# HOW DIGITALIZATION CAN TRANSFORM **HEALTH, EDUCATION** AND **WORK** AS LATIN AMERICA AND THE CARIBBEAN EMERGE FROM THE PANDEMIC

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*The authors would like to express special thanks for the valuable contributions from Luis Tejerina, Alexander Bagolle, and Bill Savedoff for health; Elena Arias Ortiz, Ximena Dueñas, and Greg Elacqua, for Education; Manuel Urquidi, David Rosas, David Kaplan for Labor Markets; and Mariano Bosch for overall suggestions and support.

# INTRODUCTION

Like other historic disruptions, the COVID-19 pandemic has triggered chain-reactions in innovation, adaptation, and rapid behavioral change. The Latin American and Caribbean Region is no exception. For example, after decades of resisting formal financial services and digital payments, in 2020 more than 40 million people in this region suddenly opened bank accounts. Millions more shopped online or used digital platforms for the first time to receive government benefits when approximately eighty-four countries introduced or expanded digital financial transfers. Companies that had long shunned remote work embraced it in a matter of weeks. Despite massive limitations, public schools launched online learning modalities and used radio, text-messaging, television, and the internet. Hospitals saw exponential growth in the use of telemedicine, and public health systems quickly ramped-up digital applications to conduct epidemiological surveillance, distribute laboratory results and implement contact tracing.

The COVID-19 crisis has also exposed a vast, **pent-up demand for improvements in the quality, convenience, and cost of basic public services.** While the ongoing human and economic toll of the pandemic has overshadowed the potential for dramatic and lasting gains in areas such as health, education, and remote work, it is not too early to ask how these gains might be retained and reinforced. This report highlights opportunities in **telemedicine, tele-education, and telework**—the three areas we think are best positioned to achieve a profound digital transformation in the near-term. For each area, we offer a summary of the status quo, examples of early movers and innovators, and key questions regarding **policy actions that can accelerate current trends.**

**>>> Many of the elements necessary to achieve these transformations are already in place.**

By late 2019, 428 million people in Latin America and the Caribbean (LAC) had a mobile phone subscription and 343 million were connected to mobile internet. This is equivalent to 68% and 55% of the population, respectively. High urbanization levels in the region make digital technologies available to a growing percentage of the population. Today, over 90% of the population lives in areas with mobile internet coverage and the Global System for Mobile Communications (GSMA) estimates that 64%, or an additional 80 million people, will be mobile internet users by 2025. Although the region's profound income disparities mean that broadband is still unaffordable to a large segment of the population, the connectivity gap is steadily narrowing.

As the following case-studies elucidate, if governments combine incentives for investments with the right policies, standards, and infrastructure, the region could see historic advances in the next five years. The result could be a flourishing of new processes and radically improved experiences in health, education and labor.


random
# VARIABLE
GAME_START
PLAYER_RUN
CURRENT_YEARS
CURRENT_MONTH
WEEKS
DAYS_THIS_MONTH
DAYS_THIS_DAYS
random_weeks
return False
PLAYER_GUN_POUNDS
CURRENT_WEEKS
85%
74%
63%

# DIGITAL HEALTH

## (TELE MEDICINE)

## CURRENT STATUS

The devasting impact of the COVID-19 pandemic in LAC can be largely attributed to the preexisting status of healthcare systems that were overburdened and underfunded prior to the crisis. Despite significant growth during past decades, public healthcare spending, at 3.7% of GDP, remains inadequate to address the healthcare needs of the region. By 2019, LAC had an average of 2.1 hospital beds and 2 doctors per 1,000 inhabitants, half the level found in OECD countries. The region also has an acute shortage of medical specialists.

Despite the widespread availability of public health care systems, access to services is inequitably distributed and more limited for populations that are disadvantaged because of income disparity, gender, ethnicity, disability, and/or location. The quality of healthcare services is generally low. Poor-quality healthcare is associated with 10% to 15% of all deaths in low- and middle-income countries; and productivity losses range between US$1.4 and US$1.6 trillion each year. In LAC, only 30% of deaths that could have been avoided by adequate healthcare were due to lack of access; the other 70% occurred when people received poor quality care due to unskilled staff, inadequate surgical facilities, or improperly managed chronic conditions[1].

The unprecedented human and economic toll of the pandemic has forced governments to rapidly take steps

1. [citar SFD salud]

to decongest healthcare facilities, improve the quality of care, and lower costs. In this context telemedicine has emerged as an effective and affordable means to relieve hospital overload and avoid person-to-person contact for many consultations. In Colombia, the number of telemedicine contacts increased from 1.4 million to 101 million during the first year of the pandemic. Uruguay was able to use telemedicine and mobile testing to monitor 86% of its first 1,500 Covid-19 cases. In Argentina, an IDB report estimated a 233% increase in the number of telemedicine calls from 2019 to 2020.

Countries have implemented a variety of telemedicine models to accommodate the needs of their populations. Peru and Ecuador, for example, developed apps where users could engage in "online triage" to schedule medical appointments. Argentina launched TeleCovid, public platform to facilitate telecommunication between healthcare providers and patients. The system was widely valued by users, 88% of whom declared they would continue using telemedicine[2]. TeleCovid was part of a larger telemedicine national strategy (Telesalud) that extends healthcare access to vulnerable and marginalized populations with limited access.

Preexisting enabling factors including physical infrastructure, information infrastructure and legislation largely determined countries' abilities to harness digital healthcare solutions. In the case of Electronic health records (EHRs), for example, Uruguay and Costa Rica were able to quickly adapt existing digital technologies to track and register COVID-19 cases and make data-driven decisions thanks to their comparatively mature EHR infrastructure and online resources. However, most other countries in the region are still in the early stages of EHR adoption. Although more than half of LAC countries had a functioning EHR system by 2018, only a quarter had legislation that supported its use at a national level.

## THE **TELEMEDICINE** OPPORTUNITY IN LAC

To encourage a sustained expansion of telemedicine and other digital health technologies, countries will need to make a concerted effort to modernize the regulatory framework and ramp-up investments across numerous fronts. According to the International Telecommunication Union (ITU), thebiggest hurdles to healthcare digitalization in the region are budgetary constraints, low levels of electronic identification, lack of interoperability, and insufficient institutional support for e-health initiatives.

Legislation also remains highly uneven across countries. A recent IDB study found that only 10 (Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Peru, El Salvador, and Uruguay) of the 26 LAC countries have advanced regulatory frameworks around EHRs. Most of these countries have had these regulations for several years, while some (Argentina, Brazil, and Peru) passed laws to accommodate the use of telemedicine during the pandemic.

Healthcare providers' overall digital readiness is another basic constraint to the growth of telemedicine. As with other digital services, telemedicine is limited by a lack of IT infrastructure, strategic planning, and specialized human capital. To overcome these deficits, we estimate countries should spend 3% to 5% of their healthcare budgets developing digital health systems and capabilities. In 2020, the Pan American Health Organization (PAHO) and the IDB developed a tool to measure providers' readiness to offer telemedicine services. Governments should use these types of independent assessment tools to accurately gauge their situations and prioritize investments for maximum impact.

These investments could pay dividends that go far beyond recovering from the pandemic. In many countries, digital interventions are helping the healthcare sector to balance traditional disease management with a stronger emphasis on prevention. Poor diet, alcohol abuse, and smoking are among the leading drivers of morbidity and mortality in LAC. Some estimates indicate that preventive interventions targeting dietary and behavioral changes, education, and weight management could reduce the disease burden in the region by 37%. A successful digital transformation would make use of telemedicine in areas in which it has proven to deliver results equivalent to in-person visits

2. MSAL, 2020, Red Federal de Telesalud y Comunicación a Distancia: Plan estratégico nacional de telesalud y presentación de resultados.

at a potentially lower cost[3]. Combined with EHRs and Clinical Decision Support Systems, telemedicine also has the potential of increasing the quality of services and reducing medical errors[4]. Finally, telemedicine can become a powerful means of expanding preventative health measures that involve behavioral interventions, such as those related to mental health.

Some countries are already implementing digital strategies to promote health-related habit changes. Jamaica Moves is an app created by the Jamaican Ministry of Health and Wellness and key partners to improve nutrition and physical activity among Jamaicans and reduce the risk of non-communicable diseases. While the app was rolled out in 2017, it has undergone continuous updating to accommodate changing needs and public health goals. In May 2021, the Ministry launched JaMoves on the Move, a software that tracks blood pressure, glucose levels, weight, and other health status indicators and pushes notifications to nudge users to follow certain recommendations and tips. Beyond the pandemic, the gamification of healthcare could change the way people think about medicine and improve outcomes in LAC.

3. There is a need to have robust studies on cost effectiveness of telemedicine, however
4. See https://publications.iadb.org/en/electronic-health-record-systems-definitions-evidence-and-practical-recommendations-latin-america, https://pubmed.ncbi.nlm.nih.gov/30959468/

## >>> 1DOC3 AND PORTAL TELEMEDICINA:
## THE POTENTIAL OF AI TO MEET LAC'S INCREASING NEED FOR CARE

The use of artificial intelligence (AI) in telemedicine is rapidly spreading around the world, offering effective ways to collect and process patient data, while significantly improving quality of care by increasing the amount of information processed by medical providers. In LAC, 1DOC3 and Portal Telemedicina are two home-grown examples of telemedicine applications that are leveraging the power of AI to extend access to quality healthcare in the region.

1DOC3 is an AI-assisted telemedicine platform originally developed by entrepreneurs in Colombia. 1DOC3 users can access the platform through a website or mobile app and start a health evaluation process without the need of an appointment. The system screens patients using an AI-driven symptom checker and guides them to different physicians based on this assessment. By screening patients remotely, the platform saves time for patients and doctors and increases the amount of people that can receive care in each period. The cost of an individual consultation is US$9.99, and patients can choose monthly subscription plans starting at US$19.99.

Since the onset of the pandemic, 1DOC3 consultations have increased by a factor of 11, reaching 300,000 per month. Overall, the platform has served over 1 million users. 1DOC3 raised US$3 million in venture capital earlier this year, and it has plans to expand its current network of doctors in Mexico, Peru, Colombia, and Ecuador. In addition to expanding geographically, 1Doc3 is also contracting with private companies to provide remote care as part of employee benefit packages.

Portal Telemedicina is a platform that reaches more than 33 million patients served by hospitals and clinics in 280 cities in Brazil and Angola. Portal Telemedicina uses AI to screen

symptoms and recommend a course of treatment. To ensure the quality of care, these findings are evaluated and confirmed by doctors before being communicated to patients. This process also retroactively informs the algorithm to improve the models. By building on its experience detecting pneumonia cases prior to the pandemic over the past eighteen months, the platform has been able to detect COVID-19 cases in less than ten minutes with 95% accuracy.

Portal Telemedicina is broadening healthcare access to remote areas at an affordable cost, benefiting low-income and marginalized communities. For example, in Coari, a small city 444 kilometers from Manaus, Portal Telemedicina offers access to quality care provided by specialists based in Sao Paulo. Across the country, the platform provides access to specialists 24 hours a day, seven days a week, and is helping hospitals and clinics to dramatically reduce waiting times for patients.

1DOC3 and Portal Telemedicina illustrate the potential to improve and expand the quality of care in the region through digital platforms and AI. Such services could offer a much-needed complement to the overstretched health system while giving low-income patients more flexible ways to access care. COVID-19 recovery strategies should include incentives to increase the dissemination of telemedicine and other innovative solutions from both public and private providers, while ensuring that internet access becomes more widespread and accessible.

## KEY POLICY QUESTIONS

1. What regulations should be introduced or updated to facilitate rapid expansion of telemedicine in the context of each LAC country? (The IDB is conducting an ongoing survey of telemedicine regulations in the region.)

2. How can countries ensure interoperability between telehealth systems and other health systems (for example, Electronic Health Record platforms), to avoid the creation of silos and improve the flow of information for health professionals and patients?

3. Which digital strategies will encourage a more participatory, patient-centered approach to healthcare that empowers patients to collaborate with medical professionals to proactively promote health and reduce disease risks?

4. What is the role of patient preparedness and consumer protection in the design and implementation of health services?

5. How can current and future medical professionals be engaged with the design and use of telemedicine in ways that encourage utilization, good quality services, and continuing openness to innovation?

6. Given the constraints faced by national health budgets, can private investment play a role in expanding the scale of telehealth projects beyond the pilot phase?

7. How can governments gather evidence on the effectiveness of telehealth investments to determine whether they produce better outcomes than face-to-face care, and under what circumstances?

# HYBRID-EDUCATION

## (TELE EDUCATION)

## CURRENT STATUS

Although education systems worldwide were among the most severely disrupted sectors during the pandemic, schools in LAC suffered particularly severe setbacks. From March 2020 to February 2021, schools in the region were shut down for an average of 158 days, compared to a global average of 95 days. Of the 20 countries with the lengthiest full school closures, 11 are in LAC. As a result, around 166 million school-aged children either lost, or were at risk of losing, an academic year.

In response to the crisis, 96% of LAC education ministries used radio and/or television to offer some form of remote learning, and 92% implemented online education portals. Uruguay was one of the best prepared countries in the region, since 85% of its households already have internet connectivity. The government developed an online platform for teachers, students and parents to access customized content, allowing 75% of students and 84% of teachers to stay connected throughout school closures.

Other countries collaborated with the private sector to bridge connectivity gaps. According to a survey carried out by the IDB's Education Division in February 2021, 42% of the countries in Latin America and the Caribbean provided free internet access for education platforms and sites. Countries used a variety of special arrangements with telecommunications firms to ensure free access to online learning platforms that offered resources including articles, interactive games,

eBooks, digital libraries, video lessons, and audiobooks. In Colombia, for example, the Ministry of Information, Technology and Communications mandated mobile operators to provide zero-rating conditions[5] to the education community. Similarly, Chile worked with the mobile phone association to guarantee free downloads for study guides. The Chilean government also formed an alliance with Google to facilitate technical support to educational institutions.

## THE HYBRID EDUCATION OPPORTUNITY IN LAC

To enable a permanent expansion in the use of remote learning as part of their education ecosystem, LAC countries must create a comprehensive program to close the connectivity gap for low-income students, train teachers, and evaluate the effectiveness of various remote learning methods.

Although tele-education helped millions of students in LAC maintain some level of learning during the lockdowns, low-income students had limited access because of the lack of connectivity. In Bolivia and Colombia, more than 40% of parents reported that their children could not participate in school activities because they did not have the means to do so: an internet connection, a computer, a tablet or a cellphone. Students from the most vulnerable households have almost no internet access at home, especially in Peru (14%), Mexico (19%), Panama (24%) and Colombia (25%)[6]. Lack of connectivity among low-income students may also be linked to the likelihood of dropping out of school entirely. Although more research is required, early estimates indicate that millions of children may have permanently dropped out of school during the lockdowns, leading to an increase of at least 15% in the region's drop-out rate.

In large countries such as Argentina, Brazil, Mexico, or Peru, between 43% and 50% of students between the ages of 6 and 23 did not participate in any learning activities whatsoever or had zero interaction with teachers during the closures. There were 166 million students affected by school closures in 2020. By the second quarter of 2021, 105 million were enrolled in school systems that were partially open, 1 million were enrolled in school systems that were completely open, and 60 million were not enrolled at all, as their school systems remained closed. Many students have had minimal engagement with the school systems and are at a high risk of dropping out of school altogether[7].

There is very little evidence at this point of how effective tele-education efforts were, even for children with good connectivity. Many teachers and parents are believed to have lacked the digital skills necessary to support their children's learning experience during this period. Only half of the teachers in the region reported being able to perform basic tasks using computer applications. Even at the university level, three out of four professors did not feel fully equipped to incorporate digital technologies in their coursework. As evidence of best practices in remote learning becomes available, education ministries in the region will need to mandate continuing education initiatives and long-term training programs to ensure that teachers at all levels are capable of leveraging distance learning tools.

Evidence from other countries suggests that for hybrid education systems to succeed, governments must adopt Education Management Information Systems that, among other things, enable continuous monitoring of each student's learning trajectory and the implementation of individualized learning plans. A recent study by the IDB´s Digital Education project showed that out of 16 public educational systems[8] surveyed, most educational systems have rolled out a nominal register at the student level, which could enable them to track a student's learning path through the education system. However, these educational systems lag behind in the use of that information: only 8 have implemented individual student reports in digital format, and only one has developed appropriate tools for timely detection of learning challenges and dropout risks.

5. Zero-rating policies allow free access to certain pages and digital content through agreements between the government and telecommunications firms, establishing that access to certain Internet content is excluded from the traffic and does not consume data.
6. https://publications.iadb.org/publications/english/document/CIMA-Brief-20-COVID-19-Are-We-Prepared-for-Online-Learning.pdf
7. Miguel Székely, Pablo Zoido ¿Qué ha sucedido con la educación en América Latina durante la Pandemia? Mimeo
8. The 16 education systems analyzed correspond to Argentina (provinces of Córdoba, Mendoza and Santa Fe), Brazil (state of Espírito Santo and municipality of Florianópolis), Colombia (city of Bogotá), Costa Rica, El Salvador, Honduras, Jamaica, Panama, Paraguay, Peru, Dominican Republic, Suriname and Uruguay (Council for Early and Primary Education)

In advancing tele-education, policymakers will need to ensure that it does not amplify inequities, especially gender-based ones. As schools closed down during the pandemic, the burden of household work—including childcare, elder care and helping children with schoolwork—fell primarily on women. School closures put young girls at a greater risk of early pregnancy, abuse, and gender-based violence, and more girls than boys in secondary education missed at least three quarters of classroom instruction in 2020. Hybrid education strategies must anticipate and compensate for such disparities.

## >>> DESCOMPLICA AND LAB4U:
## LAC STARTUPS DISRUPTING THE FUTURE OF EDUCATION

The pandemic has accelerated the emergence and expansion of several education startups across the region. In Brazil, the education technology platform Descomplica offers test-preparation and post-graduate courses via a combination of more than 70,000 videos and live sessions. In 2021, it secured US$83 million, the largest investment ever received by an education technology startup in LAC. Based in Chile, startup Lab4U uses built-in sensors to transform smartphones and tablets into portable laboratories for more than 100,000 students in 20 countries.

Descomplica is changing the education landscape in Brazil by democratizing access to standardized test preparation—a critical factor for gaining access to higher education. Access to top-tier universities in the country is mainly determined by income and geography, as the most prestigious schools are mostly private and located in major cities. While traditional test-prep courses can cost as much as six times the average income, Descomplica offers a complete learning platform for less than US$4 per month, along with complimentary free content on social media.

Lab4U aims to facilitate STEM learning through inexpensive and accessible laboratory applications. Their three apps, Lab4Physics, Lab4Chemistry, and Lab4Biology, can be accessed at no cost with limited functionality, or for US$29 per month for unlimited experiments and tools. An assessment conducted by the IDB in Mexico in 2018 found that Lab4Physics had a significant impact on student's physics knowledge, self-perception, and interest in studying a STEM career, compared to students in the control group.

Descomplica and Lab4U have leveraged technology to provide quality education resources at scale, allowing anyone with access to the internet to learn from highly qualified teachers and high-quality experiments. As such, they show the powerful complimentary role that the EdTech market can play in LAC.

## KEY POLICY QUESTIONS

1. What permanent incentives can governments offer telecommunications firms to guarantee access to digital distance learning platforms for 100% of students within the next 5 years?

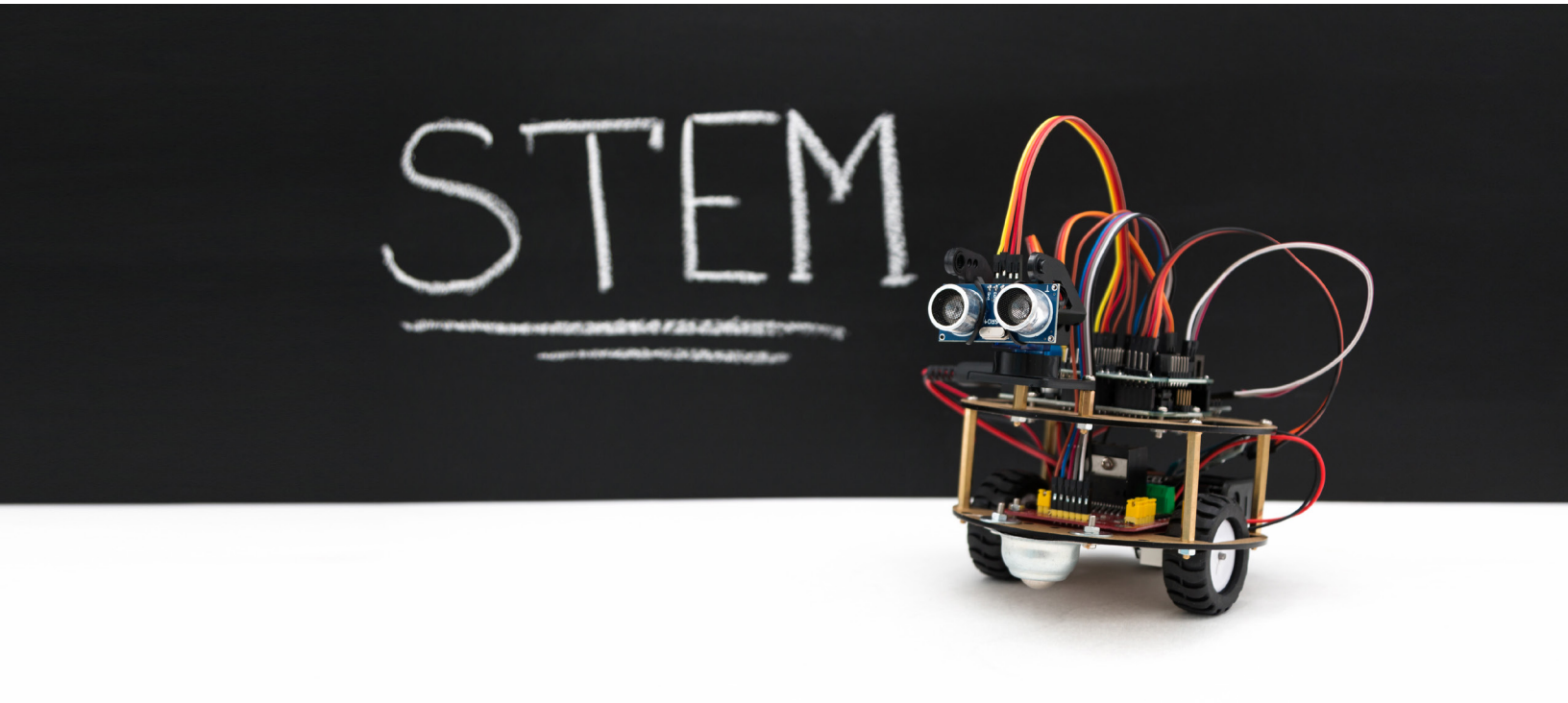
2. How can governments leverage the surge in technology use by teachers and principals during the pandemic to consolidate their skills in hybrid education (which combines face-to-face and distance learning)? What kinds of virtual courses can be quickly offered to help teachers and principals who are struggling to adapt?

3. What convenient, cost-reducing efficiencies garnered from the digital transition can school systems use as incentives for teachers and principals who had previously resisted this change (i.e.: permanently digitizing administrative tasks that teachers and principals previously had to carry out manually, eliminating needless bureaucratic procedures, etc.)?

4. How can the current crisis be used to speed up the adoption and expansion of Education Management Information Systems? In the near-term, how can these systems be used to enable better tracking of individual students, greater personalization of instruction, more fluid communication and collaboration between schools and families, and greater tracking of school level spending and resource allocation? In the medium-term, how can these systems be used to identify deficiencies and inequities in order to allocate resources more effectively?

5. What measures should be implemented by governments to guarantee that learning gaps are not widened due to inequities in access to technology and/or gender biases?

6. What level of hybrid education systems would be ideal? What model for what grade level?



# TELEWORK

## CURRENT STATUS

Prior to the pandemic, telework was uncommon in the LAC region and many companies were unprepared to adjust to the lockdowns. The composition of employment in the region also hampered the potential of telework, as contact-intensive sectors represent almost 45% of employment. According to a recent International Labor Organization (ILO) report, only 3% of employed workers teleworked in LAC in 2019, and downloads of apps such as Zoom and Microsoft Teams stood at 77 per 100,000 people in LAC, compared to 525 per 100,000 in the United States.

This situation rapidly changed during the first months of the pandemic. The number of downloads for telework applications increased 20-fold between January and March of 2020, and telework peaked in April, when lockdown mandates were most widespread. ILO data from Argentina, Chile, Costa Rica, Peru, and Uruguay shows that between 20% to 30% of salaried employees worked remotely during the year—a huge jump from pre-pandemic levels.

Before the pandemic, women made more use of telework than men. During the pandemic, this gap widened. The implications of this fact are complex and require in-depth analysis. On the one hand, teleworking allowed women (especially those with a high level of education) to remain connected to the job market. On the other hand, both teleworking and flexible arrangements may have increased the paid and unpaid workload for women, thus reinforcing gender biases.

Workers in the region reported several advantages of teleworking, such as flexible scheduling, better work-life balance, and increased productivity. In a survey with call center employees in Brazil, 98% of respondents reported a better quality of life due to spending more time with their families.

Nevertheless, the potential of telework is not being fully achieved across the region. Based on International Monetary Fund (IMF) estimates, around 25% of jobs in the region are "teleworkable"—an indicator of how easy it is to perform a job remotely. According to ILO estimates, however, despite the impressive increase in the six countries mentioned above, region-wide only around 23 million people teleworked at some point during 2020, which amounts to less than 10% of the region's total workforce. This indicates that LAC has significant room to expand telework.

Estimations show that between 10% and 35% of workers could telework in the region, with a clear relationship between this percentage and the degree of development of their countries. At the peak of the pandemic (June 2020), the percentage of teleworkers in Chile, Mexico and Uruguay (countries for which there are reliable measurements during the pandemic) was between 20% and 40%.

The characteristics of remote workers also changed during the pandemic. In 2019, 20% to 50% of employees working from home had low educational levels, since most were performing manual labor. (They were not doing things online; they were just working from home). The types of jobs that switched to telework during the pandemic, however, generally involved workers with higher educational levels. During lockdown periods, fewer than 10% of remote workers only had a high school education. In Costa Rica, for example, the proportion of remote workers with a university degree or some college experience increased from 50% in 2019 to 95% in 2020. In terms of gender, women were more likely to work remotely both before and during the pandemic.

The advent of information technology and computer science is also changing the job-training landscape in LAC. Marketplaces like AccionTrabajo in Paraguay or CompuTrabajo in Chile already offer virtual training programs, and this trend is spreading to more traditional labor institutions across the region.

Telework has also become an appealing alternative for minority groups and people with disabilities who suffer from different types of workplace discrimination. The Brazilian branch of the Dutch platform Specialisterne, for example, has given transgender workers access to remote work opportunities, while avoiding discrimination. Specialisterne also offers high quality jobs in areas such as software testing, quality control, and data conversion to people with autism spectrum disorder. This model is currently being replicated and scaled up by IDB Lab in Mexico, with the goal of benefitting over 10,000 people through digital opportunities. While these platforms do not solve the root causes of discrimination, they provide a safe alternative that can be complemented by additional government efforts to ensure equal opportunities.

Beyond telework, digital technology has facilitated on-demand and e-commerce platforms. The use of delivery platforms such as Glovo, Rappi, and UberEats increased by 50% in March 2020, creating options for people seeking jobs or additional income. Social media and e-commerce also experienced a massive surge during the pandemic, creating opportunities for formal and informal workers and small businesses that were forced to limit in-person services.

## THE **TELEWORK** OPPORTUNITY IN LAC

To achieve a lasting expansion of remote work across multiple sectors, countries in LAC will need to accelerate efforts to close their remaining digital gap, while modernizing labor legislation to encourage remote work and offering targeted telework incentives for women.

Despite the growing penetration of telework in the region, the internet was inaccessible to most workers during the pandemic. In Bolivia, when surveyed[9] about obstacles to telework, 58% of responders reported lack of access to the internet and 92% said they did not have adequate devices.

9. Survey forthcoming

People with limited digital skills face additional challenges. A large share of adults in the region have little or no computer experience: only 43.6% of survey respondents in Peru and 25.2% in Chile reported having such skills. Across LAC, only one third of adults use computers, smartphones, or other ICT tools at work at least once a week. This obstacle is especially acute for smaller companies: 63% of micro enterprises and 47% of medium-sized companies reported being unable to transition to telework.

The possibilities for telework depend on the type of economic activity carried out and the part of the production process in which the worker participates, which in turn is correlated with educational levels. In Chile, Mexico and Uruguay, workers with high education were able to transition to a virtual work environment, while those with low education could not do so to the same degree. In these three countries, between 35% and 60% of workers with high education were telecommuting, while fewer than 10% of workers with low education were able to do so.

Finally, successful telework initiatives will need to pay special attention to gender issues. Studies indicate that remote work can offer flexible scheduling and higher productivity, but evidence shows that it can also interfere with people's personal lives. For women, transition to telework during lockdown periods overlapped with additional household chores, childcare, and homeschooling. Across the region, COVID-19 has erased over a decade of progress in the expansion of women's participation in the labor force, which dropped from 52% in 2019 to 46% in 2020. This exodus of women from the labor force has been widely attributed to increasing demands at home because of lockdown measures.

## >>> REGULATING THE FUTURE OF WORK: COVID-19 PROMPTS THE CREATION OF TELEWORK LAWS

The pandemic has forced countries to rethink the future of work and has prompted a surge of legislation that aims to optimize and expand opportunities for telework. Before COVID-19, most LAC countries did not have updated laws regarding telework. Colombia was the most advanced country in this respect, with a law that has regulated telework since 2008 and a website that communicates important information to remote workers. Peru, Brazil, and Costa Rica had also introduced telework into their legislative framework prior to 2020. Most countries, however, did not have specific legislation in this area.

By the end of 2020, Mexico, Panama, El Salvador, Chile, and Argentina had passed laws regulating telework and other countries in the region with existing regulations had modified them to meet new needs dictated by social distancing rules. Most laws distinguish between teleworking and distance or remote working, with specific rules and worker protections for each format.

Today, these laws are enabling increased digital transformation in the region by creating new incentives for employers to increase their offers of remote positions and provide increasing flexibility in the workplace. However, it remains to be seen whether the new regulations provide adequate protections for labor rights, and whether they lead to permanent changes in work patterns.

The sustainability of these laws is also in question, as many were passed as emergency measures without extensive research or debate. Some were streamlined and drafted as

guidelines to avoid legislative hurdles. In a few Caribbean countries, for example, remote work and telework have been addressed through guidelines related to occupational safety and health, rather than through specific labor laws.

Similarly, the fast-tracking of telework laws meant that some overlooked important components regarding worker protections. Only five out of 11 countries analyzed by the ILO in a recent study established data protection and privacy standards in their telework laws and no country required that workers or supervisors be trained in telework skills. Similarly, while most countries introduced telework-related health and safety protections, only one included accident reporting guidelines and only three referred to workplace inspections.

Given the speed with which these laws were approved, it can be expected that further changes will be needed to ensure their durability and relevance in the context of LAC. As more workers can telework and new opportunities for remote working arise with increasing internet penetration in the region, these regulations will need to evolve in order to protect teleworkers and their privacy, guarantee appropriate training schemes and avoid discrimination.

## KEY POLICY QUESTIONS

1. How can telework opportunities be enhanced to include flexible work alternatives for workers who cannot or do not want to obtain a "traditional" formal job (in the workplace, with fixed hours)?

2. What incentives would encourage private sector investment and competition in the kinds of connectivity that remote work requires, particularly for low-income workers and those who live outside major urban centers?

3. How should telework laws passed during the pandemic be modified or updated in the coming years?

4. What balance should firms with telework possibilities have, that will allow for flexibility while protecting workers? How should the tax and social security system be adjusted to reflect new arrangements?

5. What is the most efficient way to create a dynamic market for digital work skills training relevant to specific industries?

6. What kinds of "upskilling" and "reskilling" programs will be most relevant for each country to ensure that vulnerable populations are not excluded from the labor market?

7. How can telework be used as an opportunity to promote quality jobs for people with disabilities, women with children and sexual minorities that have traditionally faced discrimination?

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