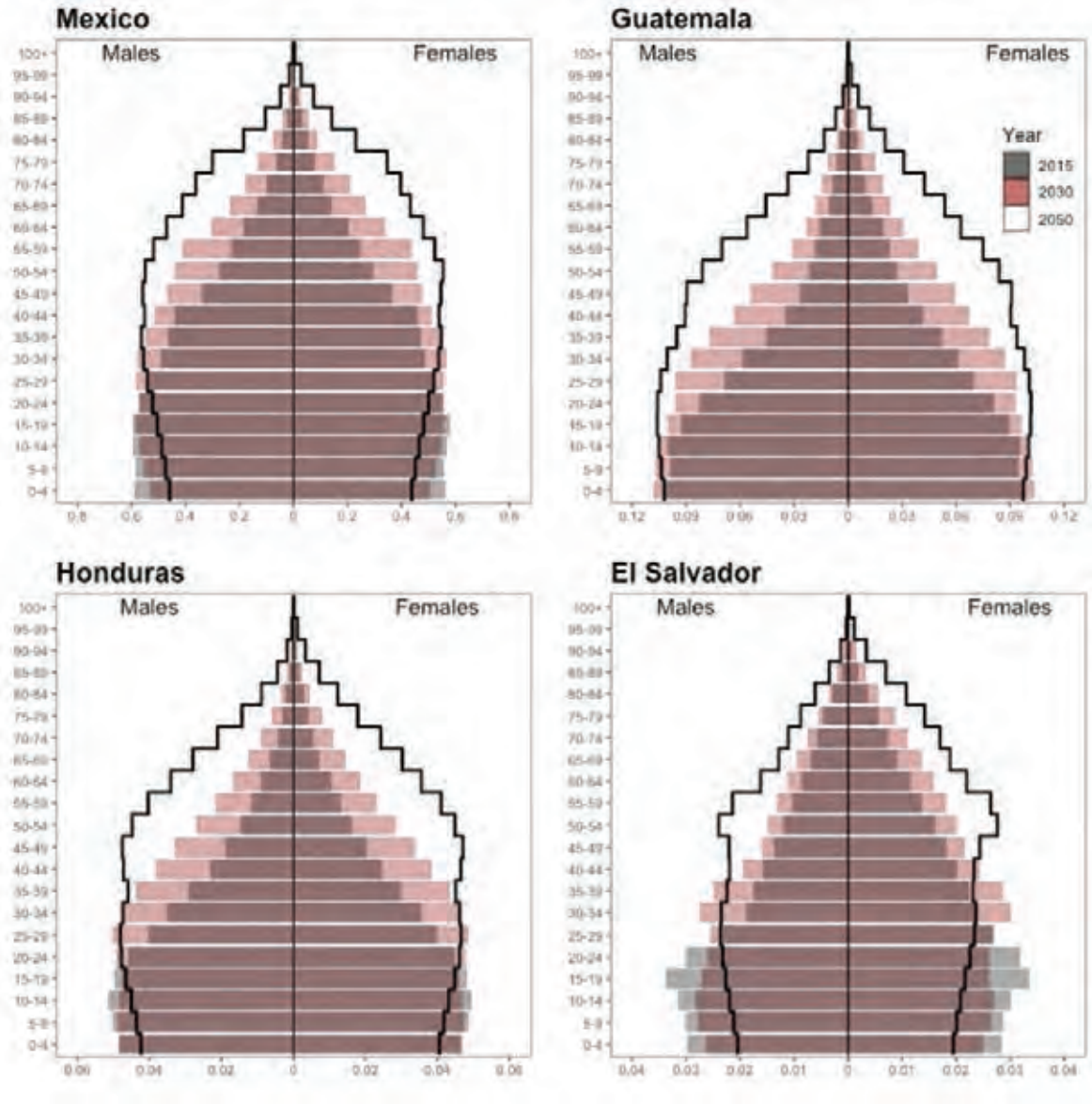


Figure 3. Past and projected total fertility rate, 1950-2050[4]

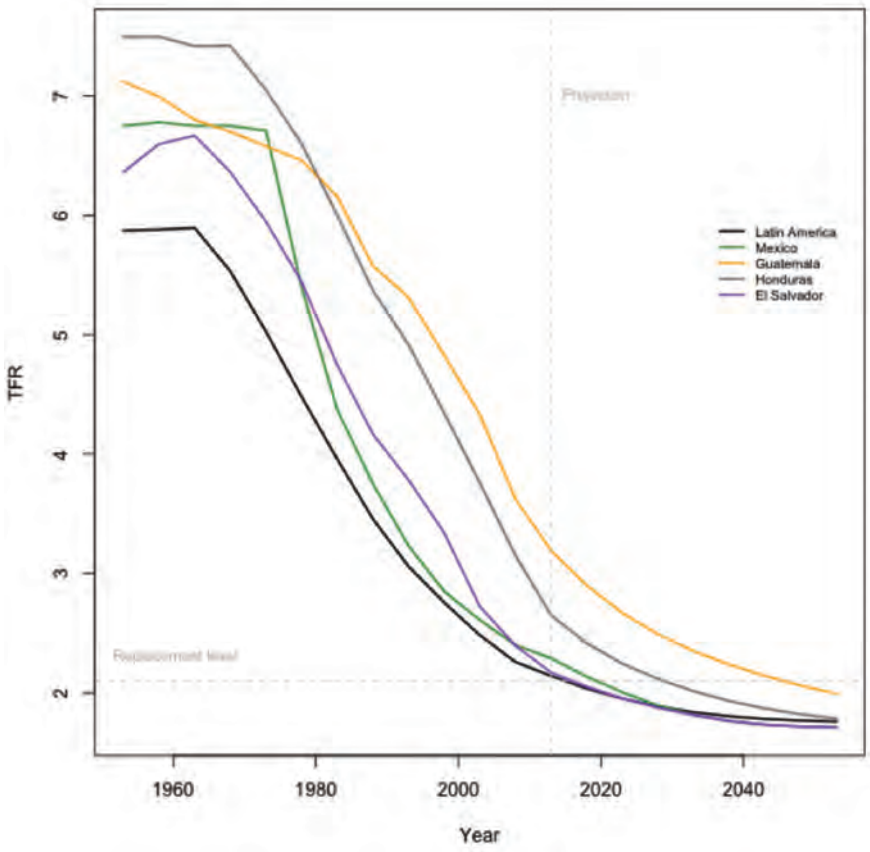


Figure 4. Past and projected life expectancy at birth, 1950-2050[7]

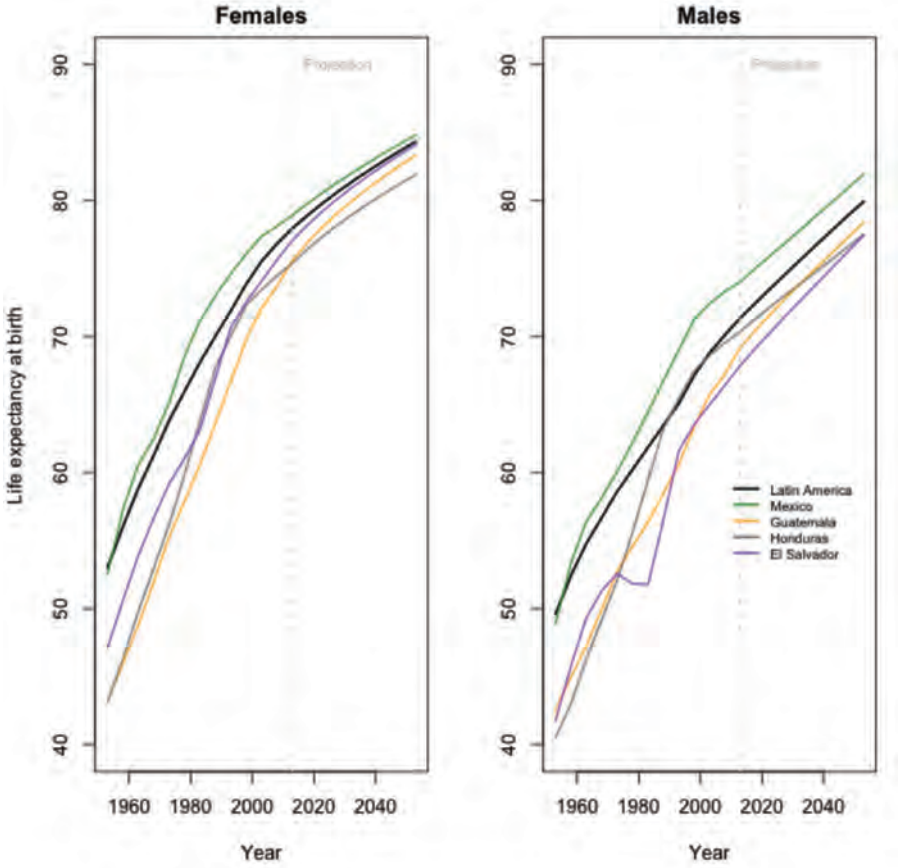


Figure 5. Intentional homicides per 100,000 people by sex, 2000-2015[8]

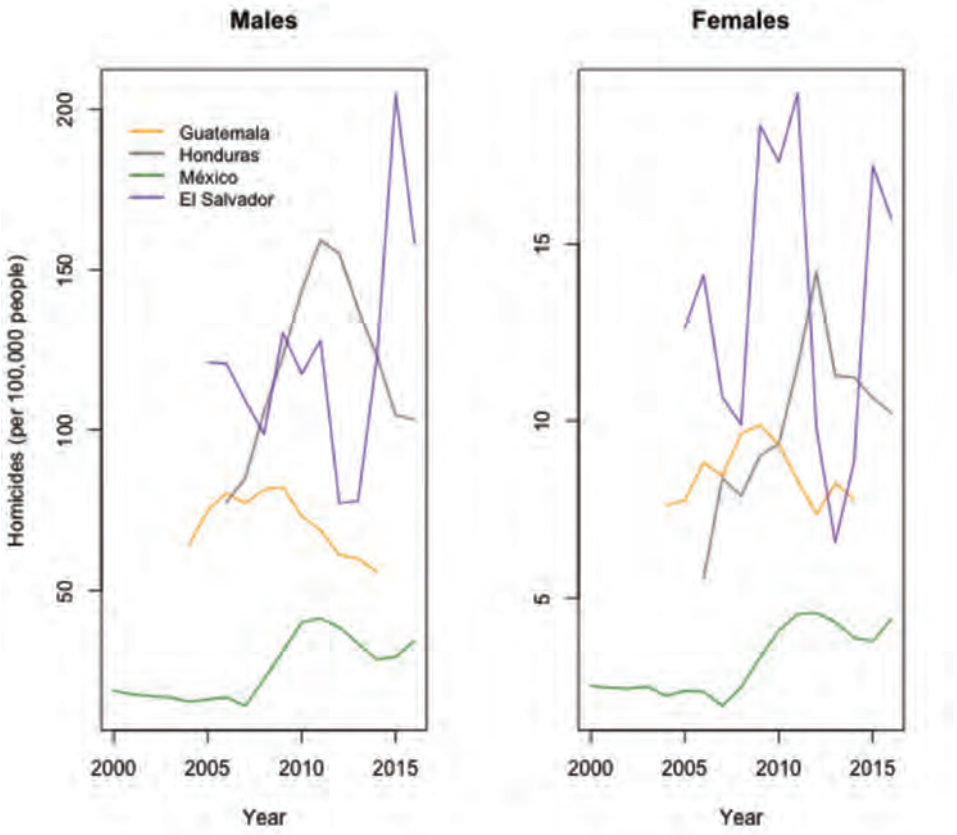
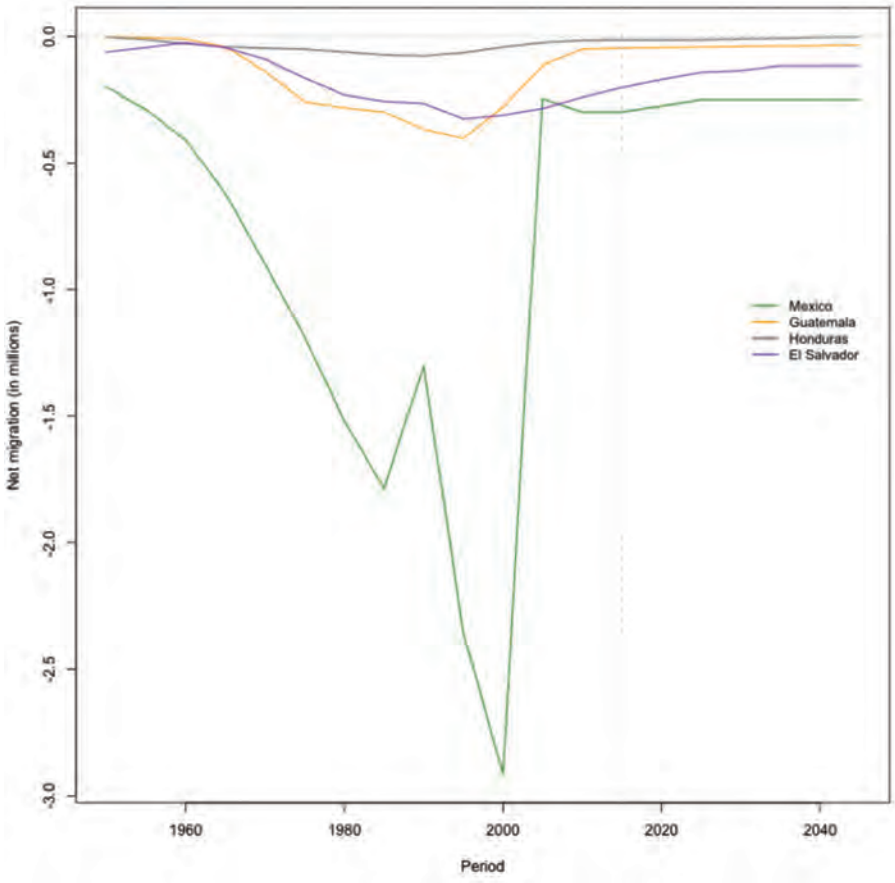


Figure 6. Past and projected net migration (in millions) for five-year periods, 1950-2050[9]



Digital Transformation in Central America: Marginalization or Empowerment?

By Richard Aitkenhead and Benjamin Sywulka

Abstract

As Digital Transformation reaches Central America, a strategic question arises: will it result in more marginalization, or in more empowerment? Writing from a practitioner's perspective building on decades of lessons learned, the authors propose design principles for the transition. The region is systemically unprepared for the global forces that are hitting it, and the ability of the average citizen to generate income will increasingly decrease. Job creation in conjunction with business sophistication will be necessary, but it is unlikely to come from foreign direct investment, big business, technology entrepreneurs, academia, or government because of their structural realities. The most effective job-creation mechanism in Central America over the next ten years will likely be Self-Employed Platform-Enabled Entrepreneur (SEPEE) businesses. Major players in the Central American ecosystem should participate in the SEPEE economy if they want to grow, but it will require innovative incentive alignment and long-term vision.

Introduction: The Central American context and the digital transformation dilemma

Central America sits between Mexico and Colombia and is comprised of Guatemala, Belize, Honduras, El Salvador, Nicaragua, Costa Rica, and Panama. The region has a combined population of 48 Million and a GDP of $258 Billion,[1] making the entire region comparable to Colombia in population and to Chile in GDP. As the region faces the uncertain future of digital transformation, it is worth noting a few key points. First, two thirds of the economy is informal.[2] Second, two thirds of the population never finishes High School.[3] Third, three quarters of High School graduates can't pass a standardized math test.[4] At first glance, it would appear that digital transformation is a sure recipe for further marginalization—low-skilled jobs being replaced by automation, low-educated populations being unable to add value in a digital economy and being forced to fight for survival for the few non-automatable low-skilled jobs available—decreasing average income, increasing crime, and increasing migration. The optimist may have an alternative prediction—emphasizing how connectivity, smartphones, and apps can democratize education, health, and income generation. This strategic dilemma between marginalization or empowerment should not be minimized or over-simplified. There are genuine threats to the survival of the region as we know it given how unprepared it is for the global digital economy, which operates by rules that are drastically different than the rules that have been in place in the region for the past 500 years. And yes, there are achievable opportunities to dramatically increase the quality of life of the region's citizens—but these cannot be achieved without understanding and navigating the complexity of the Central American reality. This paper explores design principles for building the new digital Central America—from a practitioner's perspective—taking into account decades of lessons learned from successes and failures in trying to help the region reach its potential.

Central America is systemically unprepared for the global forces that are hitting it, and the ability of the average citizen to generate income will increasingly decrease

We are beginning to see the impact of two major global forces on the Central American economy. The first is *Digital Transformation*—the convergence of Big Data, Artificial Intelligence, Robotics and Automation, 3D Printing, etc. The second is *Conscious Capitalism*—the emergence of purpose-driven companies and consumers who prioritize maximizing stakeholder value instead of focusing primarily on shareholder value.[5]

While for some industries being "digital," or "green," or "social" is more of a "nice-to-have," in others, these forces have implied revenue, profit, or job loss. In working with executives and boards of directors in the region, we have seen anecdotal evidence of the beginnings of these trends. Agricultural industries that are candidates for automation (large, flat extensions of monoculture crops, for example) are already facing increasing financial pressure to automate their production processes, leaving hundreds of thousands of seasonal workers without a job. Artificial Intelligence has begun to take over some jobs in the Contact Center industry—where intelligent chatbots replace humans in customer service. Agricultural and manufacturing exports to the United States and Europe are facing increasing pressure to have strong environmental

and social business models and/or certifications, as the buyers become more demanding and more "conscious." Large energy, mining, manufacturing, and infrastructure projects have been shut down, delayed, or put on hold due to protests, social media pressure, and legal actions against them—shifting the power dynamics and ground rules for investing.

The combination of these forces leads to a worrisome forecast of job creation in the region over the next ten years. Foreign direct investment is not likely to grow as much as is needed because of poor investment climates—security risks, poor infrastructure, and uncertain rule of law, among others. If there are new investments, the likelihood of automation being a critical part of the investment is very high—which means that job demand for low-skilled labor will continue to be low.

While historically the region grew by supplying the world with commodities, growth in this emerging digital, conscious economy will depend significantly on the region's ability to have more sophisticated businesses. This implies having more sophisticated infrastructure, more sophisticated production and commercialization processes, and more sophisticated talent. The challenge for the region is that closing the infrastructure, process, and education gaps is not something that can be done overnight.

There are tremendous systemic interdependencies that make the transition to the emerging digital and conscious economy extremely difficult. Let's begin with tax collection—the region has low tax collection (14% of GDP on average),[6] of which much of it goes to operating the government structures (75% of budgets), including the salaries of hundreds of thousands of government employees (38% of budgets).[7] This leaves little room for investment in infrastructure—and the little that is invested often is of poor quality given the corrupt schemes by which the contracts are awarded. The lack of road, port, and airport infrastructure in turn increases operating costs for businesses, but also for the health and education systems. With tight operating budgets, basic health and education services are poor both in quality and coverage. The combination of needing to contribute to the family's income generation activities (13% of 7 to 14 year-olds are working),[8] poor road and school infrastructure, learning difficulties due to chronic malnutrition, and limited access to high-quality teachers results in a region where one third of the population never finishes primary school,[9] and two thirds never finish secondary school. Of the one third that does finish secondary school, less than a quarter can pass standardized math tests, and less than 11% go on to pursue a University degree (only 6% in the northern countries of the region).[10] This leaves most people with no choice but to work in low-skilled jobs, which in the northern Central American economies that are 73% informal[11] entails earning between 35% and 90% of minimum wage,[12] And to close the vicious cycle, none of those informal businesses pays taxes, which brings us back to the low tax collection with which we started.

As the digital and conscious economy demands more sophisticated businesses, there will be a huge shortage of talent with the minimum competencies necessary to be employable, and a huge shortage of job openings for low-skilled labor.

Job creation in conjunction with business sophistication will be necessary, but it is unlikely to come from FDI, big business, tech entrepreneurs, academia, or government.

The authors of this paper have been leading and facilitating investments and strategic efforts in the region for several decades, and in the last decade, have played key roles in Digital Transformation efforts in large businesses, government, academia, organized private sector, and civil society. What follows is a practitioner's perspective on strategic approaches for the region over the next ten years, based on anecdotal learnings of enablers and barriers that have been identified working intimately with many stakeholders on these exact issues.

Foreign Direct Investment: The investment climate is poor

One the main mechanisms used historically for creating jobs is Foreign Direct investment. FDI in the region is $12 Billion (5% of GDP).[13] FDI can be a good mechanism for creating jobs in the digital economy, as foreign investors introduce new technologies into the ecosystem, and over time the capabilities and skillsets remain inside the regional economy. FDI growth, however, requires several critical elements: rule of law, infrastructure, available talent, and ideally tax incentives. From an investment climate point of view, the region's average score is 59 points (4.1 out of 7).[14] with the most common barriers to competitiveness being corruption, inefficient government and bureaucracy, inadequate infrastructure, crime and theft, tax rates, and inadequately educated workforce. Attracting call-center investments, for example, has been a big priority for the region, and has had a very positive impact. But expanding the investments beyond their current capacity will require major efforts in improving infrastructure, revising wage laws and tax laws, and increasing the talent pool with English and technical skills. These changes require major government commitment, and it has been difficult to move forward on many initiatives that could catalyze more FDI. With the exception of Panama and Costa Rica, Central American governments have had a hard time aligning their stakeholders around significant FDI efforts. In addition to this, political polarization—bringing back deep-seeded fears on both sides of the ideological spectrum—has risen to destabilizing rates in Guatemala, Honduras, El Salvador,

and Nicaragua—and the polarization is likely to continue for the next 3-5 years—which significantly detracts long-term investments and fosters capital flight and migration. In this context, FDI is unlikely to be the main mechanism of job creation in the digital economy.

Medium and Large Businesses: The family-owned businesses are risk averse

A second source of job creation would be growth of the medium and large businesses. From a corporate strategy perspective, these businesses can grow inorganically and organically. Inorganic growth through M&As is likely to continue as larger players consolidate in the region. But this type of growth doesn't necessarily lead to job creation, as the consolidation process often focuses on optimizing workforces—although the good news is that these mergers do tend to increase best practices and technology adoption. Organic growth can come from top-line and bottom-line growth. From a Digital Transformation perspective, companies can and should incorporate "digital" into their growth strategies in two major ways. The first is to digitize their current business—this implies incorporating digital technologies, mindsets, and processes that increase efficiencies (bottom-line impact) and go-to-market abilities (top-line impact). The second is to build new digitally-enabled business models—where entirely new value chains are created that eventually become the new rules of the game for the industry.

Before making predictions on the ability of medium and large businesses to sophisticate their businesses and create new jobs in the digital economy, it is important to understand the underlying structural realities of Central American businesses. The vast majority of the Central American businesses are family-owned (the Latin American average is 85%;[15] Central America's is probably higher). This has two major implications—the first is that the financial return model tends to be dividend-driven, not capital-gain driven. Medium and large businesses aren't usually looking for exits; they are looking for steady dividends to maintain the living standards of shareholders. The second is that as the companies are privately owned, there is no secondary market for shares, and therefore no pressure to have robust innovation pipelines that could drive up share prices. The impact of these structural realities is that investment decisions tend to gravitate towards lower-risk, shorter-term return opportunities.

Bringing this home to investments in digital transformation—companies tend to wait until technologies have been de-risked, best-practices have been developed, and business cases with near-term returns can be easily made. This works well for many "digitizing the current business" initiatives, because early adopters in other geographies have proven that the technologies add value and the investments fit the "copy/paste" strategic profile of the companies. In terms of job creation, this implies that many low-skilled jobs will be replaced by technologies in the coming decade, and a whole new pool of jobs will be created in skillsets where there is virtually no supply—data scientists, innovation managers, robotics engineers, etc. The profile does not work so well for "building new digital business models" initiatives, because these entail a much higher risk, much more experimentation to find product/market fit, and much more energy to educate a non-digital market before adoption even becomes an option. While there are some exceptions, particularly among telecom companies, management structures and incentives are rarely aligned with developing these types of business models—and therefore the task of building these new digital businesses falls on the shoulders of technology entrepreneurs.

Technology Entrepreneurs: Their ecosystem is weak

The challenge with these entrepreneurs is that they tend to operate in a systemic vacuum—where they don't have financing mechanisms like angel and venture capital, accelerators, and most importantly, a strong B2B network of partners and customers to support them and buy from them. As much as B2C technologies with millions of users appear to be icons of the digital age, it is the more boring B2B technologies that have actually fueled tremendous growth in digital ecosystems. Central American technology startups often face the challenge that there is no market for their innovations within Central America, because those who should be buying from them are late adopters, not early adopters. It has been easier for many entrepreneurs to find the support they need—both on the customer side and the investment side—outside of the region. There are of course exceptions, but as a rule, corporations prefer to buy proven technologies, and family offices (the principal source of investments for these kinds of businesses) prefer to invest in proven businesses that have already been de-risked—an ecosystem that is difficult to survive in as a tech entrepreneur. As a result, many tech entrepreneurs de-risk their own income generation by taking on full-time jobs at companies, and their emerging technologies never take off. Emerging technologies remain more akin to academic endeavors and "nice to have" projects, instead of strategic assets tied to business growth.

Academia: It's difficult for them to align to industry needs

Another key player in job creation is Academia, not so much because it creates employment, but because it creates employability. Universities try, of course, to link themselves more effectively to business growth strategies. They are acutely aware of changing industry needs, and that they must adapt to the demands of the future job markets. They face, however, two major challenges. The first is that student demand is often not aligned with

employer demand. In most cases, students must decide what they will study before enrolling in the University. Their perception of what a good career would be is often not aligned with the reality at the other end of the five-year journey. In addition, parents play a huge role in the decision of what to study—and since student loans are given on the basis of the parents' collateral—not on the basis of future incomes of the graduate, their opinions weigh heavily. The second challenge is that Universities have a very difficult time interacting with the private sector. Although some have made strides in setting up open innovation programs or trainee programs, there is very little collaboration between corporations and universities—whether for research and development, work-study programs, or simply calibrating degree offerings or degree requirements to industry needs. Universities are structurally designed to prioritize student needs and higher education regulations over industry needs—which creates a big gap between University outputs (both talent and research) and business requirements. This problem will escalate as businesses are forced to transition to the digital economy, and Universities will have a hard time restructuring their own business models to respond more effectively.

Government: Not Nimble and long-term enough

Governments around the world have been effective at creating jobs—even jobs in the digital economy—by a combination of tax incentives, subsidies, tailored regulations, trade agreements, credit offerings, infrastructure commitments, and capability building programs. Most of the Central American countries have used some of these mechanisms to attract investment. There are several challenges moving forward for the region's governments, however. One of them is the deep level of polarization in the region—which makes it very difficult to get enough alignment among stakeholders to create laws and implement programs that will actually create jobs in the digital economy. Even something as basic as trying to improve educational outcomes in public schools can be a tortuous journey that can cost public servants their job and their future (it's not uncommon for Ministers to leave their post with dozens of lawsuits against them—including a few penal ones—that they have to deal with for the next 10 to 20 years). One big opportunity for creating jobs in the medium-term that is Government-driven is increasing transportation and housing infrastructure. The region has an average of 2 meters of roads per inhabitant,[16] for example, and needs to move to 3–5 meters per inhabitant in the next decade (the United States has 20 meters of roads per inhabitant).[17] The reasons for the low buildout are many, but part of the problem is the dozens of laws and regulations (many contradict each other) that need to be complied with in order to build out new infrastructure. If Governments manage to align their stakeholders, they can rewrite the rules for infrastructure development in order to accelerate investment and job creation, but this is very difficult to do in the context of political polarization.

A second challenge is that even if laws are passed, public policies are signed into effect, and agreements are reached, governments rarely have the resources to build the needed sustainable ecosystems around those initiatives for them to have the desired impact. A country might be able to establish a Special Economic Zone, for example, but in order for that zone to work, a huge amount of energy, money, and coordination is required to supply the infrastructure, water, energy, telecom services, roads, ports, logistics services, public transport systems, raw materials and supply chain suppliers, general and administrative services suppliers, and of course the qualified talent to work in the companies that will be operating in the Special Economic Zone. Having qualified talent is in and of itself its own huge project that requires investing not only in massive training, reskilling, and formal education efforts, but also in housing, education, health, recreation, and transport infrastructure for the families of that talent. Building minimum viable ecosystems is tremendously difficult, and requires a lot of patience, trial and error, innovation and pivoting, and willingness to persevere beyond the originally planned budgets and timelines.

The digital transformation of the region will require a counter-intuitive mixture of long-term strategic commitments that can withstand multiple electoral cycles, and short-term tactical flexibility that allows for experimentation, pivoting and nimble execution. Central American governments typically do not have institutions that can operate under those design principles—making it difficult for them to spearhead the transformation process. They will likely talk as if they are the protagonists of the show, but in reality, do little more than give some opening words. The real work will be up to the shapers of the digital ecosystems.

The most effective job-creation mechanism in Central America over the next ten years will likely be Self-Employed Platform-Enabled Entrepreneur (SEPEE) businesses.

We have seen organizations make two major mistakes when it comes to digital transformation. The first is the assumption that digital transformation is about technology transformation—in reality it is more about people and culture transformation. The second mistake is the assumption that it's primarily about implementing new technologies, when in reality it's primarily about solving problems—particularly deep human needs that haven't been met yet. This is relevant to our discussion, because if we look at the challenge in the region from the perspective of gaps that need to be closed, it can

be overwhelming. If we look at it from the perspective of unmet human needs that can be solved more effectively, digital transformation brings hope.

While some analyses focus on the outliers—how the best of the best of the region do amazing things despite their contexts, or how the most disenfranchised have become even more disenfranchised as the world changes—this analysis prefers to focus on the average rather than the outliers—how can the digital transformation strategy of the region create a better quality of life for the average citizen?

Using this as a starting point for the strategy, the greatest unmet need of average citizens in the region is income generation. While national strategies in the region have focused on solving income generation through formal job creation, digital transformation opens up the door to solve income generation itself. As it is, in a context where two thirds of the businesses are informal, and 80% of new businesses never grow beyond 5 employees,[18] self-employment is already a widespread reality. What has become popular in developed economies—the "gig economy"—has been a reality for a long time in the region—in fact, it has been the only source of income for much of the population. The difference is that gig economy platforms today are open meritocracies in which people can expand their client base and pricing through rankings and reviews. The non-platform-enabled gig-economies of Central America are closed "arbitaucracies," where people have to succumb to pricing and market access restrictions imposed by brokers who arbitrage between supply and demand. These brokers connect marginalized people with buyers for their products and services, but their business models tend to be low-volume high-transaction-cost models, in contrast to digitally-enabled platforms that tend to use high-volume low-transaction-cost business models. The "offline" marketplaces for products and services in the region tend to be very inefficient, friends and family-based, geographically limited, non-transparent, and unfairly priced due to significant arbitrage. The online marketplaces are introducing transparency, trust, and efficiency into the transaction culture, and platforms like Uber and AirBnb are already generating income for thousands of people in the region.

There is a tremendous opportunity to empower the average Central American citizen to generate income through better platforms and marketplaces—but it is far more complex than "build it and they will come." There have been several utopian attempts to empower the disadvantaged through information tools, but the reality is that it takes a whole lot more than information to make the marketplaces more efficient. Efficient marketplaces tend have a lot of hidden scaffolding around them that make them work—some examples include Uber car lessors who make it possible for people without a car to become Uber drivers, digital marketing strategists that increase the likelihood of Amazon products being found by buyers, cleaning companies that take care of AirBnb rentals, training communities and tutorials for TaskRabbit taskers to learn new skills that allow them to earn better rates, and insurance policies for Turo (peer-to-peer car rental service) drivers. This scaffolding is exactly what is missing when trying to implement in Central America the digital platforms that have worked in other geographies.

Our experience has been that in addition to providing the platforms themselves, investments need to be made in the scaffolding as well. Starting a self-employed business in the informal economy can be painful, but the biggest barrier tends to be obtaining the credit to get started, the know-how of the business, and the suppliers. Moving from empirical business practices to digitally-enabled platform economies requires a whole new set of abilities and processes—from setting up bank accounts, receiving trainings and certifications, obtaining credit, acquiring licenses, registering legally for invoicing, and hiring an accountant to file taxes. Our experience is that without support in the "onboarding," it is very difficult for the average citizen to enroll and participate in these platforms. Yet, now, more than ever, there is a tremendous opportunity to shape these business ecosystems digitally in a way that creates income generation opportunities at scale for average citizens.

It is also important to note that platforms are not just digital marketplaces—there are several non-digital self-employment platforms that have worked very well in the region. These include catalog sales companies (mostly women selling to other women—cosmetics, clothes, and homegoods), productive linkage programs (supply chain incubation—used mostly in agriculture and handicraft exports), and micro-franchises (usually small retail shops—pharmacies, fast-food, mini-stores, etc.). These self-employment enabling platforms are generating income for hundreds of thousands of people in the region and still have a lot of room to grow. They are also ripe for digitalization—as onboarding, transaction, payment, and operating costs can be reduced significantly with emerging technologies.

Our hypothesis is that the best way to leverage digital transformation to increase wellbeing in Central America is by creating more Self-employed Platform-Enabled Entrepreneurs (SEPEEs). This requires investments in incubating proven business models, packaging them as a "business-in-a-box," developing robust and efficient onboarding processes so that average citizens can implement or enroll in de-risked self-employment businesses (this includes offering micro-credit and micro-leasing schemes), and offering robust technology platforms that enable operating the businesses efficiently

(including supply chain, procurement, commercialization and financial administration). The SEPEE model could be applied to hundreds of unmet needs in the region—bakeries, day-care centers, mini-stores, electrician services, plumber services, concrete floor pourers, clean water services, trash collection and recycling services, and the list goes on. At a scale of hundreds of thousands, there a lot of use cases and business cases for emerging technologies, and digital transformation becomes a much-needed enabler.

Major players in the Central American ecosystem should participate in the SEPEE economy if they want to grow, but it will require innovative incentive alignment and long-term vision.

The SEPEE economy can be a genuine win-win for everyone. Average citizens can increase their income generation options and gain the upside and flexibility of having their own business but do so in a way that reduces the risks and learning curves significantly. Government can increase tax collection as more and more informal empirical businesses transform into formal platform-enabled businesses. Technology companies and entrepreneurs can finally have strong B2B partners and customers in the region, where the scale is significant enough to build meaningful revenue. Academia can benefit by having a much larger customer base and testbed for research and development in emerging technologies. Medium and large companies can also benefit by packaging micro-franchises around their production and commercialization processes—creating distributed production systems and exclusive sales channels around their brands. And the population will benefit significantly by having more efficient business ecosystems, with more transparent pricing, lower transaction costs, and higher trust and accountability.

The challenge will be aligning the stakeholders in the region to shape the SEPEE economy. Many organizations will intend to lead it, but in the end the question is who will pay for it. Who should pay for the incubation of models? Who should pay for the scaffolding—particularly the training and onboarding costs of entrepreneurs? Who should pay for building the technology platforms and operating them? Our hypothesis is that each SEPEE business-in-a-box will require its own minimum viable ecosystem of partners—investment, credit, training, legal, accounting, technology, suppliers, go-to-market, branding, etc. The entrepreneurs or intrapreneurs in medium and large companies who manage to pull the partners together will be the ones who shape that particular SEPEE vertical.

From a strategic choice point of view, we do believe that major players can make feasible decisions that support the SEPEE movement. Governments have the opportunity to make changes that have a low political cost but a high citizen benefit. Part of the reason that governments have a hard time leading long-term strategic transformations is that ideological polarization and special interests drag them into a daily struggle for survival, so the best they can do is maintain basic rule of law, citizen safety and institutional functionality. Much needed reforms are often blocked because they are perceived to help the rich to the detriment of the poor, or vice versa. Reforms that enable SEPEEs, however, can transcend the left vs. right narrative, because they are by nature win-wins for both sides of the political spectrum. Tax reforms that lower and simplify taxes for small businesses—and collect taxes at the platform level instead of the individual business level—can significantly increase the tax base, without generating ideological antibodies. Labor reforms focused on self-employment and small businesses can significantly increase protection and formalization of the labor force—without necessarily encountering labor-union or big-business opposition. Resources allocated towards "entrepreneurship" are generally well received by all stakeholders in the countries, which would allow governments to fund trainings, certifications, financial instruments, innovation competitions and even streamline internal approval processes (registrations, permits, etc.) that cater to the self-employed and small-businesses—without encountering political opposition.

International Cooperation, multilateral organizations, and friendly governments can also play a critical role in this effort. The United States, for example, has a strong interest in preventing immigration from Central America. While it has already donated hundreds of millions of dollars in the region to improve education, health, and economic development, the funding could have a lot more impact if it were focused on SEPEE solutions—empowering the private sector to provide healthcare and education services through micro-franchises and Uber-like platforms, and then leveraging these private-sector capabilities to improve public-sector services (by using vouchers or public tenders, for example). One small step for the United States that would be a huge step for Central America would be designing a Digital Strategy for the region in conjunction with governments and the private sector—to implement existing global technology solutions in the region—helping Uber, AirBnb, TaskRabbit, Craigslist, eBay, Amazon, Google, Facebook, etc. set up operations in the region and making the necessary adaptations—but doing this as a strategic decision, instead of waiting for those companies to do it on their own when the conditions are right. Part of this strategy should also encompass digitizing as many government services as possible using existing world-class platforms that don´t need to be built—just configured—using global standards of privacy and service levels. And speaking of platforms, it is difficult for the digital world to run without

strong underlying physical platforms. Amazon needs a mail system, which needs good roads, ports, and airports, which need good electricity and internet access, which need good transport and backhaul systems—all of these are capital-intensive investments that somebody needs to make in order for Amazon to work. For reasons mentioned earlier, it is unrealistic to expect the region's governments to make those investments, which opens the door for International Financial Institutions to play a strong roll in structuring Public-Private Infrastructure projects, and in pushing for the reforms needed to enable them. Some countries and industries have had more success than others in doing this, but political polarization has again led to a standstill in many of these efforts. The key might be, again, to package these efforts in a SEPEE narrative—creating mechanisms for self-employed entrepreneurs to participate in building the infrastructure and make money that way, or even in owning stocks or bonds in infrastructure projects. SEPEEs can bring a sense of procedural justice into big-ticket, big-business efforts, minimizing opposition.

Medium to large companies should dedicate innovation teams to packaging micro-franchised production and micro-franchised commercialization models for their products and services and be willing to reduce margins in exchange for more sales volume—in order to compensate entrepreneur tax payments and scaffolding costs. Tech entrepreneurs should focus on solving real problems that average citizens have—like water access, health, education, nutrition, transportation, and protection, and supply B2B or P2P solutions that empower average citizens to provide solutions for other average citizens. Academia should focus on becoming an intricate backbone of the SEPEE economy—providing micro-degrees that graduate into SEPEE business-owners, focusing R&D efforts on providing solutions for SEPEE verticals, and packaging early childhood, primary, secondary, and technical education franchises that are tech-enabled and scalable to significantly increase educational performance in the region.

This last point is critical. The SEPEE economy should be designed not only to solve today's income generation problem but also to lay the foundations for the region's children to succeed in the global, digital, and conscious world. The Central American gig economy of today will likely focus on providing best-practices, efficiency, trust, and scale for basic services. But the aspiration should be that the children of today's SEPEE business owners should be the architects of the high-tech future of tomorrow—not just for the region, but for the world. SEPEEs are certainly not the only answer to the region's challenges in the coming decade, and SEPEEs alone can't solve the critical underlying infrastructure and government functionality problems—but we believe that a SEPEE strategy could be the catalyst for keeping the engine running and the car moving forward, while we redesign and build the motor we need to survive the road ahead.

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[1] Calculated from "Population," *The World Bank*, https://data.worldbank.org/indicator/SP.POP.TOTL?locations=GT-BZ-SV-HN-NI-CR-PA, and "GDP (current US$)," *The World Bank*, https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=GT-BZ-SV-HN-NI-CR-PA

[2] "La Economía Informal en Centroamérica y República Dominicana: Desarrollo Subregional y Estudios de Caso," *OLACD Observatorio Laboral — Organización Internacional del Trabajo (2013)*, https://www.ilo.org/wcmsp5/groups/public/—-americas/—-ro-lima/—-sro-san_jose/documents/publication/wcms_237269.pdf

[3] Calculated from "Educational attainment, at least completed upper secondary, population 25+, total (%) (cumulative)," *The World Bank*, https://data.worldbank.org/indicator/SE.SEC.CUAT.UP.ZS?locations=GT-BZ-SV-HN-NI-CR-PA

[4] Calculated from F. Javier Murillo, "Resultados de aprendizaje en America Latina a partir de las evaluaciones nacionales," *UNESCO/OREALC*, 2007, http://unesdoc.unesco.org/images/0015/001555/155567s.pdf. The data used is from 2007 to provide consistency in measurement across countries, and assumptions were made that pass-rates of graduates would be lower than those of 6th grade (HN and NI) and 10th grade. The reality is that the percentage has either stayed the same or gotten worse over time in several countries. Guatemala's mathematics pass-rate of graduates in 2017, for example, was 9.6% (https://datosabiertos.mineduc.gob.gt/dataset/52f11b39-e79e-4259-9952-c9e04193baab/resource/81d76d4c-a75e-4f8d-92a0-b379e711e5ae/download/db_establecimientos_graduandos2017.xlsx, Column AV- Var48)

[5] For more information read John Mackey, "Conscious Capitalism, With a New Preface by the Authors: Liberating the Heroic Spirit of Business," or visit https://www.consciouscapitalism.org

[6] Calculated from "Tax revenue (% of GDP)," *The World Bank*, https://data.worldbank.org/indicator/GC.TAX.TOTL.GD.ZS?locations=GT-BZ-SV-HN-NI-CR-PA

[7] Calculated from official government finance institutions in each country. Guatemala: http://www.minfin.gob.gt/images/downloads/presupuesto_presupuesto_ciudadano/presupuesto_ciudadano2016.pdf, Honduras: http://www.sefin.gob.hn/wp-content/uploads/2018/03/Presupuesto_Ciudadano_2018_HONDURAS.pdf, El Salvador: http://www.transparenciafiscal.gob.sv/downloads/pdf/DGP02000248_gc_sumario5-17.pdf, Nicaragua: http://legislacion.asamblea.gob.ni/Normaweb.nsf/4c9d05860ddef1c50625725e0051e506/0cd9f498f98945ff062582100060c1b3?OpenDocument, but news sources were needed to find ratios— https://www.elnuevodiario.com.ni/economia/442881-asamblea-nacional-aprueba-aumento-presupuesto-nica/, Costa Rica: https://www.hacienda.go.cr/docs/5228c10ee0c98_Folleto_Presupuesto_Nacional.pdf, Panama: http://www.mef.gob.pa/es/noticias/Documents/Presupuesto%20General%202018.pdf, Belize: http://www.mof.gov.bz/uploads/files/0nmnmacu.pdf.

[8] Calculated from "Children in employment, total (% of children ages 7-14)," The World Bank, https://data.worldbank.org/indicator/SL.TLF.0714.ZS?locations=GT-BZ-SV-HN-NI-CR-PA

[9] Calculated from "Educational attainment, at least completed primary, population 25+ years, total (%) (cumulative)," *The World Bank*, https://data.worldbank.org/indicator/SE.PRM.CUAT.ZS?locations=GT-BZ-SV-HN-NI-CR-PA

[10] Calculated from "Educational attainment, at least Bachelor's or equivalent, population 25+, total (%) (cumulative)," *The World Bank*, https://data.worldbank.org/indicator/SE.TER.CUAT.BA.ZS?locations=GT-BZ-SV-HN-NI-CR-PA

[11] "La Economía Informal en Centroamérica y República Dominicana: Desarrollo Subregional y Estudios de Caso," *OLACD Observatorio Laboral — Organización Internacional del Trabajo (2013)*, https://www.ilo.org/wcmsp5/groups/public/—americas/—ro-lima/—sro-san_jose/documents/publication/wcms_237269.pdf

[12] Calculated from multiple sources to estimate actual average wage vs. legal minimum wage. For minimum wage calculations, primary data from official sources was used if possible. In several cases official websites were down, so secondary news sources referencing official data were used. Guatemala: http://www.mintrabajo.gob.gt/index.php/salariominimo, Honduras: http://www.trabajo.gob.hn/tabla-de-salario-minimo-2018/ (site down, news articles used), El Salvador: http://www.mtps.gob.sv/avisos/salarios-minimos-2018/, NIcaragua: http://www.mitrab.gob.ni/bienvenido/documentos/acuerdos/Ac_Sal_Min_2013.pdf (site down, news articles used), Costa Rica: http://www.mtss.go.cr/temas-laborales/salarios/Documentos-Salarios/lista_ocupacion_2018.pdf (average semi-qualified worker wage was used), Panama: https://www.mitradel.gob.pa/salario-minimo/ (average small business wage was used), Belize: http://labour.gov.bz/index.php/en/2013-02-12-02-42-04#ancla6. For average income calculations, diverse studies and news sources were used. Ratios per country and sources of actual average income are as follows. Guatemala (50% to 70% ratio, depending on which study is used) : https://www.publinews.gt/gt/guatemala/2015/02/19/estudio-revela-cuanto-ganan-promedio-guatemaltecos-segun-escolaridad.html, Official National Statistics place the ratio closer to 70% https://www.ine.gob.gt/index.php/estadisticas/tema-indicadores, Honduras (35%): http://170.238.108.227/redhnd/2016/PDF/6.%20Cuadros%20de%20Ingresos, El Salvador (90% to 120% ratio, depending on studies): https://www.defensoria.gob.sv/wp-content/uploads/2017/12/monitoreo.pdf, Nicaragua (59%): http://www.inide.gob.ni/Emnv/Emnv14/EMNV%202014-2%20Febrero%202016.pdf, Costa Rica and Panama's average incomes are above 120% minimum wage. Costa Rica: http://www.inec.go.cr/sites/default/files/documetos-biblioteca-virtual/reempleocomparacioniiitri2018-04.xlsx, Panama: https://www.contraloria.gob.pa/inec/archivos/P6821441-27.pdf.

[13] Calculated from "Foreign direct investment, net inflows (BoP, current US$)," *The World Bank*, https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD?locations=GT-BZ-SV-HN-NI-CR-PA

[14] Calculated from "The Global Competitiveness Report," *World Economic Forum*, 2016-2017, http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf

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[17] Calculated from Bureau of Transportation Statistics, https://www.bts.gov/content/public-road-length-miles-ownership

[18] Calculated from the "Global Entrepreneurship Monitor" for Guatemala https://www.gemconsortium.org/country-profile/67, El Salvador https://www.gemconsortium.org/country-profile/59, Costa Rica https://www.gemconsortium.org/country-profile/53 and Panama https://www.gemconsortium.org/country-profile/96.

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Latin America: Opportunities and Challenges for the Governance of a Fragile Continent

By Ernesto Silva

Introduction

Facebook Live. That was the platform chosen by Jair Bolsonaro to issue his first statements after learning of his triumph in the presidential elections in Brazil in October 2018.[1] It was not a speech at the headquarters of his party or in a public place. It was not the television channels or the radio stations that intermediated in the communication with the citizens. More than 300,000 people saw their statements live, and within the hour there were more than two million people who had seen his eight-minutes long message, approximately, quickly registering nearly 350,000 comments and reactions. The elected president of the continent's largest country, who has 8.7 million followers on Facebook and 2.4 million followers on Twitter, chose social networks as a platform for his inaugural message. New technologies and platforms, but nevertheless a phenomenon already known: citizens supported a kind of "savior" or "solution" against the disenchantment with the ruling elites of recent years.

The fragility of institutions in Latin America continues to be a central challenge for governance. The dissatisfaction of citizens with their governments is channeled in many cases towards the search for "magical" or prompt solutions, which are usually conducted by caudillos—strongman-type leaders. This configures a scenario where the people (the leader), and not the institutions, are those who seek to respond to the problems that affect a country. The institutional environment is weak and vulnerable.

The amplification of the use of social networks and platforms in political activity has been a growing trend and has shown a more active and participatory citizenship in political processes. But this activation and participation has not implied – until now – relevant changes in the quality of the institutions. Therefore, and beyond the amplification of the use of social networks and platforms in political campaigns, how much is Latin America changing in the quality of its institutions? How are the opportunities that technology and information offer being seized to move faster into the future? How are new technologies influencing current and future governance?

When asking broader questions, the answers are more uncertain. Significant changes in the form of political and social interaction can be identified, changes in citizen control of political activity, but there is still no significant change in the quality of institutions and their capacity to bear sustainable progress over time. The institutions remain vulnerable to the caudillos and to populist offers to face the great pains of the continent.

Regarding the use of technologies to improve development and progress capabilities towards the future, the Latin American continent is a *follower* of what other countries in North America or Asia lead. It does not show leadership capacity or substantive innovation.

The way of making political campaigns has been influenced, indeed, by new technologies and social interaction platforms. The recent election in Brazil is an example of this, as is citizen participation and control of governments through the strength of social platforms and through new standards of transparency and accountability.[2]

Something similar happens with respect to consumers. The growth in the use of digital applications for everyday life has proven to be relevant, as can be seen in the growth in the use of applications such as Facebook, Twitter, Netflix, Uber, or Waze, just to mention a few. Similarly, access to fixed internet and fixed and mobile broadband has grown,[3] and the gap between Latin America and the OECD in these matters is lower than in other indicators of progress.[4]

But these advances in the adoption of technologies and innovation seem to move more slowly in two key areas. The first is the modernization of the state and governments to provide better services to its citizens taking advantage of new technologies and innovations. The second is the lack of innovation in the business models and productive strategies of the countries. Probably the common element of these lags is the weakness of political and social institutions in the continent.

An adequate understanding of the challenges of technologies for current and future governance requires

a review of other aspects of the Latin American evolution. The history of the continent is a story of slow but sustained economic progress, with significant achievements such as the reduction of poverty, the development of a growing middle class, and the concentration of more than 80% of the population in urban areas. But at the same time, political and institutional instability has become a constant that threatens the ability to move faster towards higher levels of development and welfare.

This document is organized as follows. To contextualize the analysis, the political and institutional evolution of the continent is briefly reviewed. Next, central aspects of the economic, fiscal, and quality performance of public spending are described. Then some of the impacts that this growth has had on the social evolution and the welfare of citizens are analyzed. Subsequently, and in line with the above, the importance that immigration and demographic changes are having in Latin America is discussed. Then, some of the opportunities and challenges that digital transformation presents for governance towards the future are described and analyzed. Next, the particular case of Chile is described. Finally, the conclusions are presented.

The Political and Institutional Context

Latin America and the Caribbean are at a moment of fragile stability. After centuries of uneasy and turbulent development, the continent is experiencing a mostly democratic wave, with the exceptions of Cuba and Venezuela and the uncertainties observed in Nicaragua and Bolivia. Something like that was very difficult to think about in 1978, for example, when only three countries in the region had properly democratic governments (Costa Rica, Colombia, and Venezuela).[5] Although there are many democratically elected presidents who have not been able to complete their mandates and have had to resign or be dismissed for various reasons, the reality is that the American continent is today a more democratic and freer continent than it was in the recent past.[6]

There is nothing to ensure, however, that the current situation of democratic majorities can be projected and stabilized towards the future. The American continent accounts in two centuries of more than 360 successful coups and many other failed attempts.[7] The refoundational spirit has dominated the political scene, and more than 250 constitutions have been approved in two centuries,[8] with an average of 13 constitutions per country, a figure much higher than that observed in Europe or North America.[9]

It has been very difficult to configure and consolidate the rule of law in the continent, in spite of a few exceptions.[10] The process of independence during the first third of the 19th century was a process of destruction of the colonial state, without the preparation or construction of an alternative model to offer governance and a future. The lack of institutional design and impersonal mechanisms led to the emergence of caudillos and individual leadership as a way to fill that gap. In this way, power is configured around the leader and not around the institutions.

When power and authority are configured in relation to the caudillos and not to the institutions, the principle of legality weakens or disappears. Therefore, in Latin American and the Caribbean (LAC) there have been many caudillos who have understood the state as a personal patrimony and have acted for their own interests rather than for general interests. The problem, evidently, is that there have been no institutional counterweights to avoid this abuse of power. Even this view of the state as patrimony has been manifested in the fact that the caudillos repeatedly seek to refound their states to adapt them to their own goals and purposes. Without a doubt, this has been a relevant source to explain the corruption phenomena that continue to be observed nowadays and that have led various leaders of the region to face charges of corruption in recent years.

Latin America today lives the paradox of having a majority of democratic nations that grow and progress, but at the same time it has diverse places on the continent – even in those same democracies – where the rule of law does not operate. There are still places and territories controlled by the guerrillas, crime, or drug trafficking, and where the state is not able to impose its order or ensure control. This can also be explained by the emergence of armed groups under the leadership of caudillos in the states in formation.

Why has it been more difficult in Latin America than in other places to establish the rule of law and stable democracies with institutional mechanisms that can face the abusive attempts of a caudillo? Why so much fragility and disposition to the revolution, to the manifestation, and to the abrupt change? Mauricio Rojas raises an additional argument, which complements the institutional approach.[11] He points out that one of the main reasons for this reality is the enormous inequality of conditions that has been observed for centuries in the American continent, which has made a large majority of citizens not feel part of the institutional arrangements and be willing to participate in revolutions or social movements to achieve a better situation. In other words: the cost of participating in social movements or revolutions is very low, because there is little to lose. This contrasts – in his opinion – with the conformation of the state in the United States. He recalls that the first observation of Tocqueville[12] when referring to the democracy of the United States was to highlight the equality of conditions that he had observed in the country (in the north of said country), and how this influenced the cultural and institutional

dynamics, and finally the adherence to democracy. The existence of free men, owners, merchants, and artisans, whose standard of living was not so diverse, facilitated social cohesion to install a new experiment such as the democracy of the United States. Everyone has incentives to take care of the built order.

The counterpoint is that in Latin America that equality of conditions has not existed. Rather, a structure of concentration of power and wealth has hindered the cohesion and installation of impersonal and abstract rules that are adhered to and respected by the majority of the citizens. Daron Acemoglu and James Robinson have spoken of the existence of extractive political and economic institutions as an explanation for the failure of some nations.[13]

The caudillos have mobilized the population around inequality. They did it in the past and continue to do so today, with different mechanisms or tools. For a long time, the instrument was the revolution and the guerrilla. Today the mechanism seems to be the appropriation of the state, or the gradual death of democracy from within.

The economic progress of the region has managed to incorporate and make active participants of a significant mass of the population that was excluded from social life. The reduction of poverty has been significant, and the strengthening of the middle class has been overwhelming. This may have contributed to diminishing the revolutions and coups d'etat, because there are more people who feel part of social progress and who face the costs of participating in these actions.

But these advances have not solved all the problems. Progress has brought new challenges and new forms of mobilization, in most cases through – again – caudillos that activate the postponed population.

The institutional weakness and the personalization of the state has led the political discussion on the continent to be more about people than ideas. In that sense, Peronism, Chavism, and Fujimorism, are only examples of agglutinating factors beyond doctrines, ideas or political parties. Therefore, the party systems are fragile and do not usually have a forcefulness in their programmatic platforms.[14] Politics is built mostly around the leader.

Because of these dynamics, in the seventies the region was characterized by a high level of conflict, as well as low economic growth and income per capita similar to the one observed today in the poorest countries of the world. More than half of the population lived in conditions of misery, excluded from the minimum welfare systems. This state of affairs led the democratic regimes of the region to be unable to provide a solution and to end up yielding to the democratic fractures in almost all countries in the region, with exceptions such as Colombia, Venezuela and Costa Rica. Although the military regimes responded to the lack of order (pre-revolutionary situations), they were not able to carry out successful reforms to change the growth trends, apart from exceptions such as Chile, which even anticipated the changes that many democracies recently implemented with the collapse of the Soviet Union.

With the advent of democracy, the region has maintained certain patterns of institutional stability, albeit fragile. This has allowed low but sustained growth and very important and positive social policies, which have managed to include as part of society groups that were postponed and excluded for decades. Today, the picture is one where fragile democratic systems exist and new socio-economic sectors are participating in public and social action. Although important portions of poverty still can be observed in the region, these do not present the exclusionary characteristics of the seventies, and, on the contrary, an increasing number of middle and upper middle sectors can be observed, whose demands usually generate enormous challenges for governance.

The last few years have seen a series of presidential elections in the region. Some speak of a new wave. After the military governments of the seventies and eighties, in the past decade the regional articulation of the Latin American left was experienced through leaderships such as Lula da Silva in Brazil, Cristina Fernández de Kirchner in Argentina, Evo Morales in Bolivia, Rafael Correa in Ecuador, and Chavez and Maduro in Venezuela, to name a few. After the last election season, a different trend can be seen today, with Mauricio Macri in Argentina, Iván Duque in Colombia, Sebastián Piñera in Chile, Jair Bolsonaro in Brazil, to mention the most outstanding cases.[15]

In short, the evolution of LAC has been turbulent in the last decades. However, despite the disappointments, frailties and frustrations, Latin American institutional history is a story of improvements and progress. A similar situation can be observed in economic and social matters.

The Economic Situation

While the world will grow close to 3.7% during 2018, Latin America and the Caribbean (LAC) will grow only 1.2%.[16] Both the global and continental growth projection have had reductions throughout the year. However, while the global growth projection was reduced -0.2 percentage points during the year, the LAC growth projection was reduced by -0.8 percentage points.[17] The economic performance of the continent is strongly affected by the reality of Venezuela, whose domestic product is projected to decrease about -18%. Without this exceptional case, the growth of the region would approach 2.5% for this year.

Latin America and the Caribbean grow, but they do so at a slower pace than the rest of the world and the different regions or groups, such as the advanced economies, as shown in Figure 1, which describes the figures for the period 2017- 2019. (See Figure 1)[18]

When one extends the horizon of analysis and incorporates the period corresponding to the boom of commodities, that is, the 2000s, the performance of LAC exceeds the rest of the world, but not the rest of emerging economies, as can be seen in Figures 2 and 3.[19] (See Figures 2 and 3)[20, 21]

Both in 2017 and in 2018, regional growth will be less than 1.5%, with a further advance towards levels of 2.2% expected for 2019. [22] The main basis of this growth rate are found in the situation of Mexico, Brazil, Argentina and Venezuela. Mexico shows an upward trend of 2.0% in 2017, and projections of 2.2% in 2018 and 2.5% for 2019, driven by the growth of the United States. Brazil also shows an upward trend, with a growth estimate of 2.4% for 2019, even though expectations have moderated downward in recent months. In Argentina, on the other hand, the evolution has been negative. At the beginning of the year the growth projections were positive, but today the expectation is a decrease of -2.6% for 2018 and -1.6% for 2019, resuming the positive growth only in a medium term. The Venezuelan situation is dramatic, as 5 years of economic decline have accumulated, with a projection of -18% for 2018 and -5% in 2019. In Venezuela, close to 50% of GDP has been destroyed throughout this deterioration process.

If the economic situation is of modest growth, the fiscal situation on the other hand is precarious and demands attention. By 2018, it is expected that 29 of the 32 countries in the area will have a negative total fiscal balance.[23] As expected, the public debt is growing, reaching an average of 60% of the regional GDP this year and affecting the credit ratings of some countries, such as Chile and Brazil. During 2017, Fitch reviewed the credit rating of 8 countries, making 7 reductions in the credit note and only one revision upwards. This, added to the fall of the net inflow of capital to the region, has contributed to increase the risk premium and the access and cost of financing.

The World Bank has pointed out that fiscal deficits and the increase in debt limit the options of using fiscal policy as a countercyclical tool at times when some consider it necessary.[24] For this reason, it is necessary to accelerate the process of fiscal adjustment in a large part of the LAC countries, taking precautions to maintain prudent levels of public investment in infrastructure and social programs to support the most vulnerable.

It should be remembered that during the commodities boom, the governments of the continent had more resources to develop infrastructure programs and social initiatives. At the end of the cycle of high prices, governments have faced the social pressure to maintain their initiatives and programs but at the same time reasonably adjust their levels of public spending.

This leads to the analysis of the quality of public spending in the continent. It is necessary to do more with less, reaching higher levels of efficiency and effectiveness in public spending. The recently published IDB report "*Better Spending for Better Lives: How Latin America and the Caribbean Can Do More with Less*" is very timely, therefore. Since the 1990s, there has been an increase in the level of public spending as a percentage of GDP in LAC. Although this increase has been significant, it is still far from the levels of spending observed in developed economies. In LAC it is projected that public spending in 2018 will be close to 22% of GDP compared to levels of 40% in more developed economies. The evolution has been interesting, since an average increase of 7% per year has been observed in the last twenty years. However, not everyone considers that there is an equivalent improvement in terms of human capital or physical capital, or lasting social improvements. [25] The quality of the expenditure requires a lot of improvement towards the future. Many countries of the continent spend inefficiently. The challenge for LAC is not necessarily to spend more but to spend better.

The social changes that the continent has seen in recent decades are impressive, with significant decreases in poverty levels, a growing middle class, and a concentration of the population in the cities close to 80%. These changes have also affected the composition of public spending. In the region, there has been a tendency to reduce capital expenditure and favor current expenditure, a matter that responds in part to the contingent pressures of the citizenry but risks capacity and potential for future development.

The economic challenges on the continent are quite big. The end of the commodity cycle, the need for fiscal adjustments, the increased demand for spending by an empowered middle class, fragile political institutions, and an outdated productive structure demand a revision of the strategy.

New technologies and the emergence of new forms of information offer a new opportunity. To persevere in its current development strategy, LAC risks continuing with moderate growth, with high dependence on commodity price cycles, and decreasing its relative leverage in the world economy.

The opportunities that Latin American societies have to join the way of technology, innovation, and information are fundamental. They require a population with a good

educational level, governments capable of reacting to new opportunities and lead changes, and a private sector that has the incentives to invest looking into the future. Next, some elements of the social evolution of the continent are analyzed.

The Evolution of the Middle Class and Social Mobility

Perhaps the most relevant change in the social composition of Latin America is the advance in the reduction of poverty and in the consolidation of an emerging and active middle class. This evolution has had a direct impact on the way in which governability and changes in social mobility are articulated.

In relation to the reduction of poverty, Latin America exhibits a paradox. On the one hand, both the levels of extreme poverty and those of total poverty are lower than the world average (see Figures 4 and 5), but on the other hand, in the growth of the per capita product, the performance of the region does not seem to be better than the world average (Figure 6).

The average regional growth hides very diverse realities. Thus, for example, there are countries such as Chile that have performed better than the rest of the countries in the region in a systematic way since the beginning of the 1990s (Figure 7), while the region has remained at average performance. (See Figures 4 and 5)

The paradox of having lower levels of poverty than the rest of the world, despite having weaker economic growth than the rest of the countries, also extends to other areas. Indeed, life expectancy at birth in the region is 3.5 years higher than the world average. Despite the lower growth of the GDP, the effects on reducing poverty and improving living conditions seem to achieve relevant results. Furthermore, if we consider another critical indicator such as infant mortality, we also observe that the performance of LAC is better than the world average (Figures 8 and 9). This paradox allows in some way to have a more positive and optimistic perspective regarding the capacity of the region to improve the welfare of its inhabitants, even if it does not manage to meet its potential for economic growth. This view could be defined as a vision of rational optimism,[26] that is, understanding that there are significant advances that should avoid those visions that presage a disastrous future or that evaluate the present as insufficient and even regrettable. (See Figures 6, 7, 8, and 9)

Social progress in terms of poverty reduction, life expectancy at birth, and infant mortality are just examples of the evolution of recent decades. This leads to the question of how governments should face the future, considering that the region has sustained economic growth but at low levels and with social policies that have allowed access to basic services or utilities to the population better than the world average. The governance of the future faces a new political, social, and technological scenario.

Just to visualize the order of magnitude of the change we can see that between 2001 and 2011, approximately 50 million and 30 million inhabitants, respectively, increased the middle and upper middle sectors in the South American region, that is, 19% of the total population. (See Figure 10)[27]

These groups that left behind poverty and joined the political and social life are those who emerge as new protagonists of political action. Although their demands may be clientelist like many others, the central element of these middle-class groups is the search for order and equality, sustained growth and security, which requires governments to adapt to respond to these demands. Fiscal stress is much greater because the type of goods they demand are much more expensive in a context of low growth.

But there is another characteristic of these groups. Throughout the last decades, the social policies of expanding access to education have been very relevant in the continent. Therefore, these middle-class groups are more educated and enlightened than in the past and have a more skeptical view of political affairs. Even though in LAC the populist temptation and the search for magical solutions are still present and current, this has been concentrated in the most vulnerable sectors. The new middle classes have a look of greater distrust of the promises of political rhetoric. The new middle groups do not share the vision of the salvific dreams that remain rooted in the popular sectors of the continent. Thus, as the middle-class groups in LAC continue to grow, there is hope to reduce populist offers.

The new middle classes have progressed a lot in the last decades and in each election they have much more at stake than in the past. They know that a good or bad government affects their present and their future. In this sense, they are impatient and politically less loyal groups, which in a context of institutional weakness and even in the presence of solid institutional structures, supports short-term political changes that may not be the most appropriate. In this regard, the cases of Chile 2010-2018 demonstrate this.

To finish this section, and before entering into the challenges of the digital revolution for governance, it is necessary to remember that the social reality of LAC shows that the continent is progressing but still very vulnerable. Various examples for the above.

The first of these is the educational performance, which shows that the Latin American continent has worse performance and achievements than other emerging regions such as Asia.[28] The second is the Human Development Index of the United Nations.[29] There are very few Latin American countries that have a "very high" level of human development (Chile, Argentina, and Uruguay), and the progress of the region as a whole has been slower between 1990 and 2017 than in other regional areas, like Asia and even places in Africa. A third example that invites reflection and concern about the instability of the continent are the figures reported by the OECD in its report on social mobility. [30] That report shows that inequalities – despite having declined in recent years – are still very strong and that it is difficult to observe relevant levels of social mobility. It argues that still the place of origin is a very strong predictor of the future destiny of the inhabitants. Moreover, it points out that this has affected a greater despair and distrust in governments and their capacity to offer better future prospects.

A fourth element of concern is the productivity of the continent compared with other regions. Indeed, when reviewing the evolution between 1960 and 2017, LAC presents a negative performance, capable of surpassing only Sub-Saharan Africa. This limits the possibilities of seizing with strength and speed the opportunities presented by a changing world. (See Figure 11)[31]

A fifth element that demands attention is the demographic evolution and its implications for the labor market and for social protection policies. LAC is aging and in very important countries of the continent the growth of the labor force is moderate and will tend to diminish in the near future. For example, Brazil, Colombia, and Chile (3 major economies in the region) will face a decline in their labor force by the year 2035,[32] an issue that will not happen in Argentina where the working-age population will continue to grow for decades. In the case of Mexico, for its part, the rapid population growth that has been observed in recent years will decrease dramatically as a result of changes in fertility rates. This will imply that the work force will continue to grow until 2050 and then decrease.[33]

In terms of aging, the continent will see an acceleration of the process. [34] Mexico, Brazil, Colombia, and Chile, for example, will see their population of older adults increase rapidly. In the case of Mexico, the country will surpass the United States in percentage of older adults by the year 2060. Chile and Brazil, meanwhile, will overtake the United States in aging by 2050, something difficult to think a few decades ago, and its explanation would be centered on the fertility rates observed in these countries in the last time.

Given this scenario, what opportunities does the digital revolution offer to accelerate the road to the future and progress?

Digital Transformation in Latin America: A Leapfrogging Opportunity?

Challenges and opportunities of the digital revolution for governance and progress.

The arrival of the fourth industrial revolution found Latin America at a special moment, as previously indicated. What are the opportunities and challenges facing the continent in terms of technological and digital transformation? We will begin the analysis by briefly describing the connectivity and infrastructure situation in the region.

The Starting Point

In terms of access and infrastructure, 56% of the inhabitants of LAC used the internet during 2016.[35] Between 2010 and 2016, the percentage of connected households increased by 103%, even though there are still many that do not have access to the internet. The gap between LAC and the OECD in terms of households with Internet access, for example, has been reduced significantly: while in 2010 the gap was more than 50 percentage points (73.2% in the OECD compared to 22.4% in LAC), at present this gap is slightly higher than 40 percentage points, that is, a significant change.[36] This advance has been accompanied by a greater penetration of the internet in the lowest income socioeconomic quintiles.

More than 80% of the continent's population lives in the urban world, compared to about 40% in 1950. In reviewing the difference in internet access in the urban and rural world, it is observed that in countries like Bolivia, El Salvador, Peru, Paraguay, and even Mexico, the connectivity gap between the urban and rural world is very high. In contrast, in Chile, Costa Rica, and Uruguay, the gap is much smaller. On average, the urban-rural Internet access gap in 2017 reached 27 percentage points.

The differences between access to Fixed Broadband and Mobile Broadband have also evolved. While in 2010 the penetration of both was similar, today the reality is very different, with a strong growth of mobile broadband (reached 64% coverage) while fixed broadband reaches a lower coverage (11%).

In the case of mobile broadband, it is interesting to look at data traffic. Between 2010 and 2016, data traffic grew by 3.75%, four times more than the growth in the number of subscribers.[37] Despite this enormous growth, LAC is the region with the lowest mobile data traffic in the world, seven times smaller than Asia Pacific.[38]

However, in terms of digital economy and competitiveness, LAC is below the world average in important aspects of electronic commerce (B2C). Thus, for example, in the individuals that use a credit card, the percentage in LAC is lower than the world average, and very far from the developed economies.[39] Similar situations occur in areas such as the number of secure servers per million inhabitants or postal delivery at the home address.

In regulatory matters, cyber legislation before 2015 made several advances. Thus, for example, there are interesting regulatory advances in transactions and electronic signatures, in intellectual property, and in domain names, while advances in terms of consumer protection and data protection are moderate. Progress is much slower in the field of computer crimes and information security.[40]

The digital strategies of governments also show interesting figures. 73.9% of the countries have a digital government strategy for use of ICT in the public sector.[41] 60.9% have performance indicators of progress in electronic government, and an identical percentage has a national portal for public services, a very relevant issue when it comes to bringing services to citizens.[42] Digital identity has also advanced, albeit somewhat more slowly, with 56% of countries that have a legally recognized digital identification system.

The expansion of the use of technology in the service of sustainable development also shows some progress. For example, 54% of the countries in the region (compared to 58% worldwide) have an electronic health policy or strategy.[43]

Some Areas of Opportunities and Challenges.

The fourth industrial revolution (4IR) is impacting the way governments, businesses, and economies are organized in general. Like other industrial revolutions, this generates uncertainty and opportunities. But this 4IR has some differences with the previous revolutions.[44] Firstly, the speed: while previous revolutions took decades to generate impact, the new technologies act very fast and therefore demand a rapid capacity for action and response from governments and businesses. Secondly, the 4IR is propelled by a diversity of technologies, materials, new discoveries, and tools, which makes it a more complex and difficult dynamic to assimilate. Thirdly, this revolution impacts whole systems, not being limited to the development or change in one kind of product.

These differences with other industrial revolutions imply that leaders must act differently to take advantage of the huge opportunities.

Which technologies are leading this industrial revolution that threatens to change the way in which social interactions are structured? Artificial Intelligence, Blockchain technology, Internet of things, cloud computing, virtual reality, and augmented reality are the axes that propel changes. They also highlight the use of 3D printing, Advanced Robotics, Mobile Internet, and Social Networking.

These technologies are generating a constant process of disruption in which digital transformation has the potential to boost growth in various areas, transform public services, and improve the welfare of the citizens as long as information, knowledge, and data are available for everyone. These emerging technologies affect governments because they reduce the costs of providing public services to citizens efficiently, but at the same time they demand that the government be reorganized and restructured in order to take advantage of these enormous potentialities. These are technologies that favor collaborative, open, transparent, democratic, and flexible mechanisms, imposing on governments the challenge of adapting their structures to be efficient and effective in the response.

For Latin America and the Caribbean, a continent that has grown slower than other emerging regions, the central question is whether this 4IR will allow a significant leap in order to accelerate the pace and approach development and growth to other regions of the world.[45] That is difficult to answer today, because many efforts of governments, companies, and educational institutions are required to develop the basic conditions that allow opportunities to be seized.

In what areas can the potential of the 4th industrial revolution be seized in LAC? Here are some examples.

In terms of fintech, for example, the opportunity is huge. Nearly 50% of the population of the continent is not part of the banking system, and the development of electronic money, new methods of payment, and the penetration of fintech generates a very positive and significant opportunity for social inclusion and reduction of inequalities.

Access to goods and services is very important in a continent that has a high rate of urbanization (over 80%). This generates conditions for Ecommerce to take off with great force in the region, increasing competition, improving the quality of services and bringing to citizens a diverse range of goods that empowers people and that boosts entrepreneurs.

The advances in eHealth are perhaps one of the main opportunities that the 4IR implies. It is in this area where the opportunity of leapfrogging is evident, leaving behind outdated technologies and models, and making a significant leap into the future. Latin America is aging and

requires new forms of health care. The costs of traditional health care systems continue to grow, as well as the costs of the insurances that covers these risks. It is becoming a situation difficult to manage towards the future, therefore, it is necessary to rapidly take advantage of eHealth opportunities (defined by the World Health Organization as "the use of information and communication technologies (ICT) for health").[46] The applications of artificial intelligence for medical diagnoses and the uses of 3D printing are just some examples of the enormous world of opportunities that the industrial revolution offers in health.

To take advantage of the opportunities of the 4IR, the continent needs to train minds, then machines, and not vice versa. The formation of human capital is at the heart of the challenge of countries to take advantage of the opportunities of the technological revolution. With the massive dissemination of the internet, and the growing access to smartphones, the capacities for strengthening the offer and quality of education are massive. The educational process is aimed at individual, personalized strategies that are able to take charge of the realities and interests of each student, in each of the stages of their lives. The 4IR is challenging the traditional models of school and university education, giving way to mixed and personalized models of education, which allow that even in remote places, very vulnerable people can access personalized and top-level educational models that allow them to compete in knowledge and skills with other citizens.

Linked with the above is the development of skills for the future. The digital transformation is revolutionizing jobs, and it is very difficult to predict today what the future jobs will be. There are studies that indicate, for example, that about 45% of existing jobs in OECD countries have a significant risk or high risk of being automatized in the coming years.[47] In the case of Chile, that risk exceeds 50%. This means that one of the main challenges of societies is to take advantage of technologies to develop dynamic and up-to-date models that accompany the Life Long Learning of people, allowing them to adapt to the new competences and skills demanded.

Another huge opportunity is related to cities. If in the past the discourse was about of the moment of empires, later was about the moment of nation-states, today is about the cities. In LAC more than 80% of the population is concentrated in cities. Although this offers many vulnerabilities and complexities, it presents even more opportunities to improve the quality of life and provide services of excellence. Thus, smart cities are one of the main opportunities that Latin America has in order to improve the lives of its inhabitants and offer better conditions for the future. Smart cities can be defined as those that apply information and communication technologies with the aim of providing infrastructure that ensures sustainable development and improves the quality of life of its inhabitants[48]. Mexico City, Sao Paulo, Rio de Janeiro, Buenos Aires, and Santiago are just examples of large cities that concentrate problems and opportunities that can be addressed by smart cities. Congestion, pollution, efficiency of public services, ride sharing, urban planning, and intelligent monitoring of crimes are just examples of the enormous potential of these new technologies.

In line with the above, governments can simplify procedures and processes to take advantage of the growth of Internet access and smart devices to simplify processes and improve the quality of care. As previously stated, governments should not only limit themselves to digitizing procedures, they should rethink all the documentary and procedural requirements that are currently being demanded from their citizens, taking advantage of the enormous information available and the new technological capabilities.

In terms of citizen participation, the mass usage of networks and platforms is allowing people to participate in new forms of dialogue and civic debate. New applications have also allowed citizens to be more informed of what is happening in their surroundings, generating greater conditions for transparency, accountability, and response capacity to be demanded of the authorities. This has happened simultaneously with a change in the interaction between citizens and authorities, moving towards more horizontal models of interaction.

Finally, and in line with the above, there is a need to give new impulse to entrepreneurship and innovation. The opportunities are there, and the ecosystems have been developing, although slower than necessary. There are already several unicorns that have emerged from the continent, but the potential suggests that much more can be done, as long as there is a favorable and stimulating environment for entrepreneurship and innovation.

As can be seen, the opportunities are several. But so are the challenges. Below are some of the main challenges for LAC to take advantage of the opportunities of the technological and industrial revolution.

The first is cybersecurity. Today there are more than 20 billion attacks per day in the world, and Latin America is not exempt from this problem. The increase in the usage and applications of the Internet of Things (IoT) allow an improvement in the lives of citizens, but also involve the risk of cyber-attacks and exposure of information to eventual aggressors. As in the case of IoT, cloud computing is also highly exposed to cyber-attacks. Latin America is especially vulnerable to cyber-attacks because many countries in the region do not have the capabilities and

technologies to face these risks. There are countries that have progressed and have much to contribute in the regional context. But the general picture is of vulnerability and risk, and therefore requires a specific advance in education, technology, and strategy to minimize the risks of cyber-attacks.

A second challenge is human capital. LAC needs to move faster in the formation of human capital to take advantage of the opportunities of the digital transformation. This means not only in the private sector but also in governments and civil servants.

A third challenge is the protection of the privacy of personal data and the updating of institutions that safeguard individual freedom and respect the rule of law. As we have previously indicated, LAC is a continent with a fragile institutionalism, vulnerable to warlordism and to control by the leader. In an environment where information is crucial and where personal history can be manipulated, the need to have institutions that play the role of a counterpart to the authority is fundamental to give certainty and to safeguard individual rights. This is a central challenge and for which much more discussion is required, given the institutional history of the continent.

Finally, it is necessary to mention the enormous challenge that new platforms and social networks are presenting for the political system, in a continent that has been moving from poverty to middle class, and in which citizens are more actively participant to political and social life.

We mentioned at the beginning of this essay that Jair Bolsonaro, the new president of Brazil, had chosen Facebook Live as the platform to transmit his first message once elected. It was not the traditional radio or television channels; social networks were the protagonists of the most relevant political communication of the last year in the largest country on the continent. The entrance of social networks, especially Facebook, Twitter, and WhatsApp, has revolutionized political communication. This has allowed a more direct interaction between citizens and their authorities and has generated dynamics of unprecedented political activation. All this has been very positive, since it has allowed the inclusion of groups that were excluded and that today find new forms of participation and rapprochement. But just as there are very positive aspects of these technological disruptions, there are also relevant problems and risks.

Political activity requires discussion, debate, negotiation, and consensus. This is how the countries move forward, this is how the democracies are. No one can pretend to impose their ideas on everyone else in a democratic system. What happens is a process of deliberation through which the elected representatives construct solutions that are acceptable to a great majority of the citizens, without being able to give everything that is expected to the citizens and submitting to the popular evaluation in the next election.

Social networks and platforms make this process more difficult. Indeed, they can in some cases weaken representative democracy, seeking mechanisms of direct or plebiscitary democracy.

Politics requires a common space, a meeting place for those who have differences. Only in this meeting space can common solutions be built.

Social networks avoid the existence of that common space. In fact, the algorithms and segmentations that the social platforms operate make the individuals be grouped with like-minded people and produce a segmentation that favors the reinforcement of one's own thinking and limits exposure to different ideas. Self-referential groups are formed and the capacity for dialogue is severely limited. How to generate dialogue and build agreements when individuals are part of closed groups, that reaffirm their own beliefs and that they are not exposed to diverse ideas and points of view?

In social networks, most debates lead to simple, or even simplistic, answers. These are plebiscite democracy schemes, that is, they are in favor or against something, a middle ground is not what is looked for. This is in contrast to the representative democracy that stimulates deliberation, negotiation and consensus.

In a context of citizen empowerment, of crisis of the authorities and institutional vulnerability that is typical of the history of the continent, these elements and risks of social networks must be taken into consideration and be part of a profound political and social debate.

Reflections on the Chilean Case

Latin America and the Caribbean include a great diversity of countries. In terms of impact, attention is usually paid to what happens in Brazil and Mexico, given the size of their population and what they represent as markets. Argentina is also a focus of attention given its history of wealth, even though during the last century its progress deteriorated, institutions were weakened, and the country ceased to be part of the club of the developed countries. It is hoped that it can break the negative trend and start a new stage of successful projection into the future. Venezuela is today at the center of the discussion, but unfortunately it is for its dramatic institutional, economic, and social deterioration.

But there are other cases of interest, especially if they are positive experiences. The cases of Costa Rica, Uruguay, and Chile are interesting examples of stability and

progress. These are smaller countries in the region, and therefore objects of less attention. We stop in the case of Chile.

Chile is recognized today as an exceptional and outstanding case of progress and institutional stability, which allows it to be in good condition to face the fourth industrial revolution and observe expectantly the challenges that this means for governance. The truth is that the country has a long institutional history. After its process of independence from the Spanish Crown started in 1810 came a stage of turbulence and adjustment that was consolidated with the Constitution of 1833, which managed to rule the country for almost 91 years, something exceptional in the continent. With a strong presidential system, the political system was consolidated (despite a brief civil war in 1891 generated by a political, budgetary, and constitutional debate). The Constitution of 1925 came to establish a new order and served as the basis for the political system until its infringement provoked by the failure of Salvador Allende's socialist government in 1973. The coup led by the military led to a 17-year-old regime, which committed serious human rights violations, and, at the same time, laid the foundations for the current progress of the country, founded on the economic program led by a group of young economists from the University of Chicago and known as the "Chicago Boys." Under the authority of Pinochet, this group of economists installed in Chile the ideas that Milton Friedman and others proposed for the economy, long before governments such as Reagan's in the United States or Thatcher's in the United Kingdom.

The agreed and peaceful transition that occurred in 1990 generated an unprecedented fact. Pinochet had been defeated in a referendum of continuity in 1988 and had called for elections for the following year. A center-left coalition led by the Christian Democrats prevailed in the elections and led the transition by maintaining the essential aspects of the Chicago Boys' economic model, further strengthening the implementation of social policies and Chile's insertion in the world.

Today, after successive alternations in power between the two main political coalitions, Chile is a country of 17 million inhabitants, with the highest GDP per capita in the region of US $25,891 (PPP);[49] located in the first place of LAC in the Human Development Index of the United Nations; leading the continent in the Digital Evolution Index; as a member of the OECD for a decade now; with a life expectancy at birth similar to the developed countries; and with social and economic indicators that realize an enormous progress. In addition, in terms of innovation and digital economy, it is recognized as a leader in the region, leading indicators such as the Index of Digital Economic Value for Latin America (2018).

What elements explain this progress? It is difficult to offer an argument of causality. Rather, it is possible to describe some elements that help to understand the political and social dynamics of the country.

From the seventies and then in the eighties, a profound modernizing process was initiated that included opening the economy and competition, freeing prices, reducing the size of the public sector, and designing a political and economic Constitution that would safeguard the right of property. Likewise, the reforms included the creation of a pension system focused on individual savings whose resources are managed by competing companies, a health protection system that includes the option of private and public health coverage, an educational system that encouraged the private sector to participate in the educational system with the aim of increasing coverage and generating competition, and a system of mining concessions that encouraged investment and development.

Regarding the role of the State in the economy, an autonomous Central Bank was established, whose role has been to control inflation and which is prohibited from granting loans to governments. In addition, a strong privatization program was developed for many of the state-owned companies that had been created during the previous decades. It was also established that in the future state-owned companies can only be created by law, at the proposal of the president, and must have a supermajority in Congress to be approved.

The political system consecrated a strong presidentialism, consistent with the historical tradition, but with a relevant set of checks and balances that limit the exercise of power. Thus, a bicameral Congress elected through a majority system of two seats per district (which was recently modified by a proportional one) generated a party system that had many political groups but grouped into two large coalitions that negotiated permanently to approve the changes. This generated a dynamic of stability and confidence. The acts of the president are reviewed administratively by the Comptroller General of the Republic, an autonomous body independent of the government. An independent judiciary with a Supreme Court and, in addition, a Constitutional Court to control ex ante and ex post the constitutionality of the norms generated a dynamic of strong presidential power but with an adequate counterweight.

The Chilean bureaucracy is recognized as a competent institution, even though it has much to improve. Their capacities in the formulation and implementation of public policies have been very important for the success of the Chilean model.

In short, Chile has good institutions that promote private initiative in an ambiance of freedom and competition and with a strong but counterbalanced government that develops social policies to improve the welfare of its citizens. That is what has happened in Chile in recent decades.

But Chile is not without problems. Today, there are many who disagree with the changes implemented during the military government and projected in the governments of the Concertación. The emergence of a new middle class has posed new challenges, as has happened in other regions that generate progress. Several elements stress the present. The political system is in the process of change, with the recent implementation of a proportional electoral system for the congress, favoring representativeness but increasing fragmentation and possibly diminishing the willingness of political leaders to cooperate. The quality of education remains very weak, limiting the future opportunities of the new generations. Thus, unfortunately there remains the reality that origin is the best predictor of a person's fate, an issue that contradicts the aspiration to make individual destiny depend on effort and merit.

Economic growth continues but at somewhat lower rates than in the past. It has lost vigor and strength. The central explanation lies in the fall in the productivity of the country, an issue highly linked to its educational system and its labor market, which requires greater flexibility and adaptation.

Linked to the above (productivity) is the need for the state to be more agile, efficient, and excellent, both to provide services to its citizens and to remove barriers that inhibit entrepreneurship, innovation, and creative destruction. The modernization of the state is a priority task for the country towards the future.

Chile today can tell a story of success, but to project itself into the future, it requires understanding and addressing the new challenges, those that stress governance in a new interconnected and global world.

Conclusions

Latin America is a continent in progress, but in a fragile state. Its political, economic, and social evolutions show progress but fail to consolidate a lasting and sustainable strategy over time. It requires faster advancement.

It is a diverse continent. In its tens of countries throughout the region, there is a diversity of achievements, advances, and setbacks that require special views. Therefore, it is difficult to speak of the region as a whole, given the particularities and moments that each nation lives.

LAC is a continent that is rich in natural resources, but it needs to review its strategy. The end of the super cycle of commodities, the fall in birth rates, the progressive aging of its population, and the risk of protectionism in some countries open the need to look for new strategies.

The digital and technological revolution offers opportunities and challenges. In terms of opportunities, the continent already has an advance in Internet coverage and basic connectivity infrastructure. The fourth industrial revolution offers a leapfrog opportunity for LAC, promoting the massification of banking access through FinTech; the speed and quality of health care through eHealth; the increase of ecommerce; the personalization of education and life-long learning; and the planning, development, and improvement of urban life through smart cities.

In governmental matters, technology offers a huge opportunity. A clear example is the digitalization and simplification of procedures for citizens and the development of new citizen service platforms. Another opportunity is to advance in the culture of open governments, which strengthen transparency, participation, and accountability. Likewise, there is a huge opportunity to develop project laboratories and pilot programs and to learn from the huge volumes of data to generate useful, timely, and relevant information for decision-making.

To advance these challenges, LAC must focus on training minds rather than training machines. Then, it must continue to strengthen investment in infrastructure and the participation of the private sector to innovate and be the protagonist of the destructive creation of the future. It also requires governments that can give confidence and certainty to investors and international counterparts.

But just as there are opportunities, there are also risks and challenges. The technological eruption has also penetrated the political dynamics, the way to campaign and to communicate from the government. Social networks and platforms have allowed the development of new and interesting forms of citizen participation and have collaborated in the identification of new forms of activation and political mobilization. All this has empowered the citizens. However, social platforms are creating groups and sub groups that listen to themselves and move away from the common dialogue. Social networks, through segmentation and data management, are transformed into a space for reinforcing one's convictions, limiting exposure to the ideas of others. The negotiation, the transaction, or the search for agreements and consensus are much more difficult.

The interaction model of social networks is more typical of a plebiscitary democracy than of a representative

democracy. This tension between the democratic schemes will be at the heart of a middle-class continent that looks uncertainly into the future.

Latin America and the Caribbean face the future with enormous opportunities, uncertainties, and challenges.

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Supporting Data

Figure 1. GDP growth in certain regions 2017-2019[18]

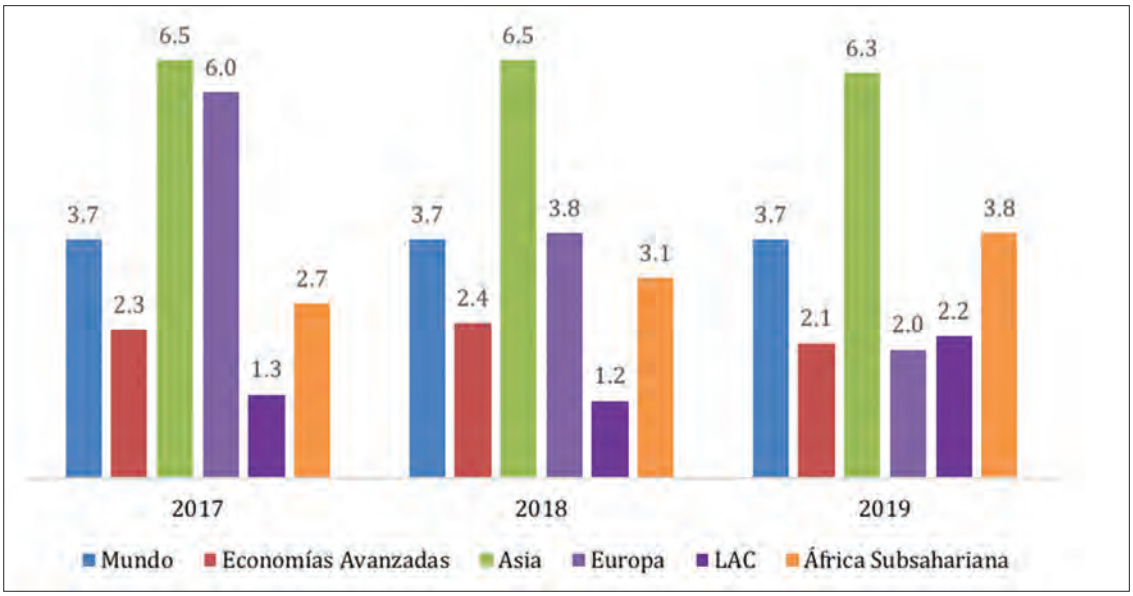


Figure 2. GDP Growth in LAC, Emerging Markets, and the Rest of the World[20]

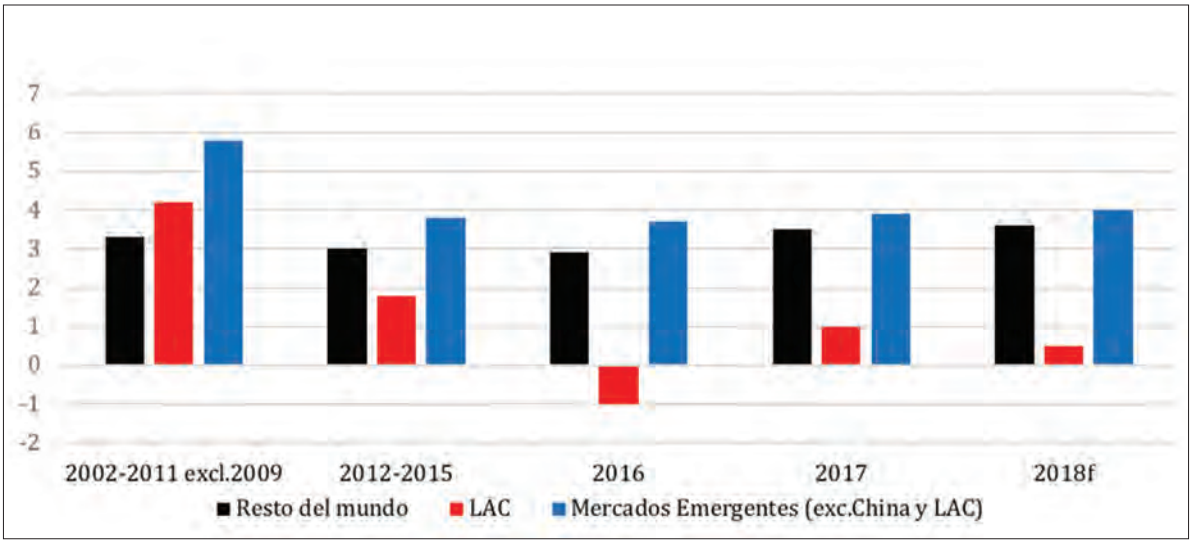


Figure 3. Comparative GDP growth in LAC and the world (2000-2019)[21]

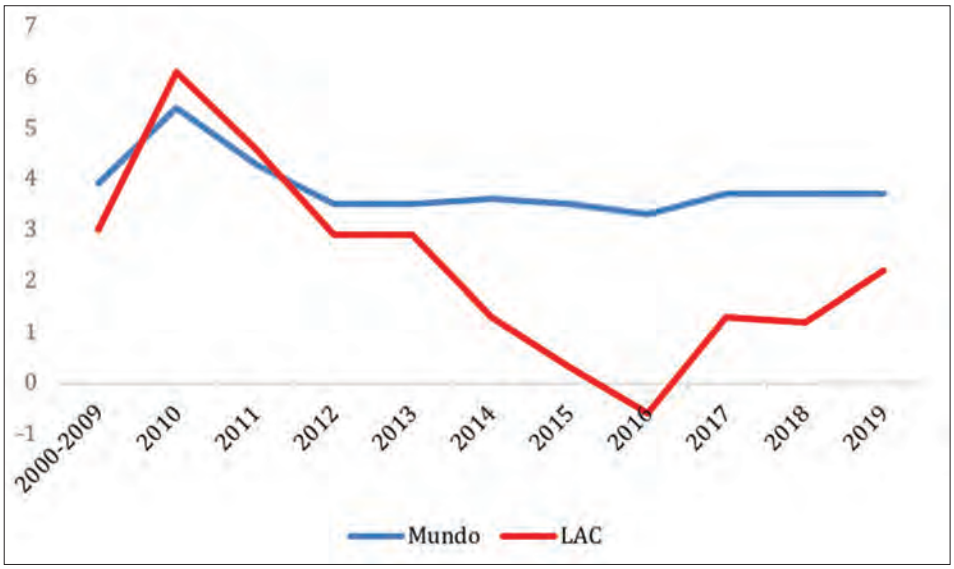


Figure 4

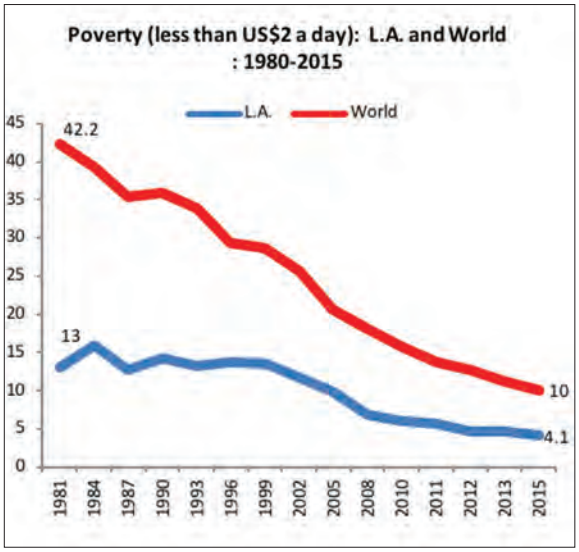


Figure 5

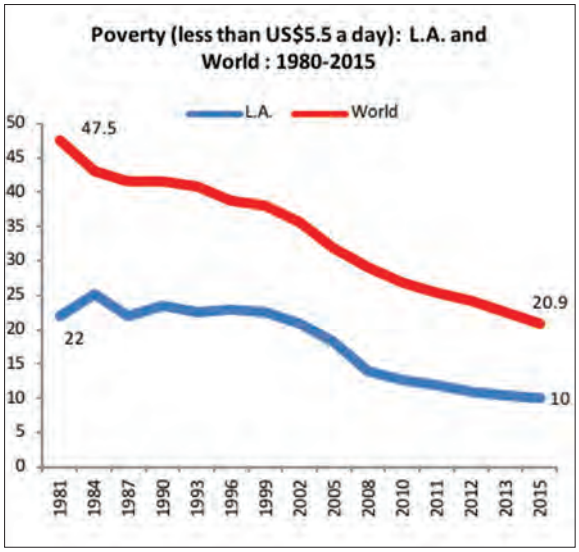


Figure 6

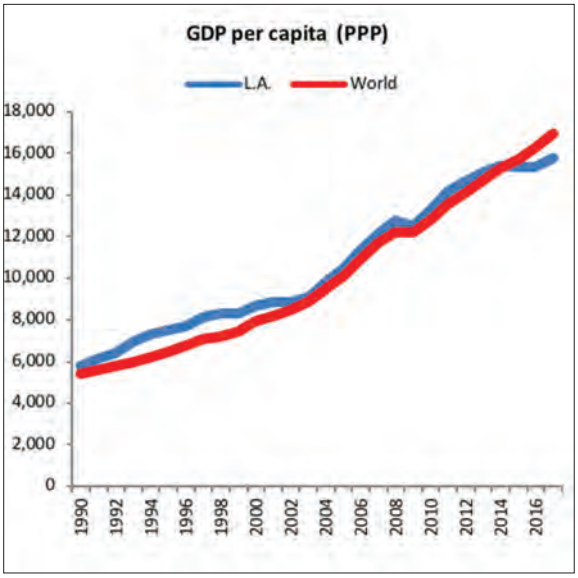


Figure 7

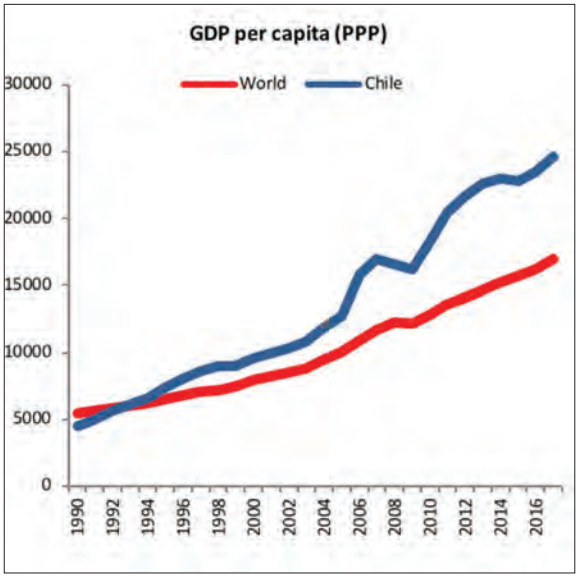


Figure 8

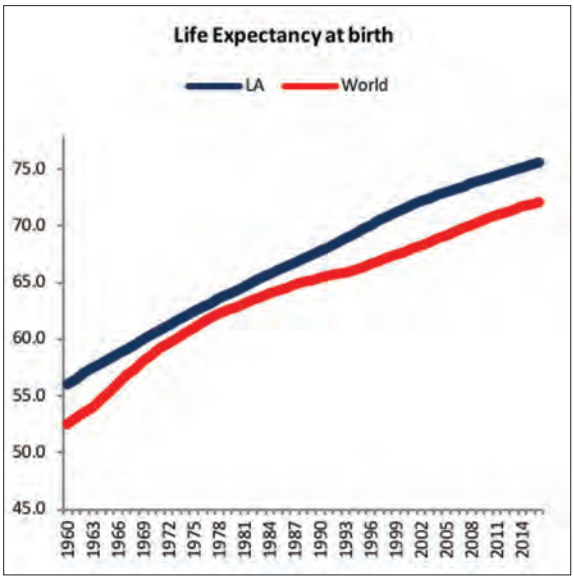


Figure 9

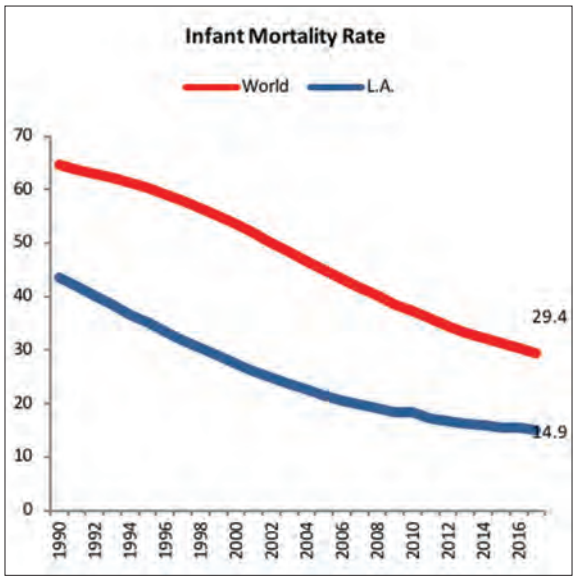


Figure 10. Changes in socio-economic groups in the continent (2001-2011)[27]

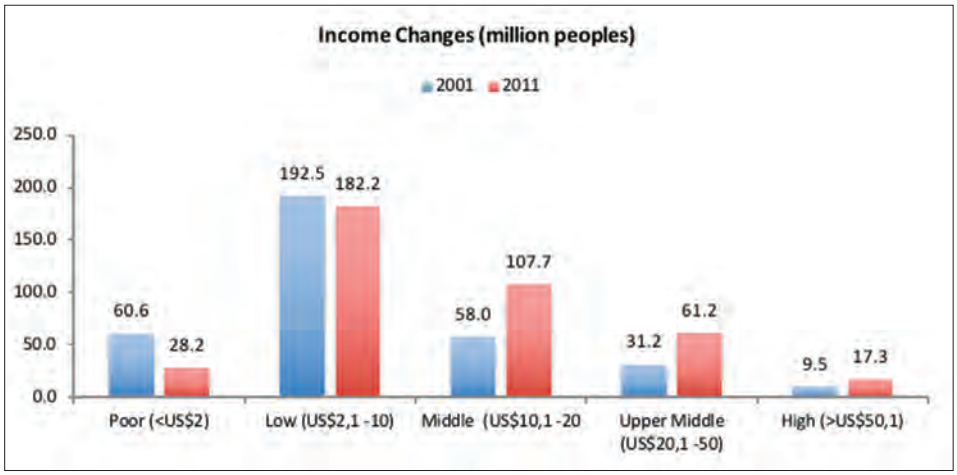
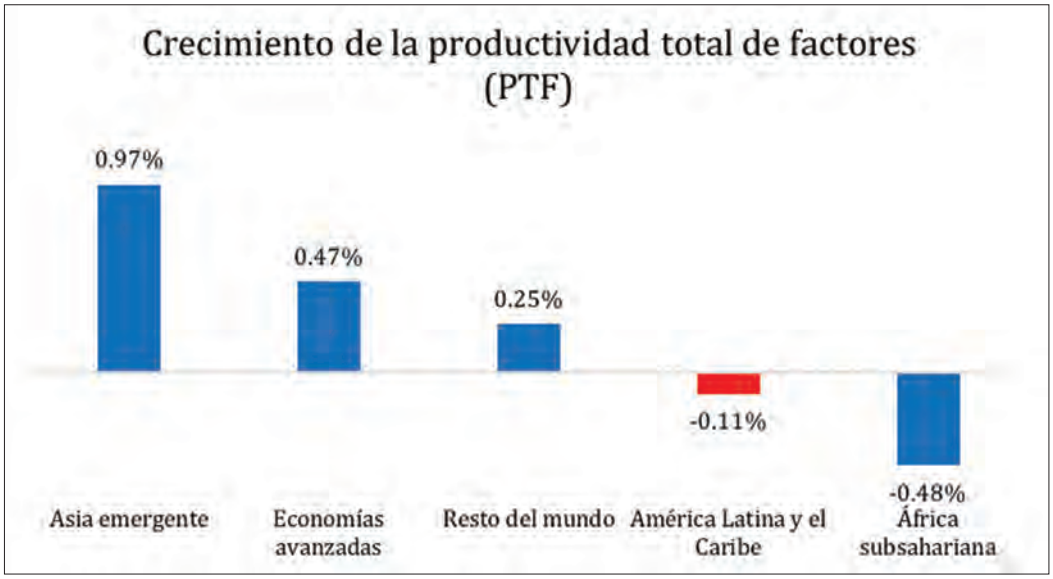


Figure 11. Percentage change in Total Factor Productivity 1960-2017[31]



Observations from the Roundtable

Our takeaway from our roundtable on Latin America in an emerging new world is a region showing gradual—and fragile—economic, social, and governance progress *on average*, but with significant heterogeneity lying beneath, both within and across individual countries. For example, while Mexican manufacturers are by some counts already more roboticized—and therefore more ready for future disruptions—than those in the United States, citizens in some areas of the country live with few opportunities in conditions more closely resembling sub-Saharan Africa. And while Chile, Uruguay, and Costa Rica can show a consistent trend of stability and growth with rising quality of life, next door, Brazil, once a developing-economy powerhouse, has fallen to below investment-grade and suffers rising drug violence. Colombia, post-peace agreement, has seen a historically remarkable economic and governance turnaround, while neighboring Venezuela's economy contracted by 18 percent last year, casting refugees across the continent. Something fragile is something which can breakdown easily or quickly. Even as we look to long-term forces which may shape the future of this region then, that persistent fragility looks set to define the region's day-to-day realities, country-by-country, and vote-by-vote.

Meanwhile, specific demographic pictures vary by country, but one consistent observation is that the future composition of each country's population (labor force, age, fertility) and ensuing migration pressures will not be like the past. These longer-term facts have not been a focus of governments in a region that has seen an average of 13 new constitutions written per country over the past two centuries.

Latin America has promise, and clear bright spots, but the status quo looks fraught given the changes that are already arriving across the region. In the near term, Latin America appears set to be a technology-taker, adapting externally-developed and managed platforms and systems to its local needs. There are risks to existing blue- and white-collar jobs, along with potential for transitioning citizens out of the informal sector. At the same time, the urbanization of Latin America (80% of the population lives in cities) would seem to facilitate further adoption of value-adding digital technologies into governance and everyday lives. We think this argues for a nuanced approach to 21st century technologies in the region.

In regions and sectors where existing institutions are generally strong or at last improving, gradual implementations into areas including digital governance, e-health, education, and manufacturing are likely to yield positive marginal dividends. Here, a rising middle class is demanding new attention and services that their governments have not traditionally been focused on offering. This is a fertile space for new technologies to take hold. Most recently, in Mexico and Brazil (together representing half the region's population), campaigning politicians have already seized upon social media and new communications platforms with surprising—even alarming—speed. Next, those same tools may also be applied to governance more broadly.

Meanwhile, where today's conditions and institutions are stubbornly poor, for example in the violence-torn Northern Triangle of Central America (NTCA), more innovative applications of new technologies may be able to circumvent institutional weaknesses to create "pockets of success" that improve the lives of everyday people. Digital networked platforms and the firms behind them could stand in for failing tax collectors, schools, even social trust systems. But even they demand a minimum of traditional social services and public infrastructure to help improve the region's productivity—it is difficult to run a business in a country where only one-third of the young finish high school and with just 2 meters of road per capita versus 20 meters in the United States.

The United States can help in some aspects of this transformation. And engaging in those areas where the United States can be effective shouldn't be seen as taking responsibility for another country's citizens, but in improving the "neighborhood" in a way that serves our own self-interest too. There are U.S. domestic implications to what happens in a fragile Latin America. But choices made in Mexico, Central America, and South America against this backdrop of technological change over the coming years also hold broader "great power" geopolitical implications, including growing Chinese economic and political interests, that have gone unappreciated in traditional U.S. narratives on the region. Things can change fast in this neighborhood. We need to pay attention.

Technology and Demographics in the "Fragile Democracies"

Ernesto Silva, in his survey of the region in this volume, points out that Latin American economies will grow on average by only 1.2 percent in 2018—faster if Venezuela is excluded—versus 3.7 percent worldwide. Despite low growth rates, however, social indicators show poverty levels have been reduced to below world average, and there is in many countries a growing middle class. Across the region, growth of the labor force is moderate, but generally well down from past growth rates, and will soon diminish further. In the key countries of Brazil, Colombia, and Chile, the labor force will begin to decline by 2035. With this comes a rapidly increasing population of older adults—by 2050, for example, Brazil's population will become "older" than that of the United States.

These trends point to a "demographic dividend" window that is still open, but rapidly closing. Can the region take advantage of that? Labor productivity remains stubbornly low. Public debt is growing and will likely continue to grow absent reforms to social security systems that will come under stress from an ageing populace. Alongside that, credit ratings are being reduced, increasing the cost of new infrastructure investment and doing business in general.

Given this, governments and institutions in the region will need to do more with less, especially in countries that have ridden the now-ending commodities boom. In countries with general stability and a rising middle class, citizens have new demands, and new frustrations. In Chile, the state, for example, is now expected not just to provide universal access to primary education but to improve the quality of secondary and college education too. Commenters at our roundtable pointed to the Brazilian middle class' (justified) dissatisfaction with their government's recent performance as the underlying driver of populist Jair Bolsonaro's surprise election, which came on the back of 8.7 million Facebook followers and just 18 seconds of television time. Similar strains of malaise are evident in Mexico, where real incomes for college-educated workers have declined in recent years despite overall economic growth, and citizens are increasingly dissatisfied with corruption and violence.

What does technology hold for these relatively stable, if fragile, parts of Latin America, and how can the United States play a part?

Access to the internet is growing, and 56 percent of the region's inhabitants used the internet in 2016. But the pace of modernization of state and local government services and business innovation has been slow. We believe that information technology provides opportunities to increase growth and reduce dependency on commodity price cycles. It can reduce the cost and improve the quality of public services, and governments can be restructured to take advantage of these new technologies. Some options for how technologies might support a leap to close the gap with the rest of the world include:

- 50 percent of the population is not part of the banking system. New forms of money and digital payment platforms offer a significant opportunity.
- Urbanization provides opportunity for electronic commerce, increasing competition and improving quality, empowering customers, and boosting entrepreneurs.
- Electronic health technologies including telemedicine provide opportunity for significant leapfrog in health care in areas where infrastructure may be lagging, which is particularly important as populations age.
- Widespread internet and smartphone access provides a new backbone to expand and strengthen the quality of education. With low marginal costs, technology helps even remote and vulnerable people gain access to quality education, allowing them to compete in knowledge and skills and supporting life-long education and upgrade of skills. Latin America's current poor performance in the quality of education leaves its citizens and enterprises ill-equipped for 21st century success.
- "Smart cities" can apply information and communication technologies to address congestion, pollution, efficiency of public services, ride sharing, and urban planning.
- Governments can simplify processes and improve quality of services; roundtable participants estimated that digitization can reduce per-person interaction costs by an order of magnitude and reduce corruption in the process.
- And citizens can be informed and participate in civic debate, leading to increased transparency and accountability.

There are risks too to these changes however—areas in which the United States could help mitigate the negative impacts of disruption:

- With digitization comes cyber intrusion, and many Latin American countries do not have experience with cybersecurity risks. This is an area where the United States has shared interest and can provide direct expertise, training, and best practices.
- Similarly, new technologies that permit the collection of large amounts of information on citizens by governments demand new cultural norms and systems for data privacy. This is a particularly important problem given rapid changes in governments—and even constitutions—in the region.
- Social media pose enormous new challenges for the political system, as citizens participate more actively in political and social life. Roundtable participants noted that whereas a robust political process requires discussion, debate, negotiation, and consensus, today's social networks can actually make this process more difficult by encouraging groups of like-minded individuals, that then listen largely to themselves, instead of developing an intermediated "common space."
- Finally, technological disruption more broadly rewards those who are most flexible, and the most able to harness and scale these tools. In a region that lags behind global averages in educational performance, this should be a wakeup call for faster development of human capital—if not to be at the forefront of developing a broad swath of 21st century technologies—to at least be able to understand, apply, control, and take advantage of them.

Technology and Demography in the "Non-Governed" America

Though Latin America is on the whole more democratic and politically freer than in the recent past, in many places today, the rule of law effectively does not operate at all. Instead they are controlled by guerillas, crime, and drug trafficking. The Northern Triangle of Central America (and parts of southern Mexico) stands out for its weak government, poor institutions, poor infrastructure, and high levels of violence. NTCA is particularly unprepared for the global forces that are coming, which absent deliberate and innovative efforts may make it even more difficult for the average citizen to generate income.

Today, two-thirds of the NTCA economy is informal, where workers earn just 35 to 90 percent of minimum wage (and generally pay no taxes). The formal economy, meanwhile, is dominated by medium and large businesses that are largely family-owned, risk averse, and operated to maintain the living standards of the owners rather than grow. Foreign direct investment suffers from poor risk-reward tradeoffs, limiting opportunities for commercial development and modernization.

Human capital is at low levels. Two-thirds of students never finish high school, and three-quarters of those who finish high school can't pass a standardized math test. Less than 11 percent go to college. And for those who do, academia is not well-aligned to provide students the skills future industry will need.

Better policy and governance should be an obvious response to improving these poor conditions, but governments in the region are challenged by deep polarization, and they repeatedly fail to align stakeholders to support programs like housing, infrastructure, and education that are necessary to facilitate jobs in a digital economy. And with low tax revenues and collection rates, they have few resources to build these ecosystems even if the politics were to align.

Poor conditions, combined with poor institutions, has therefore increased the importance of "outsider" and non-governmental actors to daily lives in these least developed parts of the region. Pitifully, drug cartels to operate as part-roving, part-stationary "bandits," bent on extraction of wealth from the local population as a form of pseudo-governance until displaced by another gang. A new and far more positive phenomenon though is the spread of commercial mobile internet-based self-employment and income-generating "platforms" such as the more established Uber and Airbnb but also locally-developed mobile web-based micro-franchises. These technology platforms have started to take hold in NTCA offering jobs, but also "pockets of success" in people's everyday lives through:

- ratings-based social trust;
- accountably for fraud through corporate rather than government recourse;
- minimized opportunities for petty corruption or extortion in daily business activities;
- functional third-party customer service;

- automatic tax payments that change default social expectations for behavior;
- and even low-cost onboarding and targeted education of the platform workers themselves, particularly valuable in a region with very low levels of human capital.

One striking example shared at our roundtable is that women in Guatemala will take an Uber ride by themselves, but not a taxi ride. They appreciate the reviews and accountability of Uber, but generally do not feel safe enough, nor trust their government's protection enough, to take a licensed taxi cab. While these tech-enabled self-employment platforms themselves cannot substitute for long-term good governance, they clearly can complement and even extend areas where governments are able to provide a modicum of stability and infrastructure. These platforms are in a sense technological analogues to traditional political economy "institutions." They offer a new and compelling answer to the question of how NTCA might jumpstart its way out of continuing cycles of poverty and violence—enabling average citizens to meet the needs of other citizens more productively.

In parallel with its indispensable efforts to promote governance and security in this region, the U.S. government and multilateral groups should therefore explore ways to support these burgeoning non-governmental institutions. One could imagine how tech-enabled platform or micro-franchises could increasingly address unmet needs: not just better bakeries, mini-stores, day care centers, electrical services, plumbing services, and so forth, but also traditionally government-mediated fields such as healthcare, banking, credit, insurance, education, clean water services, and trash collection. If proven in the difficult conditions of Central America, such approaches could be applied elsewhere in Latin America to improve jobs and stability.

Meanwhile, the U.S. government should continue encouraging targeted investment in this region, especially to help provide the basic infrastructure for business and commerce to function. It should encourage existing—and funded—development institutions such as the Inter-American Development Bank to take on loans or augment credit-worthiness in these most impoverished parts of the region rather than in the investment-grade Latin American countries that dominate its portfolio today. And where capital is put at risk in this region of poor institutions and track records, it should as a rule be done in public-private partnerships to improve accountability and quality of execution.

Finally, we have the question of violence, which has become so severe in NTCA as to reduce the overall life expectancy of men and act as a massive "tax" on economic activity of all kinds, and which periodically sets off large migrant outflows towards the United States. In addition to security apparatus funding and traditional rule of law efforts, roundtable attendees speculated if there is an opportunity for digital technologies to significantly improve the effectiveness of policing and the monitoring and reporting of crime:

- For example, one might imagine the application of syncretic "big data" platforms, such as those developed by U.S. tech firm Palantir and used (with some controversy) by municipal police departments to attempt to predict criminal activity—would such efforts, if effective, be better received in a region where the stakes are demonstrably higher?
- Similarly, for video monitoring facial recognition technologies. The Chinese government has arguably taken these too far in creating near-police states, but they have also been widely used to reduce interpersonal crime across similarly highly-urbanized UK and Europe and are seeing continuously improving costs and levels of effectiveness.
- India provides another model of a radical "fintech" policy—moving society towards purely digital (and therefore traceable) payments. The Indian public has seemingly accepted the losses in liberty associated with largely replacing cash transactions with this technological alternative as net-positive given heretofore intractable problems of corruption: could such a strategy similarly reduce street extortion in the NTCA or other regions of Latin America facing similar governance issues?

While crime in NTCA and other parts of Latin America has many drivers, roundtable participants emphasized one root cause where the United States has direct influence: drugs. Discussants noted that the largely supply-side focused U.S. "war on drugs" has, despite decades of efforts, failed to stem the availability and use of illicit drugs in the country. This creates a black market in which Latin American criminal cartels thrive, awash in money and arms. These repeated failures would seem to call for a radical rethinking of U.S. drug policy, including a focus on reducing the demand for drugs through selective decriminalization and aggressive treatment and education programs. Any success here over time would have hugely positive implications for the United States domestically as well as the functioning of the most marginal of Latin America societies.

Demographics, Migration, and Implications for the United States

Our roundtable discussion considered how these conditions and the future prospects for Central America and the less stable parts of Mexico might affect the pressure for out-migration to the United States. Discussants observed that such pressures are affected in the long term by essentially unchangeable demographic trends, but short-term variations in net migration between the United States, Mexico, and the NTCA remain dominated by changes in economics and violence.

Today, the population of Mexico is about 125 million, growing slowly (about 1.2 percent per year), and aging rapidly. The number of children under 15 is shrinking, and the number of seniors over 65 is growing: by 2050, there will be 110 seniors for every 100 children. Mexico has fallen to replacement level fertility; its workforce will grow by 25 percent through 2035 and essentially remain flat thereafter. Improved health and declining infant mortality have led to substantial increases in life expectancy, which now exceeds 80 in Mexico for both men and women. But as described above, homicide due to drug and gang-related violence is a major cause of death for young men; future gains in life expectancy will depend on how these countries deal with violence.

Moving south, the combined population of the NTCA is about 31 million. Guatemala is growing rapidly, El Salvador slowly. Fertility rate declines and workforce growth trends lag those already observed in Mexico by about 20 years. Over the next two decades, for example, the Guatemalan potential workforce will explode by 55 percent and expand by another 25 percent on top of that in the two decades that follow. Fertility in NTCA is higher in rural and indigenous areas, and with low education levels teenage parenthood remains surprisingly high. Were this to change, it could help increase women's participation in the labor force in NTCA, which remains low.

What does this mean for migration? 12.6 million people from Mexico live in the United States today, representing nearly one-third of the U.S. foreign-born population. Mexicans living abroad (the vast majority of them in the United Sates) now represent 10 percent of Mexico's population. Ans another 3 million people from the NTCA live in the United States, representing 6 percent of the population of Guatemala, 6.5 percent for Honduras, and 22 percent for El Salvador.

Net migration from both areas to the United States was very high between 1995 and 2005, due both to turmoil in Central America and labor-driven migration from Mexico. This was followed, however, by a huge decline in emigration in 2005-2010, plus an increase in return migration from the United States (the result of the 2008-2009 "great recession" and increased immigration enforcement during the Obama administration).

Going forward, net emigration from Mexico is expected to be well below the historical average: about 50,000 per year to all countries of the world, including the United States, with a large component of that being formal, documented migration. In fact, Mexico today sees large numbers of returnees from the north, including children born in the United States.

Net migration from the NTCA countries, however, particularly from El Salvador, is expected to continue to be substantially greater, due in part to the climate of violence. The number of migrants from NTCA in transit through Mexico—very few of whom end up staying in Mexico, which has a miniscule foreign-born population of just 1 percent, similar to Japan—is now returning to its earlier peak reached just before the great recession. Most first-time migrants are between 15 and 29 years old, are more likely to come from urban areas, and have higher educational attainment than prior generations.

These changes in flow are prompting novel policy challenges. Though the concept may sound odd to U.S. sensibilities, the growing history and now bi-directional cross-border flows of U.S.-Mexican migrants has raised the issue of a "shared" population. The task of harnessing their social contributions and meeting their needs has largely fallen to local governments, who increasingly face questions of healthcare services, education, and labor productivity. Do federal governments in either country have a strategy for effective governance of these peoples going forward?

Meanwhile, increasing through-migration of NTCA asylum seekers in Mexico is changing attitudes there towards immigration as well. Once focused on U.S. treatment of Mexican migrants, Mexican politicians and citizens themselves are now wrestling with the idea that their country could also become a destination for migrants looking for opportunity or refuge. This speaks to an opportunity for U.S.-Mexico collaboration and coordination.

Technological Change and a Return to Great Power Influence?

One expected theme which emerged from our roundtable conversations was the matter of growing Chinese government and business interests across Latin America. In a region which is in the United States' "neighborhood," China has made significant inroads through strategic investments and government-to-government relations, while U.S.

geopolitical attention has largely been turned elsewhere. China, for example, is already Brazil's, Chile's, and Peru's biggest trading partner. Troubled Chinese oil-for-loans deals with Venezuela are well-known, but China has also made billions of dollars in high profile "policy bank" infrastructure loans to Brazil, Argentina, and Ecuador, often without fiscal policy covenants attached. It is the region's largest creditor.

Changing technologies may open the door to deeper Chinese ties across the region. For example, Chinese mining firm Tianqi, likely funded by Chinese state-owned banks, has recently been cleared to purchase stakes in a Chilean lithium miner previously held by a Canadian firm—lithium being a crucial input of growing global importance for electric vehicles and other electronics, and traditionally considered a strategic resource for the Chilean state.

As our roundtable on China in an Emerging World explored, the country is very strong on mobile digital technologies and applications. And Latin America is likely to become an increasingly attractive market for this. Public security and digital surveillance technologies, for example, are one area of growing Chinese export interest which might find receptive customers in this violence-plagued region. Advanced digital communications networks are another. What are the tradeoffs of such investments, and does the United States have an interest in the choices made here?

Private Chinese internet businesses are also eager to expand in the developing world, seeing little opportunity to gain market share in the United States and Europe. Without robust homegrown alternatives, will Chinese firms come to dominate emerging consumer sectors such as mobile digital payments? This is an area with potentially strategic data gathering implications (private Chinese internet firms regularly share user data with the government when compelled), no clear local governmental or institutional strategy, and U.S. and European tech firms have relatively little to offer. The United States should consider how it might work with governments and commercial partners in the region, such as existing banks, on principals for the development of such mobile payment systems—and which are often linked to broader digital governance national ID schemes on top of which private firms can offer their own goods and services.

One of our authors in this volume observed a historical predilection across Latin America for *caudillos*—political strong men—who profess to offer "magical" solutions to entrenched problems. They represent a triumph of the individual personality over political institutions, aligning philosophically with Chinese political and social tendency towards "men" over "law." Our roundtable and the paper in this volume demonstrate the numerous reasons for which the United States and democratic U.S. institutions should be interested in this region—and the ways in which it might go about realizing those interest given a changing world. At the same time, we also observe that even in the past, U.S. attention towards Latin America often peaked when it felt that its dealings with Latin America played into broader "great power" rivalries. Since the fall of the Soviet Union and the dominance of Pax Americana in diffusing such concerns, U.S. attitudes towards this region could be characterized as a sort of benign neglect, inflamed again periodically only at its own southern border. In this emerging new world, perhaps a return to great power relations gives a new—and ultimately beneficial—reason for constructive U.S.-Latin American engagement once more.

Emerging, From Where?

Our roundtable at the Hoover Institution was moderated by the Honorable Pedro Aspe, who has long participated in and observed Latin American governance through a variety of administration roles including as Mexican minister of finance and through involvement in a broad swath international fora and investments. And through our discussions, Aspe remarked that as we consider the longer-term transformations described here, it is also important to understand the fragile and rapidly-changing Latin American political landscape from which those forces are emerging. Indeed, the December 2018 roundtable coincided with some of the most relevant political events that have taken place in some of the largest economies of Latin America in decades: namely, Brazil, Mexico, and Venezuela. Each of those changing foundations deserves mention here.

Starting with Brazil, the largest economy in Latin America, the recent election of Jair Bolsonaro as president signals a right-winged populist regime change that is highly nationalistic and prone to push for economic reform. It is important to understand Bolsonaro's position regarding free trade and his position regarding the apparent opposition between labor protection and technification of production processes. Appointments like that of "Chicago school" economist Paulo Guedes as minister of finance are a positive signal that he wants to open the Brazilian economy, much as Mexico did successfully to encourage new investment in the 1990s. Going forward, we should pay close attention to his economic reform proposals and how they fit into a free trade world. In theory, Bolsonaro's reforms can be enacted, while in practice their implementation may be more complex given the nationalistic campaign promises he made on the road to the presidency.

Then we have Mexico, the second largest economy in the region. The recent election of Andrés Manuel López Obrador ("AMLO") as president, a left-winged populist with an isolationist background, will very likely result in relevant changes to the country's economic policy. It will be of great importance to see how his proposed economic policies are implemented in a country that has experienced a considerable growth of its middle class in the past two decades, most of it linked to a boom in manufacturing driven by free trade agreements in general, and specifically by NAFTA. It is relevant to mention that one of the first things AMLO did after winning the presidential election was to back the renegotiation of NAFTA into the recently agreed USMCA regional trade agreement. He has also been in favor of the CPTPP (a successor to the negotiated Trans-Pacific Partnership, which U.S. president Donald Trump declined to sign in 2017). CPTPP goes even further than the USMCA and the traditional concept of "free trade," as it also pushes for the modernization of areas of the economy, such as digital products and intellectual property, while heavily limiting the role state-owned enterprises can play. Thus, it will be interesting to see how this apparent support for free trade in general interacts with his isolationist, entitlement-heavy and government-centric economic policies—which echo those practiced by the PRI in the 1960s. As in the case of Brazil, we have to better understand AMLO's stand regarding the apparent opposition between labor protection and the further automation and technological-orientation of production processes.

Finally, we have Venezuela, a country that continues to suffer one of the most dramatic economic deteriorations in recent history in Latin America. The start of a second term of Nicolás Maduro as president has divided Venezuela's society in two: the ones that consider him as the legitimate president and those who consider his election invalid such that a different president should be elected. The international community, including the United States, has weighted heavily in recent months, mainly in favor of having new democratic elections in the country, and not recognizing Maduro as the legitimate president. This may be the opportunity to have a regime change in a country that 30 years ago could be considered as one of the most solid economies of the region. A regime change in Venezuela would considerably change the country's labor and economic prospects, although any improvement is sure to take some time to be observed given the relatively high level of deterioration its economy currently has.

Collectively, these changes underscore the degree to which waves of public and political sentiment can gather strength and quickly wash—or crash—through society in this region. We look to an emerging Latin America, the demographics and twenty-first century technologies that will shape both it and its global partners, and how to best prepare and respond to that. But the experience of our moderator also reminds us that in doing so we should anticipate that ever-shifting regional political realties will ultimately underpin, or break down, that fragile capacity for governance.

About

New and rapid societal and technological changes are complicating governance around the globe and challenging traditional thinking. Demographic changes and migration are having a profound effect as some populations age and shrink while other countries expand. The information and communications revolution is making governance much more difficult and heightening the impact of diversity. Emerging technologies, especially artificial intelligence and automation, are bringing about a new industrial revolution, disrupting workforces and increasing military capabilities of both states and non-state actors. And new means of production such as additive manufacturing and automation are changing how, where, and what we produce. These changes are coming quickly, faster than governments have historically been able to respond.

Led by Hoover Distinguished Fellow George P. Shultz, his Project on Governance in an Emerging New World aims to understand these changes and inform strategies that both address the challenges and take advantage of the opportunities afforded by these dramatic shifts.

The project features a series of papers and events addressing how these changes are affecting democratic processes, the economy, and national security of the United States, and how they are affecting countries and regions, including Russia, China, Europe, Africa, and Latin America. A set of essays by the participants accompanies each event and provides thoughtful analysis of the challenges and opportunities.

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