

OVERCOMING EXCLUSION IN DIGITAL ECONOMIES

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ABSTRACT

The United Nations Capital Development Fund's Inclusive Digital Economy Scorecard assesses a country's aggregate progress on the main components of an inclusive digital economy – skills, innovation, infrastructure, and policy and regulation – and progress specifically to improve women's inclusion. This chapter draws on the experience of twenty-three countries that have used this tool to design context-specific digitalisation strategies and policies for digital transformation. It highlights that the information generated from this tool can guide governments and development actors in identifying and addressing barriers to equal and inclusive digital economies.

Key messages

- A market-development approach and dedicated tools can help governments design digital transformation strategies, measure progress and identify constraints that exclude groups from the digital economy.
- Measuring the inclusion of women in digital economies can pinpoint gender gaps in access to finance, business ownership and skills, and financial literacy that can be addressed with common approaches in different countries.
- Development co-operation providers should tailor financing and technical support to the stage of development of a country's inclusive digital economy and leverage the roles and behaviours of existing players in the market.
- Development co-operation providers can play a role to bring together private, public and civil society actors to identify investments and regulatory changes that build inclusion in the digital economy.

Digital economies that leave no one behind can only be achieved if they are developed at the national, regional and global levels and with a deliberate focus on making them inclusive. Women, migrants, refugees, youth, elders, disabled and rural populations are often marginalised and denied digital innovation and technology due to social norms, societal status, and limited revenue and capacity. Market constraints also hold back micro-, small- and medium-sized enterprises (MSMEs) – most firms around the world – from accessing and using digital technologies.¹

A market-development approach can help governments and the private sector build inclusive digital economies by identifying market constraints and devising step-by-step solutions to remove barriers to digital access and adoption. The United Nations Capital Development Fund (UNCDF) has a set of tools to assess the level of development of a country's digital economy and its main components. Development co-operation providers and other funders can help by investing for the long term, providing granular expertise at each stage of market development, and supporting non-traditional financing tools that help women and other marginalised groups participate in the digital economy.

Building inclusion at each stage of development of a digital economy

The COVID-19 crisis stirred new interest in enabling and advancing digital transformation. Since the start of the

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Expanding digital services at each stage of market development

To date, 23 of the 28 countries in Africa, Asia and the Pacific where UNCDF is present use its Inclusive Digital Economy Scorecard (IDES): a policy and performance tool for assessing the level of development of the

digital economy in terms of its enabling policy environment, digital infrastructure and payments, innovation ecosystem, and customer skills. The IDES also scores the main components of an inclusive digital economy (skills, innovation, infrastructure, and policy and regulation) and women's inclusion more specifically² (Figure 27.1).

Another score, the Digital Economy Score (DES), looks at the stage of a country's digital transformation, starting with inception, moving on to the start-up stage and establishment of digital financial services, then to expansion, when a greater range of digitally enabled services is available, and finally consolidation. Of the countries that implemented the IDES in 2021, one is at inception, 16 have start-up digital economies, five are at the expansion stage and one is at the consolidation stage. Strategic investments, financing and expertise provided by development actors and other funders at each stage of a country's trajectory can support governments and the private sector.

Inception: Little more than telecommunication services

In the inception stage (IDES score up to 24%), the country lacks what UNCDF

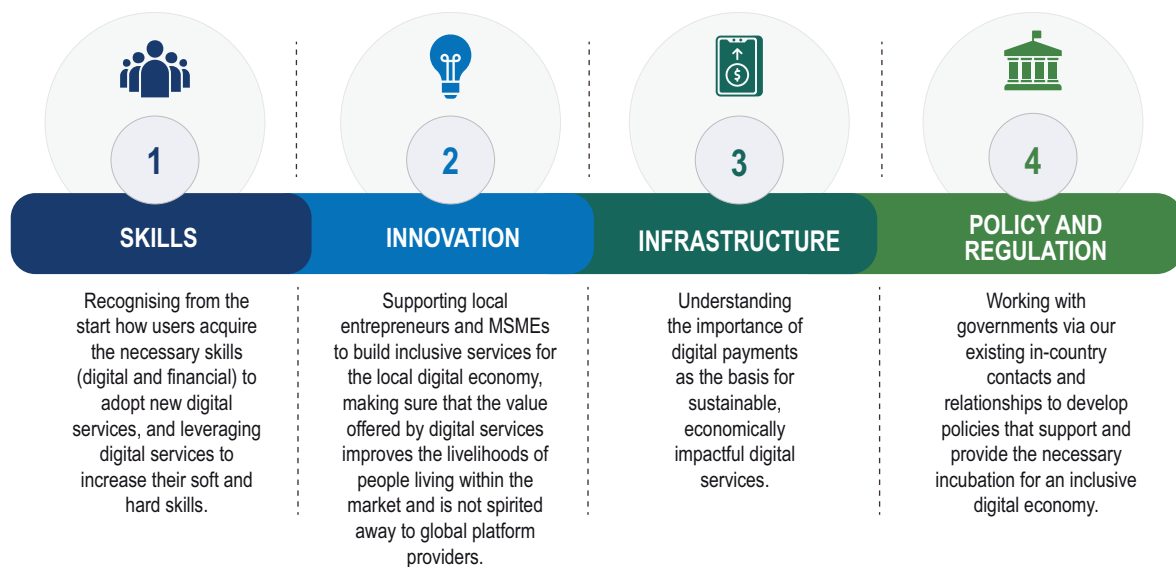
calls the foundational digital rails – policy and regulation, ID infrastructure, phone ownership, agent networks and digital financial services – that allow digital services to develop beyond voice and Internet. No providers offer mass-market digital services beyond telecommunication services, and citizens cannot rely on technology to access and use services in finance or other areas.

To advance to the next stage, digital finance providers must build mass-market services, and regulatory authorities must offer providers an enabling environment.³ This period can last several years until systems are created, products tested, pilot projects completed and customers are using services, and digital financial services providers have regulatory approval. In this stage, development actors can provide needed expertise and grants or other financial support to help de-risk providers' investments and pilot market-entry strategies for new services.

Start-up: Digital financial services begin to reduce financial exclusion

In the start-up stage (DES score 25- 49%), the country has the foundational digital rails in place for citizens to access and use some basic digital services, mainly in the payment

Figure 27.1. Main components of an inclusive digital economy



Source: Authors' illustration.

and/or finance sector. Several providers offer mass-market digital financial services that reach the unbanked. Innovation is in its infancy, but some incubators and start-ups have launched a limited number of products and services that either are digital payments (e.g. mobile money) or leverage digital payment services (e.g. pay-as-you-go solar).

To move to the next stage, digital finance providers must find the balance of active customers and active, accessible agents to serve the customers and reach profitability. Some markets remain stuck at this stage for many years until providers address all of the service issues that impede customer adoption and agent activity. An open infrastructure and payment system can open doors for entrepreneurs to pilot digital services in different domains (e.g. finance, agriculture, energy, health, education, e-commerce). In addition to financial support to scale successful services, development actors can provide in-depth expertise on various areas of digital infrastructure, finance and skills.

Expansion: The digital market and technologies add players and services

In the expansion phase (DES score 50-74%), digital payment systems become widely available and used, and the innovation ecosystem starts to develop with new partnerships and services in domains such as finance, agriculture, energy, health, education and e-commerce. Increasingly, people adopt digital tools and new players enter the market (providers, FinTech, start-ups, entrepreneurs, incubators, etc.).

To move beyond the expansion stage, government and private sector actors should use incentives to foster the growth of start-ups, help them source expertise and provide them with access to financing along all stages of their development. In this stage, the right mix of expertise and finance in the form of grants, loans, guarantees and equity will support innovation.

Consolidation: Varied and easy-to-use digital tools, and competition to add value

In the consolidation stage (DES score 75%-100%), a wide range of accessible and easy-to-use digital services are on offer in various domains and users have a choice of providers. Service providers, meanwhile, move beyond a focus on access and usage, and now compete to keep their clients and concentrate on adding value and increasing the impact of their services for clients.

Governments use the Inclusive Digital Economy Scorecard to measure progress

UNCDF's work on the IDES with several countries contributes to tangible and positive changes, including action by government agencies to develop digital economy strategies and focus on inclusiveness in their digital transformation. It helps government re-focus on their digital transformation with a comprehensive framework and indicators to identify gaps and set priorities for the coming years

In Uganda, digital had been seen as a horizontal, standalone focus area for the government's second national development plan (NDP). In 2020, UNCDF supported the country's National Planning Authority to mainstream digital into the third NDP as an enabler of economic development, and the government adopted the IDES to measure progress on digital transformation. Various government agencies now use IDES results to plan activities, identify funding gaps and set budgets for 2022 under the Digital Uganda Vision, the overall digital transformation policy.

The government of the Solomon Islands also uses the IDES to track progress on the country's digital transformation. The Central Bank used IDES scores and insights to inform the third version of the National Financial Inclusion Strategy. The Ministry of Communication and Aviation used it to identify key areas of focus for the development of the National Digital Economy Strategy. And work on the IDES contributed

to establishing the National Digital Transformation Authority.

The governments of Burkina Faso and Zambia also adopted the IDES in 2021 to design and support their digital transformations. The Ministry of Digital Economy, Posts and Digital Transformation of Burkina Faso uses it to identify key gaps and focus the priorities for policy and regulation, infrastructure, innovation, skills, and inclusiveness, particularly of women, youth and SMEs. In Zambia, the Ministry of Science and Technology uses the IDES to draft the country's first digital economy strategy and digital transformation plans for three ministries.

Inclusive digital economies: Equal access, agency and leadership for women

Ensuring that digital economies are inclusive requires specific focus on traditionally marginalised groups. To assess the extent to which the public and private sectors include marginalised people during digital transformation, UNCDF developed the Women Inclusiveness Score (WIS).⁴ It indicates the level of inclusion of women in a country's digital economy at every stage and in each component (skills, innovation, infrastructure, and policy and regulation), and helps identify the barriers women face.⁵ Countries can use the WIS to identify those components or dimension that contribute the most to a low score and thus which market constraints to address as priorities.

A country might have a high DES, but a low WIS. Difference in the two scores can indicate that there is progress on one component when measuring the aggregate situation, but less progress on that same component when it is assessed for women's inclusion. For instance, many countries have high DES for policy and regulation, but the policy, regulation and innovation components have the lowest WIS across all countries using the IDES. The reason is that many digital economy policy documents do not specifically reference the inclusion of women or design policies to be inclusive of women.

The generally low scores for innovation can be explained by the fact that the WIS is calculated from a country's gender gap in SME ownership and finance, and the extent to which digital and financial products are marketed or designed specifically for women. Thus, low WIS for innovation are not a surprise, given that the gap between men's and women's ownership of enterprises in least-developed countries averages 62% (World Bank, 2021_[1]). In addition, most countries that UNCDF serves report that digital and financial services do not meet the needs of women.

The four most common market constraints for women's inclusion are digital and financial products that do not meet their needs, limited access to finance, poor entrepreneurship skills, and poor access to digital business tools and platforms. Figure 27.2 proposes actions to address the constraint on financial and digital products that do not meet the needs of women and girls.

Addressing barriers to women's digital inclusion in Papua New Guinea

Papua New Guinea is an example of how progress in developing a healthy digital economy might mask problems below the surface in the form of barriers that exclude women or offer financial products that do not meet the needs of women and girls (Figure 27.3).

Papua New Guinea has an overall WIS of 61%, meaning that 39% of women are not included in the digital economy. WIS scores for individual components range from 43-78%, which puts Papua New Guinea in the middle among countries measured. But its innovation score, at 34%, is in the lowest quintile of the IDES cohort. The reason is a large gender gap in specific areas:

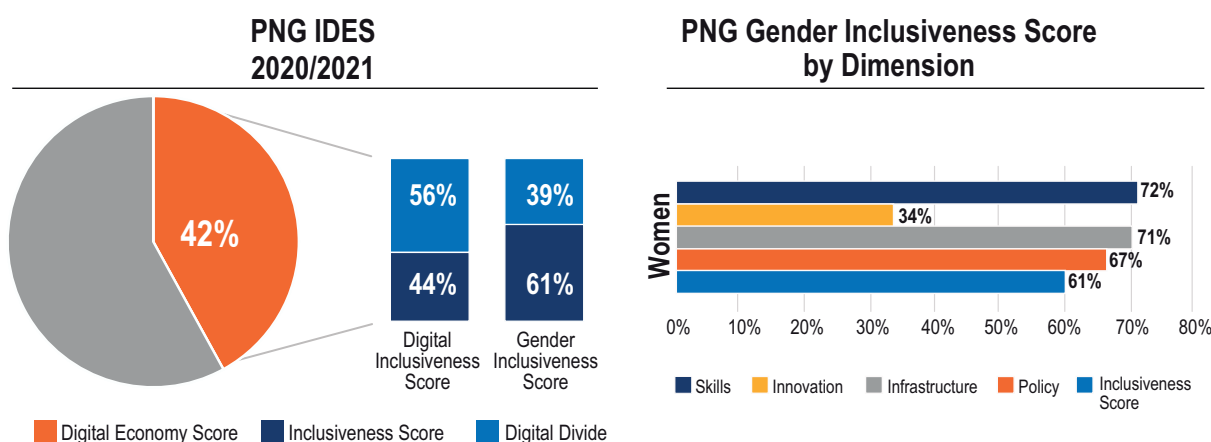
- a 47% gender gap ratio in business ownership (World Bank, 2021_[4])
- a 34% gender gap ratio in MSME credit constraints (World Bank, 2021_[4])
- only 10% of digital products that are either marketed or designed for women.

Figure 27.2. Helping digital and financial products meet the needs of women and girls



Source: UNCDF (2021_[2]), *Inclusive Digital Economies and Gender Equality Playbook*, <https://www.uncdf.org/article/6875/ide-and-gender-equality-playbook>.

Figure 27.3. Papua New Guinea inclusive digital economy scores



Note: Women inclusiveness scores for Papua New Guinea by dimension are not publicly available.
 Source: UNCDF (2021_[3]), *Inclusive Digital Economy Scoreboard* (database), <https://ides.uncdf.org/dashboard>.

In addition to the WIS analysis and use of the Inclusive Digital Economy and Gender Playbook,⁶ UNCDF interventions and activities aim to increase the number of women-led MSMEs, improve access to finance for women-led enterprises, and increase the number and use of products that meet the needs of women. In collaboration with UN Women, UNCDF is working on a markets, economic recovery and inclusion programme supported by the Australian Department of Foreign Affairs and Trade. The programme focuses on three areas to address market constraints to the inclusion of women in digital innovation:

- **Poor entrepreneurship skills connected to innovation:** Increase capacity building for women-led enterprises, focused on financial awareness, financial education and business development skills trainings to enhance the income of women vendors in markets.
- **Digital and financial products not meeting women's needs:** Establish Mama-Bank Access Points (a low-cost, biometric system that enables women who have difficulty signing their names to carry out banking transactions using their fingerprints) in or close to markets and expand the use of financial services using this system.
- **Limited access to finance:** Provide a microfinance institution with an estimated USD 225 000 first-loss guarantee to de-risk lending to this vulnerable segment and reduce collateral requirements for women-led enterprises in target geographies.

Innovative financing can open doors to the digital economy for women

Removing market constraints to women's participation in the digital economy is key to increasing the adoption of digital technologies and ensuring that the benefits of digital transformation extend to everyone. Social and cultural norms are frequent underlying barriers to women's inclusion, but often overlooked in the design of business models and enabling environments. Another

constraint can be access to finance. Non-traditional, digitally enabled financing tools can be game changers for women entrepreneurs:

- Alternative lending instruments such as digital transaction-history-based lending, crowdfunding, peer-to-peer lending and psychometric testing can lower or eliminate the need for collateral. This has proven to increase the ability of entrepreneurs, including women, to borrow money and grow their business (Feyen et al., 2021^[5]).
- Digitally enabled asset financing, initially used for the purchase of solar energy products and smartphones, is now creating business models that enable low-income populations to have their first televisions, refrigerators and other assets (Mattern, 2020^[6]).

How development actors can build inclusive digital economies

Long-term investments in inclusive digital economies are prerequisite to inclusive digital transformation. UNCDF uses a market-development approach to understand and intervene in market systems to address underlying constraints and improve efficiency, effectiveness and sustainability. The aim is to leverage the roles and behaviours of existing players in the market (e.g. users and providers of digital services) and support them in doing what they do better or differently; work with current players to provide financial instruments that encourage investment and de-risk new business models in order to make digital solutions more inclusive; and strengthening the systems and relationships among various players in the market (e.g. service providers, policy makers and regulators) through, for example, an enabling policy and regulatory environment. Such an environment is critical to strengthen systems and can be just as important as investment and competition.

Based on its experience with market development, UNCDF recommends that

development co-operation providers consider the following approaches:

■ **Work closely with governments to drive digital transformation.**

Support should help governments draft a national digital economy strategy, embed digitalisation in the national development plan, set up the governance structure and bodies to drive the transformation, provide the tools to measure and continuously monitor progress, and help national bureaus of statistics collect adequate data to track digital transformation and inclusiveness.

■ **Deliberately build-in inclusivity.**

Growth should be deliberately designed to narrow the digital divide. Support should focus on regular monitoring of inclusion, investment in digital and financial literacy and access, and addressing social and cultural norms, like for example, a perceived cultural norm that women should not have access to a phone.

■ **Co-build with the digital ecosystem.**

Working with one actor or sector ultimately does not help create the sustainable change that on-the-ground partners want to see. It is critical to take an ecosystem approach and involve the public, private and civil society sectors.

■ **Invest for the long term.**

When development partners take approaches that focus on market results and understand that market development takes time, they contribute to significant market change. The Mastercard Foundation's five-year funding for UNCDF Mobile Money for the Poor in 2014 helped strengthen Benin, Senegal and Zambia - countries that had almost no digital financial services. By 2019, all three showed strong

growth in use of digital financial services use: Benin from 2% to 40%; Senegal from 13% to 29%; and Zambia from 4% to 44%.

■ **Regulate to innovate.**

Innovation requires an enabling environment that allows for testing and learning. Support for policy and regulatory frameworks that protect consumers but enable testing and learning environments can spur private sector innovation. These can include sandboxes, regulatory navigators and partnerships with innovation hubs. All can foster useful collaboration with private sector

■ **Take a human-centred, context-specific approach.**

Tailoring the right services to improve people's lives and livelihoods is one of the most effective ways to narrow digital divides. Context-specificity is also crucial. Institutions each possess distinct resources, and their culture's unique characteristics drive the development of digital finance and enabling ecosystems down distinct paths.

■ In Zambia, UNCDF worked with Airtel Zambia to understand the barriers preventing uptake of the company's digital financial services by customers and via agents (UNCDF, 2017^[7]).

Analysis of the journey from being a non-customer or non-agent to being a super-user produced actionable recommendations. Different models of agent management were tested and useful ideas to improve inclusivity were solicited from the agents themselves.

Inclusive digital transformation relies on shared learning, agile responsiveness to dynamic situations, context-specific knowledge, deep relationships with public, private and civil society sectors, and long-term investments. These are the preconditions to leaving no one behind in the digital era.

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NOTES

1. While the United Nations Capital Development Fund focuses on MSMEs, many of the measurement tools available focus only on small and medium-sized enterprises (SMEs). This discussion refers to both types of enterprise.
2. Scores consider the level of inclusion attained by key segments (e.g. youth, elderly, refugees, migrants, rural inhabitants, etc.) of the population (customers) in the digital economy, providing insight into the effort that public and private sectors are making to include marginalised people in developing the digital economy. Another measure, the Women Inclusiveness Score, indicates the level of inclusion of women in the digital economy. For details, see: <https://ides.uncdf.org/about-the-scorecard>.
3. For the four regulatory enablers for digital finance, see: <https://www.cgap.org/blog/4-regulatory-enablers-digital-finance-gender-perspective>.
4. The WIS is largely constructed of quantitative indicators based on global and country-based data sources. However, there is a lack of publicly available data that are disaggregated by all WIS customer segments (women, youth, elderly, migrants, etc.). UNCDF, therefore, relies on qualitative data from its country teams' assessments. To improve the methodology and indicators used, the broader IDES, the WIS and other elements are evaluated annually through feedback from external experts and UNCDF country teams.
5. UNCDF is committed to “vision equal economies” in which women have equal access, equal agency and equal leadership; see: <https://www.uncdf.org/article/6930/uncdf-leverages-unique-mandate-in-service-to-gender-equality-vision-equal-economies-gender-finance-gap-zero-red-tape-zero>. Its further goal is to make women the builders of inclusive digital economies everywhere UNCDF works; see: <https://www.uncdf.org/article/6538/how-do-we-make-women-builders-of-the-digital-economy>.
6. The playbook, published in June 2021, was originally designed to help UNCDF country teams understand the market constraints to women's digital and financial inclusion, and the interventions that could address those constraints: <https://www.uncdf.org/article/6875/ide-and-gender-equality-playbook>.



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