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The Digital Gender Divide: Women in Latin America and the Caribbean in the Digital Era

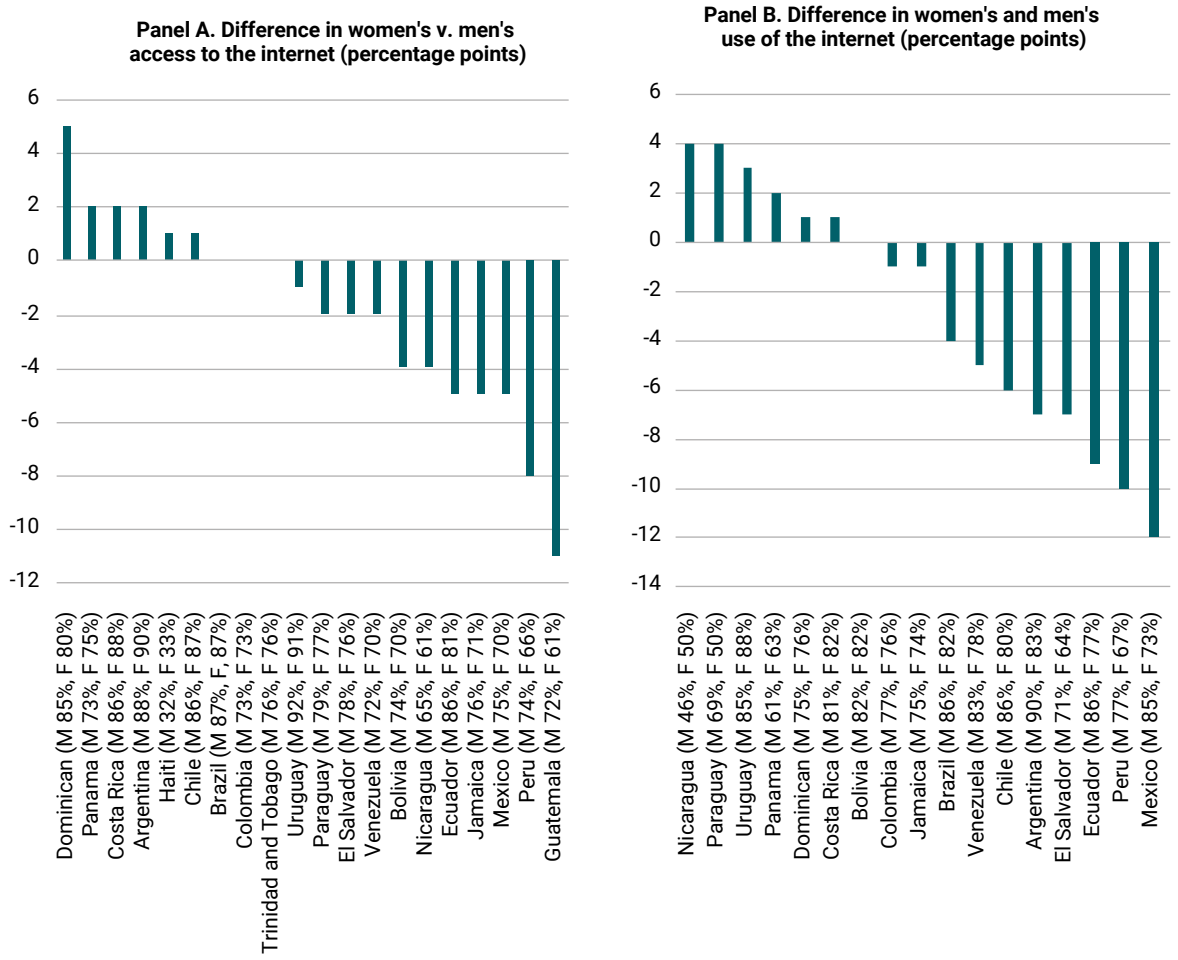
CONTEXT

From 2018 to 2022, household access to home internet in Latin America and the Caribbean (LAC) increased from 50.7 to 68.4 percent, with higher access rates in urban areas (ITU, 2023). In most countries of LAC, there are pronounced disparities in access to the internet between poor and non-poor households (World Bank, 2024). There are notable gender disparities too. Men generally have better access to the internet than women, but in some countries a higher percentage of women accesses the internet (**Figure 1**). The gender gap favoring women (expressed in percentage points) is particularly significant in the Dominican Republic. Similarly, a noticeable gap in favor of women's internet usage can be seen in Nicaragua, Paraguay, and Uruguay **(Figure 2**).

Despite progress, various individual and societal factors still hinder women's participation in the online world (IDB, 2022; Alliance for Affordable Internet, 2021; World Bank, 2021). These include household responsibilities, wage gaps, and unaffordable telecom services and devices. Women are less likely to receive digital tech training, feel confident in their skills, or work in the digital sector. Additionally, women in LAC express greater concerns about online privacy, security, reliability of information, scams, and harmful content exposure. In addition, women face greater exposure to automation compared to men. And in countries with significant gender digital divides, women employed in positions conducive to artificial intelligence may encounter barriers to effectively utilizing this technology (Gmyrek et al., 2024).

This digital gender divide has an economic impact on households and society. Evidence from various regions indicates that digital access enhances women's labor market opportunities. For example, Viollaz and Winkler (2021) found that in Jordan, a one percentage point increase in internet access results in a 0.7 percentage point rise in women's labor force participation. In Tanzania, high-skilled women in areas with mobile internet coverage transitioned from self-employed farm work to non-farm employment (Bahia et al., 2023). In Mexico, computer

Figure 1: Men have better access to the internet than women in most, but not all of the countries in the LAC region.



Source: Gallup Analytics

Note: Figures are based on the latest available years ranging between 2017-2024. Internet usage includes social media, in past 30 days on any device.

access enabled telework and increased women's labor force participation during the COVID-19 pandemic, especially among college-educated women (Inchauste and Siravegna, 2024). The macroeconomic implications are significant. For instance, the Alliance for Affordable Internet (2021) estimated that in 2020, the exclusion of women led to a GDP loss of approximately US$126 billion in 32 low and lower-middle income countries (LLMICs). Closing the gender gap in mobile internet usage in low- and middle-income countries could stimulate economic growth, potentially adding $700 billion to global GDP, according to GSMA (2019)

EVIDENCE OF WHAT WORKS

The World Bank Digital Development Global Practice launched a multi-pillar approach to reduce the digital gender gap. Promising areas of intervention include:

- **Expanding the digital infrastructure**, encompassing physical infrastructure, affordability of data and internet-enabled devices, and addressing restrictive social norms. Notable interventions involve extending coverage to public access community centers or libraries in locations predominantly frequented by women, ensuring convenient operating hours, and providing adequate female staff. Furthermore, women's access to devices and the internet can be facilitated by encouraging private Mobile Network Operators and retail sellers to implement installment plans for devices and adopt affordable pricing models, such as pay-as-you-go schemes based on actual consumption rather than upfront payments.

- **Improving access to digital infrastructure and financial services** can empower low-income women to save, borrow, make payments, and protect against economic shocks. This can be done by increasing access to national IDs, direct payments to accounts in their names, and ensuring sufficient distribution networks like banks and ATMs with female employees, or supporting mobile money access.
- **Empowering women entrepreneurs in ICT** involves improving access to digital finance and grants, offering business training and mentoring, and creating opportunities through procurement for women-owned businesses.
- **Developing digital skills for women** through STEM studies and digital literacy training on basic digital and mobile tasks. The training can address social norms by employing female instructors and ensuring timing does not conflict with care responsibilities for women attending the sessions. Training priorities include privacy, online safety, and encryption mechanisms to help prepare women against online risks (e.g., cyber violence).
- **Including a gender perspective in the ICT regulatory and policy framework** to use ICT as a tool for ensuring non-discrimination, inclusiveness, privacy, and data protection. Actions could include setting measurable targets for inclusive access, digital livelihood opportunities for women, employment, and enrollment in STEM education. Other methods might involve consulting with and involving local communities and experts in the policy development process, and enhancing legislation for online safety and combating cybercrimes.

While there is limited rigorous evidence of interventions aimed at closing the digital gender gap tested in LAC, the following are examples of empirically tested studies in this area:

Digital financial services enhance women's saving and spending decisions.

In **Mexico**, a quasi-experimental study evaluated the electronic payment of the *Oportunidades* conditional cash transfer program (which is no longer operational) into bank accounts. The intervention included opening free bank accounts for beneficiaries in non-banking institutions, reducing travel distance and costs. Consequently, both men and women decreased informal saving practices, received remittances more often, and used their savings to manage shocks instead of taking loans or cutting consumption.

Digital training enhances students' achievements and women's employment opportunities.

In **Ecuador**, a randomized experiment assessed the *Más Tecnología* program, which offers computer-aided math and language instruction in primary schools. Each participating school received basic computer lab infrastructure and four computers with software tailored to support personalized learning in language and mathematics. The program positively impacted mathematics test scores. In **Ecuador**, a randomized control trial evaluated the impact of a Digital Personalized Learning Software for mathematics remediation on first-year technical and technological higher education students. The software significantly reduced the likelihood of course repetition, especially among male students, and greatly improved standardized test scores in mathematics for both genders. The notable decrease in course repetition for males may be due to their higher enrollment in STEM disciplines.

In **Argentina** and **Colombia**, a randomized control trial of a high-quality, intensive, part-time computer coding bootcamp was designed for women to improve their skills and employment outcomes. Applicants admitted to the coding course received a scholarship that covered most of the tuition costs. The results indicate that the program increased participants' coding skills and their probability of obtaining a job in technology. Technology jobs are more likely to offer flexible hours and work-from-home arrangements, as well as generate higher job satisfaction compared to other jobs. Additionally, the study compares the employment situation of the participants before and during the first months of the COVID-19 outbreak, finding that the program increased their resilience to a downturn in the labor market.

Digital training increases women's access to information, boosts their financial literacy, and improves micro-entrepreneurs' access to markets and revenues.

In **Colombia**, a randomized evaluation examined a tablet-based financial education program with mostly female recipients of a conditional cash transfer (CCT) program. The intervention led to notable improvements in financial knowledge, attitudes, practices, and financial performance. These effects were particularly pronounced among poorer, less educated, and more rural populations, who showed increased financial health more than two years later. Participants were also more likely to set savings goals and reported more informal savings. Yet, the impact on formal financial inclusion after 2-years was limited, suggesting the possible benefits of combining supply-side solutions with financial education.

In **Guatemala**, the World Bank's pilot project DIGITAGRO enabled small-holder women to join agri-food markets through digital solutions, linking them with the National School Feeding Program (SFP) that buys food from local farmers. In a randomized trial, a digital campaign encouraged women agri-preneurs to participate, providing product, price, and contact information via video and SMS reminders. The campaign improved rural women's familiarity with the SFP, increased their likelihood of selling products, raised knowledge on registering as providers by 21%, increased animal product sales by 12%, and boosted prices received by 31.5%.

HOW ARE WBG PROJECTS ADDRESSING THESE ISSUES?

Through its support to country operations and in line with the promising approaches identified, the WBG is working to address the digital gender gap in the region.

- In Argentina, the Strengthening Data Infrastructure to Close the Digital Gap project (2023 – to date) aims to foster women's inclusion in the increasingly digitalized economy. Leveraging on an expansion of broadband coverage, this operation aims to address gender disparities regarding women's lower likelihood of internet use as well as women's underperformance in STEM fields. Broadband expansion is expected to reach 175,000 women. In addition, the project will offer training in basic and advanced digital literacy, targeting female students and public sector employees and will monitor how many of the trained women managed to secure new employment opportunities.
- In the Dominican Republic, the Support for the Implementation of the Public Administration Reform and Modernization Plan (2024 – to date) seeks to increase women's use of digital government services and develop gender-sensitive digital services. To achieve both objectives, the project will ensure that administrative services and delivery channels are tailored to meet the needs of female users. As a key intervention, the project will establish Service Delivery Innovation Labs, which will_encourage women to increase their use of Government services that are offered digitally, and facilitate female users' interaction with allow public officials to collaborate with female users to streamline service processes
- In Brazil, the Espírito Santo Digital Acceleration Project (2024 – to date) aims to increase women's digital skills while also tackling the high prevalence of gender-based violence (GBV). Currently, only 32 percent of Brazilian women use the internet for professional or productive purposes, compared to 44 percent of men. To narrow this gap, the project will offer women digital skills training and track its impact on their employment-related digital competencies. Additionally, the project aims to enhance Brazil's GBV helpline *Line 180,* by integrating it into a new emergency center equipped with advanced technology. This upgrade will improve response coordination and ensure greater accessibility for survivors.
- In Mexico, the Inclusive & Sustainable Economic Growth DPF (2022) supports legal reforms to bridge the digital financial gender gap. Currently, less women than men in Mexico report owning a transaction account or making digital payments. In addition, women report higher levels of distrust and risk perception in the digital financial ecosystem. To address these inequalities, the Government issued regulations for electronic payment institutions to ensure consumer protection and cybersecurity. These regulations are expected to address some of the drivers of the financial inclusion gender gap and foster a more inclusive digital financial ecosystem.
- In Haiti, the Haiti Digital Acceleration Project (2021 – to date) promotes increased digital access for women and safeguards against online violence. With only 7 percent of Haitian women and girls having access to the internet, the project aims to expand accessibility and enhance women's acquisition of advanced technical training. Participants will complete an intensive tech- and soft-skills training with a focus on artificial intelligence, blockchain, and coding.

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