

Digitalization and Financial Inclusion: New Opportunities and Challenges in Developing Countries

Assoc.Prof. Yesim Sirakaya¹, Recep Erturk²

¹St. Clements University Labor Economics and Industrial Relations Department Head of the Main Science

²St. Clements University Economy and Finance Department PhD student

ABSTRACT: It has become a critical strategy in terms of increasing financial inclusion in developing countries, combating poverty, reducing economic development and income inequality (Demirgüç-Kunt et al., 2018). In this context, Digital Financial Services (DFH) supports inclusiveness by providing a strong alternative for individuals who do not have access to traditional banking systems (Ozili, 2018). Digital vehicles such as mobile banking, digital wallets, credit services over the internet and fintech applications facilitate the integration of individuals living in low -income and rural areas into the financial system (GSMA, 2021). In this study, the impact of digital financial services on financial inclusion in developing countries was examined by literature screening method. The studies discussed; It shows that factors such as the development of digital infrastructure, regulatory frames, digital literacy level and gender inequality significantly affect the inclusion levels (Sahay et al., 2020). Furthermore, it has been found that the spread of digital financial instruments provides economic benefits at micro and macro level (Lukogga, 2020). This article argues that digital financial transformation should be considered as an inclusive development model in developing countries and provides strategic suggestions for policy makers.

KEYWORDS: Digital Finance, Financial inclusion, developing countries, fintech, mobile banking, digital transformation, combating poverty.

1. INTRODUCTION

Financial inclusion refers to the access of individuals and enterprises to the financial services they need and is considered as one of the cornerstones of sustainable development goals (Demirgüç-Kunt et al., 2018). Particularly in developing countries, the highly high -off population and the prevalence of income inequalities highlight financial inclusion as a means of development. In this context, Digital Financial Services (DFH) offer important opportunities for individuals who cannot access traditional financial institutions and have the potential to increase inclusiveness (Ozili, 2018).

Digital Financial Services; Mobile Banking covers technological innovations such as digital wallets, online credit systems and blockchain -based payment solutions. These services play a critical role in providing financial access to groups outside the traditional system such as individuals, women and small business owners living in rural areas (GSMA, 2021; Sahay et al., 2020). For example, in sub -Sahara Africa, millions of individuals have first met the financial system through mobile payment systems and an increase in savings and credit usage rates was observed (Jack & Suri, 2014).

However, the realization of the potential of digital finance depends on some structural and social factors. Subjects such as the adequacy of digital infrastructure, the level of digital literacy of individuals, gender inequality, data safety are among the decisive elements in this process (Lukonga, 2020). In addition, regulation of the financial system, state support and public policies are important factors that determine the direction of digital inclusion (World Bank, 2022).

The aim of this study is to evaluate the impact of digital financial services on financial inclusion in developing countries and to analyze the opportunities and difficulties encountered in this process on the basis of the literature. The study aims to provide suggestions to policy makers and practitioners to increase digital inclusion..

2. LITERATURE REVIEW

In this section, the impact of digital financial services on financial inclusion was examined in the context of developing countries and the existing findings in the literature are presented under five main themes: digital infrastructure, mobile technologies, digital literacy, gender differences and regulation.

Digitalization and Financial Inclusion: New Opportunities and Challenges in Developing Countries

Digital infrastructure and access opportunities:

The potential of digital financial services to increase financial inclusion in developing countries depends largely on the existence and quality of digital infrastructure. This infrastructure; Mobile networks include many components such as internet access, digital identity systems, payment network passages and security protocols (World Bank, 2022). Without digital infrastructure, even the most advanced fintech solutions cannot be accessible and sustainable.

1. The prevalence of mobile and internet infrastructure: The mobile network coverage area in developing countries has great differences, especially in rural areas. According to the GSMA (2021) report, approximately 28 % of individuals in sub-Saharan Africa cannot access mobile internet services. This limits access to digital financial instruments, especially for women and elderly individuals. However, the same report shows that 4G coverage rates have increased significantly in the last five years and this is directly reflected in the use of mobile financial services. Mobile device ownership is one of the most basic prerequisites for digital financial participation. Even for low-income individuals, even simple phones (feature phones) can offer access to USSD-based digital processes (Suri & Jack, 2016). In the case of Kenya, the fact that M-Pesa is accessible even with such simple phones is a good example of how the infrastructure can transform financial inclusion.

2. Digital Identity and E-Government Systems: Inadequate digital identity systems in many developing countries prevent individuals from registering in financial services. India's biometric digital identity system called "Aadhaar" has made hundreds of millions of individuals involved in the banking system (Baruah, 2021). Thanks to the digital identity infrastructure, individuals' account opening, digital wallet acquisition and online loan receipt processes have become easier. However, in many African and Middle Eastern countries, millions of individuals who still have no official identity remain outside these systems (World Bank, 2019).

3. Energy and Electrical Infrastructure: Another critical element that determines the operability of digital infrastructure is energy access. In developing countries, especially in rural areas, intermittent or non-electric access restricts the continuous use of mobile devices and digital services. For example, the development of mobile payment systems in countries such as Nigeria and Congo is often limited due to fragility in energy infrastructure (Lukonga, 2020).

4. Data Safety and Internet Quality: Not only connection, but a quality and safe internet experience is also important for the sustainability of digital finance. Low bandwidth, connection ruptures and data leakage risks may damage users' confidence in digital services. In particular, technical problems during financial transactions may cause abandonment of service (Sahay et al., 2020).

5. Role of State Policies: The investments made by states in infrastructure are directly related to the prevalence of digital financial inclusion. Countries such as Bangladesh, Rwanda and the Philippines have succeeded in increasing financial access through public-private sector cooperations for digital banking infrastructure (AFI, 2021). Such strategies; base station investments are supported by public support fintech solutions and low-taxed mobile processing policies.

Rise of Mobile Financial Services:

Mobile financial services have provided revolutionary solutions for individuals who do not have access to the traditional banking system and played a leading role in increasing financial inclusion, especially in developing countries. Services such as mobile banking, mobile wallets, USSD-based payment systems, QR Code Payment and Digital Micro-Credit applications not only enable individuals to participate in the financial system, but also allow them to play an active role in economic life (GSMA, 2021).

1. Rise of mobile payment systems in developing countries: One of the examples of mobile payment systems is the M-Pesa application in Kenya. This system, which was initiated in 2007, has enabled users to transfer money through mobile phones without any bank account. Jack and Suri (2014) emphasized that the spread of M-Pesa increases income stability, especially in rural areas, facilitates risk sharing and stabilize household consumption. Similarly, mobile payment applications such as "BKASH" in Bangladesh and "Paytm" in India supported digital financial inclusiveness by reaching a wide user base from small trades to housewife (Baruah, 2021).

2. Role of Democratization of Access to Financial Services: Mobile Financial Services democratizes financial access by targeting the excluded segments of society, especially low-income groups, people living in rural areas, women and young people. Thanks to the USSD (UNSTRUCTURED Supplementary Service Service Data) technology, even individuals who do not have smartphones can benefit from mobile banking transactions (Suri & Jack, 2016). This feature plays a critical role in the inclusion of non-financial individuals in the economy, especially in regions such as sub-Saharan Africa. According to GSMA (2021) data, 1 out of 5 adults in sub-Saharan Africa uses mobile money accounts and this rate is rapidly increasing.

3. Micro Credit and Micro Insurance Applications: Mobile financial systems have made more complex financial products such as micro-credit and micro-insurance not only money transfer. For example, through the M-Shwari system in Kenya, users can receive loans according to past digital trading history; In India, mobile health insurance policies can be arranged within a few minutes via mobile phones (Lukogonga, 2020). These systems offer a great opportunity for individuals who cannot meet the credit criteria of traditional banks; It supports the risk management of individuals even in periods of economic crisis (Sahay et al., 2020).

Digitalization and Financial Inclusion: New Opportunities and Challenges in Developing Countries

4. Economic participation and strengthening of women: Another important aspect of mobile financial services is that women's representation in the financial system. According to the report published by GSMA (2021), digital mobile services have made women open an account on behalf of their own, transfer money and carry out small -scale initiatives. Especially in countries where patriarchal structure such as Bangladesh, Pakistan and India is strong, mobile finance has become an important tool for women's acquisition of financial freedom (Baruah, 2021).

5. The transformative effect on the financial ecosystem: The spread of mobile finance transforms not only individuals but also an entire financial ecosystem. Traditional banks, while entering competition with FinTech initiatives; Mobile operators have now become financial players. This has increased the diversity of services and has made transactions more accessible thanks to price competition (Ozili, 2018). In addition, thanks to mobile finance, states have reached their capacity to realize direct aid payments in digital environment without intermediaries; Thus, transparency and productivity increased (World Bank, 2022).

Digital Literacy and Confidence Factor:

One of the main factors that determine the accessibility and usage rates of digital financial services is the trust of individuals with digital literacy levels and digital systems. Even if digital infrastructure is achieved, the goal of financial inclusion cannot be sustainable unless there is a sense of knowledge, skills and trust that will make individuals' access to these technologies meaningful (Sahay et al., 2020). Especially in developing countries, concerns about the inadequacy of digital competencies and cyber security significantly limit the spread of digital financial services.

Digital literacy refers to the individual's ability to understand, use and critically evaluate digital technologies. Digital Literacy for Financial Services; It covers transactions such as digital wallet management, digital loan application and internet banking (OECD, 2020). Studies have shown that many individuals lack basic digital skills in developing countries and this situation adversely affects participation in financial services. For example, according to GSMA (2021) data, 30 %of mobile telephone owners in sub -Sahara Africa use their devices only to search; It avoids mobile financial transactions.

In digital literacy, gender -based inequalities are remarkable. In particular, women are more disadvantageous than men in terms of having technological skills and relying on digital services. The GSMA (2021) report revealed that women's possibility of using mobile financial services is 20 %lower than men and this difference was largely due to lack of digital literacy. In countries such as India, Pakistan, Bangladesh and Nigeria, women's access to digital devices is limited, but these individuals can avoid digital systems by feeling more open to financial fraud (Baruah, 2021).

Digital trust in financial transactions is one of the main determining factors in terms of users' commitment and continuity to the system. Particularly in individuals who meet the digital system for the first time, abuse, fraud, data leakage and technical error concerns are common (Ozili, 2018). For this reason, the systems that provide digital security (two -factor authentication, encryption technologies, transparent user agreements) and design structures that reassure the user are extremely critical. In addition, the bad experiences of individuals in the past may also affect the use of digital service in a long term. Salay et al. (2020) argued that continuous training, user support lines and regulations should be transmitted in a transparent way to increase the trust of users to digital financial systems.

Literacy campaigns, public spots, educational content prepared in local language and community -based curriculum are of great importance for the success of digital financial services. Countries such as Kenya, Rwanda and the Philippines have succeeded in increasing digital financial literacy in rural areas with such initiatives (AFI, 2021). In addition, some Fintech companies aim to simplify digital processes and facilitate the learning process by developing user -friendly interfaces.

In the literature, it is often emphasized that digital literacy and trust levels directly effective on financial inclusion. It is seen that individuals with digital skills and trust use more frequently, as the level of financial literacy increases, and the rate of savings increased and loan applications have increased (Demirgüç-Kunt et al., 2018; Suri & Jack, 2016). This reveals that digital literacy is not only an individual but also in terms of social development.

Gender inequality and financial access:

Financial inclusion is not only an economic issue, but also a critical issue in terms of gender equality. While the rise of digital financial services in developing countries offers important opportunities for women's participation in financial systems, existing gender-based inequalities create structural barriers that limit the effect of these services (Demirgüç-Kunt et al., 2018). Access to financial services of women; It is affected by multi -layered factors such as having digital tools, literacy level, social norms, security perception and legal regulations.

According to GSMA (2021) data, the rate of men's digital financial services in developing countries is 20 %higher than women. This difference is even more pronounced in low and medium -income countries. Women; Mobile telephone ownership, SIM card registration and digital transactions are experiencing a serious disadvantage compared to men. For example, in India, men's mobile

Digitalization and Financial Inclusion: New Opportunities and Challenges in Developing Countries

financial accounting rate is 77 %, while this rate is 57 % in women. Similarly, in Pakistan, these rates are 30 % for 65 % (Baruah, 2021).

There are many cultural and structural factors that limit women's access to digital financial services. Among them:

Limited mobile device or internet access,

Male family members do not allow the use of digital devices,

The socially welcome of women's financial accounts on their behalf is not socially welcome,

Low level of financial literacy,

In rural areas, traditional roles based on the inactivity of women have (OECD, 2020; AFI, 2021).

These conditions prevent women from gaining economic autonomy and income through digital services.

Many countries and fintech have started to develop women -oriented solutions to increase women's access to digital financial services. Among them:

Micro credit packages for women,

Digital payment systems for women entrepreneurs,

Digital Literacy Training Programs for Women,

There are safe digital banking practices for women who are victims of domestic violence (GSMA, 2021; World Bank, 2022).

For example, in Bangladesh, BKASH has developed interfaces that provide special account management and ease of transaction to female customers. In addition, women's cooperatives in India have been integrated with mobile banking applications and facilitated women's access to financial resources (Baruah, 2021).

Access to digital financial services supports the strengthening of women in economic and social life. Jack & Suri (2016) showed that mobile money use in Kenya contributed to women's ability to make independent spending decisions and thus became more active in domestic decision -making processes. In addition, micro loans through digital wallets allow women to establish small -scale business and contribute to household income (Lukonga, 2020). This means that women's poverty is reduced in the long run and the increase in economic participation rates.

The following policy steps are proposed in order for women to benefit more from digital financial services:

Low -cost mobile device campaigns for women,

Dissemination of gender -sensitive digital training programs,

Access to digital loan for women entrepreneurs,

Regulations aimed at gender equality,

Media campaigns that will support the transformation of social norms for mobile financial systems.

Without such structural and cultural supports, it is not possible for digital financial inclusion to sustainability.

Regulatory Framework and Policy Effect:

The sustainable spread of digital financial services in developing countries and supporting financial inclusiveness depends not only on technological infrastructure, but also on an effective and inclusive regulatory framework. Suitable regulations do not only provide financial stability; It also increases user confidence, encourages fintech innovations and creates a fair competitive environment among service providers (World Bank, 2022).

In developing countries, legal frameworks for digital financial services are generally adapted from traditional banking laws, which can block the new generation digital services (Ozili, 2018). Digital wallets, crypto assets, mobile monetary systems and special arrangements are required for the activities of FinTech companies. Countries like Kenya have increased digital financial inclusiveness by regulating mobile currency systems; M-Pesa is defined by a separate regulation by the Central Bank and was under control (Jack & Suri, 2014). This has increased the trust of the investor and strengthened the devotion of users to the system.

Thanks to the appropriate policy regulations, digital financial services can reach wider audiences, and it is possible to include individuals without banks in the system. Salay et al. (2020) states that the development of fintech is slowing down if the regulations are strict and complex in developing countries, whereas regulatory environments that allow flexible and open data encourage

Digitalization and Financial Inclusion: New Opportunities and Challenges in Developing Countries

innovation. Especially thanks to the “Regulatory Sandbox” applications, fintech initiatives can be tested by providing controlled service in limited areas and successful applications are then included in large -scale regulations (AFI, 2021).

One of the most basic components of financial regulations is the KYC (diagnostic) procedures. However, in many developing countries, individuals who do not have official identity are out of the system in this process. The AADHAAR digital identity system implemented in India facilitated the access of millions of individuals to digital banking by accelerating the registration process of digital financial services (Baruah, 2021). Similar practices have been implemented in countries such as Rwanda, Bangladesh and Indonesia. Thanks to these policies, both the user verification process has become easier and the risks such as money laundering have been reduced.

In some developing countries, taxes or transaction fees from digital transactions may cause low -income individuals to move away from the system. For example, 1 %tax from mobile money transfers in Uganda in 2018 reduced the transaction volume by 24 %(GSMA, 2021). This example shows that policy makers should avoid practices that contradict the goal of financial inclusion.

The spread of digital financial systems has brought about data security and consumer rights issues. The safe protection of users' personal and financial data is critical for the continuity of services. World Bank (2022) states that countries that protect user data and determine open and transparent data policies increase the trust in digital financial services and thus their participation rates increase.

The success of regulations is not only for governments; It also depends on collaboration with private sector and international financial institutions. Institutions such as IMF, World Bank, GSMA and AFI contribute to the development of digital financial infrastructure and regulation of many countries through technical support, consultancy and financing (Lukonga, 2020).

3. METHOD

This study adopted the systematic literature screening approach, one of the qualitative research methods to analyze the impact of digital financial services on financial inclusion in developing countries. In the research process, the academic literature on the subject was examined extensively; The existing findings have been analyzed by classifying thematic headings.

Data Collection Process: Data were collected through academic articles, reports, theses and policy documents of international organizations published between 2020 and 2024. Google Scholar, Scopus, Web of Science, Jstor and SSRN were used as its main databases. The keywords used in literature screening are: Digital Financial Services, Financial Incusion, Developing Countries, Mobile Banking, FinTech, Financial Technology, Access to Finance, Digital Infrastructure, Financial Literacy.

Criteria of Inclusion and Exchange:

Included Studies: These are publications that focus on developing countries, deals with the effect of digital financial services on financial inclusion, published in refereed journals or reports of reliable international organizations.

Excluded Studies: Those who are subject to developed countries are publications that only make technical infrastructure analysis but do not provide evaluation in the context of inclusion.

Data Analysis Process: The literature obtained has been evaluated by thematic analysis method (Braun & Clarke, 2006). Data; “Digital Infrastructure and Access”, “Digital Literacy”, “Gender Based Inequalities”, “Regulatory Framework” and “Transformation of Economic Outcomes”. These themes have created a conceptual framework to explain how digital financial services affect financial inclusion.

4. ARGUMENT

The findings obtained within the scope of this study reveal that digital financial services have the potential to increase financial inclusion in developing countries. However, the realization of this potential is possible not only by the presence of technological tools, but also by regulating structural, social and political factors in harmony. In the discussion section, critical points were discussed in the light of previous literature and analysis results, and existing opportunities and restrictive factors were evaluated in a holistic way.

1. There is digital infrastructure but not distributed evenly:

Although the rapid development of digital infrastructure is a positive dynamic, it is an important problem that this infrastructure is not common to eliminate regional and socioeconomic inequalities (GSMA, 2021). Mobile internet access is still limited for individuals living in rural areas. Even in places where the internet is, energy problems or low bandwidth makes it difficult for users to receive uninterrupted service (Lukonga, 2020). This brings the risk of technological advances to produce new inequalities rather than inclusiveness. The strengthening of the infrastructure not only in city centers but also in rural and disadvantaged regions is critical in terms of reducing the digital cliff.

Digitalization and Financial Inclusion: New Opportunities and Challenges in Developing Countries

2. Digital Finance: Both Opportunity and Risk for Women:

Digital financial services offer important opportunities for women to be included in the financial system; Women -specific digital solutions provide economic autonomy (Baruah, 2021). However, given the social obstacles experienced by women in access and use of digital tools, digital financial services do not automatically create equality for women (GSMA, 2021). Digital literacy differences, mobile device ownership and social norms significantly limit women's use of digital financial tools. Therefore, policy makers should develop inclusive solutions not only on service provision but also through cultural transformation and educational strategies.

3. Digital trust and deficiency of consciousness weakens the system:

Trust is a fundamental element in terms of the sustainability of digital financial systems. It reduces the use of digital service if users do not trust systems, especially if they encounter fraud, data leakage or technical failure (Sahay et al., 2020). In order to increase confidence in financial systems, it is recommended to encourage digital literacy, increase cyber security measures and apply transparent user agreements. In addition, user support lines, individual data protection policies and open regulations play an important role in the establishment of this trust (World Bank, 2022)

4. Lack of policy and regulation restricts the development of fintech:

One of the most important obstacles to the spread of digital financial services is inadequate or solid regulations. In some developing countries, fintech practices are limited to traditional banking legislation; This blocked the way of innovation (Ozili, 2018). On the other hand, "Regulatory Sandbox" applications allow the development of fintech initiatives in a controlled manner and enable regulation to gain flexibility (AFI, 2021). In this context, it is emphasized that policy makers should create a regulation balance that supports the investment environment and protects the user.

5. Economic Effects of Digital Financial Services Long Term and Multidimensional:

The economic impact of mobile financial systems on individuals is not limited to instant financial transactions. Research such as Jack and Suri (2014) revealed that mobile money usage reduces the long -term poverty level, increases savings rates and supports entrepreneurship. However, the sustainability of these effects is related to the quality of the system as well as its quality. Quality digital services, while reassuring the user, low quality systems can create financial instability. Therefore, digital financial strategies for sustainable development should be integrated with macroeconomic policies.

General Evaluation:

The general finding in this discussion section is that digital financial services are a great opportunity for developing countries; However, this opportunity should be guided without increasing inequalities and supported by the right policies. Unless simultaneous interventions are made in multi -layered areas such as training, infrastructure, regulation and gender equality, the positive effects of digitalization may be limited.

5. CONCLUSION

This study has discussed the impact of digital financial services on financial inclusion in developing countries in a multidimensional way. Findings from literature and thematic analysis have shown that digital financial services accelerated the integration of non -bank individuals into the system, especially for low -income groups, women and rural areas living in rural areas. However, the realization of this potential is not only with technological innovations; At the same time, infrastructure investments, digital literacy studies, gender equality policies and effective regulations should be supported. Otherwise, digital finance may deepen existing inequalities.

Basic Results:

Digital financial services offer inclusive solutions for groups that cannot access the traditional financial system.

Digital solutions do not work efficiently without infrastructure and internet access.

Women are still among the disadvantaged groups in digital access; This is related to social norms, lack of education and device ownership.

Digital security and user experience are decisive in terms of the prevalence of services.

Effective regulations and public-private sector collaborations reinforce the sustainability of digital finance.

Policy and Application Suggestions:

1. Routing digital infrastructure investments to rural and poor regions:

Basic infrastructure investments such as mobile internet, base station, electricity access should be increased.

2. Developing Digital Literacy and Financial Education Programs for Women:

Digitalization and Financial Inclusion: New Opportunities and Challenges in Developing Countries

In local languages, supportive campaigns for women should be applied with easy -to -understand content.

3. Public -supported projects to increase mobile device access:

Affordable smartphone campaigns for women and low -income individuals should be expanded.

4. Creating flexible regulations that support fintech innovations:

With experimental models such as “Regulatory Sandbox”, spaces should be opened and consumer rights should also be protected.

5. Strengthening Digital Security and Data Protection Infrastructure:

Two -factor verification, encryption systems and transparent user policies should be expanded.

6. The spread of digital identity systems to the whole population:

Thanks to AADHAAR -like solutions, the participation of individuals who do not have official identity in the financial system should be facilitated.

7. Providing technical support and resource transfer with international collaborations:

Common projects should be carried out with institutions such as World Bank, IMF and GSMA.

General Evaluation:

Digital Finance has become a strategic tool in terms of economic development, social equality and individual welfare in developing countries. However, in order to increase the effectiveness of this tool, the digital transformation process needs to be managed not only in technical, but also in human, cultural and political dimensions. Developing countries should see digital finance not only as a technology, but also as the key to inclusive development and produce holistic policies in this direction.

REFERENCES

- 1) Alliance for Financial Inclusion (AFI). (2021). Digital Financial Services: Policy Frameworks and Regulatory Innovation. <https://www.afi-global.org>
- 2) Alliance for Financial Inclusion (AFI). (2021). Enhancing Digital Financial Literacy in Developing Economies. <https://www.afi-global.org>
- 3) Alliance for Financial Inclusion (AFI). (2021). Gender-Responsive Policy Frameworks for Financial Inclusion. <https://www.afi-global.org>
- 4) Baruah, B. (2021). Digital financial inclusion in India: A case study of PMJDY and Aadhaar. *South Asian Journal of Social Studies*, 9(2), 114–129.
- 5) Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- 6) Demrgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018). The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution. World Bank Publications. <https://doi.org/10.1596/978-1-4648-1259-0>
- 7) GSMA. (2021). Mobile Money Policy and Regulatory Handbook. <https://www.gsma.com>
- 8) GSMA. (2021). State of the Industry Report on Mobile Money 2021. <https://www.gsma.com>
- 9) GSMA. (2021). The Mobile Gender Gap Report 2021. <https://www.gsma.com>
- 10) Jack, W., & Suri, T. (2014). Risk sharing and transactions costs: Evidence from Kenya’s mobile money revolution. *American Economic Review*, 104(1), 183–223. <https://doi.org/10.1257/aer.104.1.183>
- 11) Lukonga, I. (2020). Digital financial services and the pandemic: Opportunities and risks for emerging and developing economies. IMF Working Paper No. 20/180. <https://www.imf.org/en/Publications/WP/Issues/2020/09/04>
- 12) OECD. (2020). Bridging the Digital Gender Divide: Include, Upskill, Innovate. <https://www.oecd.org/digital/bridging-the-digital-gender-divide.pdf>
- 13) OECD. (2020). Digital Financial Literacy: A Framework for Policy Makers. <https://www.oecd.org/financial/education>
- 14) Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. *Borsa Istanbul Review*, 18(4), 329–340. <https://doi.org/10.1016/j.bir.2018.06.004>
- 15) Sahay, R., von Allmen, U. E., Lahreche, A., Khera, P., Ogawa, S., Bazarbash, M., & Beaton, K. (2020). The promise of fintech: Financial inclusion in the post-COVID-19 era. IMF Departmental Paper Series 2020/09. <https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2020/06/29>
- 16) Suri, T., & Jack, W. (2016). The long-run poverty and gender impacts of mobile money. *Science*, 354(6317), 1288–1292. <https://doi.org/10.1126/science.aah5309>
- 17) World Bank. (2019). Identification for Development (ID4D) Global Dataset. <https://id4d.worldbank.org>
- 18) World Bank. (2022). Fintech and the Future of Finance. <https://www.worldbank.org>