
FINANCIAL TECHNOLOGIES AS A FACTOR OF FINANCIAL INCLUSION OF WOMEN

Gulbakhor M. Makhkamova*
*Tajikistan Academy of Sciences,
Tajikistan*
makhkamova.ied@bk.ru

Khabibullo Saidmurodov
*Academy of Sciences of
the Republic of Tajikistan,
Tajikistan*
saidmurodov.ied@bk.ru

Abstract

The purpose of the paper is to study the use of financial technologies by women in the financial market of Tajikistan, to identify existing barriers and drivers for expanding opportunities through financial technologies to increase the level of financial inclusion of women in the Republic of Tajikistan. The main method of research is a sociological survey on the level of use of financial technologies in the Republic of Tajikistan. In addition, we used the methods of systematization, generalization and graphical presentation of the data to analyze the results of the survey. The levels of use of financial technologies by men and women were compared; it has been found that they vary significantly. In addition, there is a gap in the understanding and use of financial technologies depending on the place of residence (urban/rural). The expansion of digital financial services can, therefore, identify opportunities for continuation and challenges that need to be addressed in promoting women's financial inclusion and economic empowerment.

Key Words

Financial services; gender aspect; financial inclusion; economic empowerment; technological integration.

INTRODUCTION

The rapid expansion of global interconnections between market participants and the networking effect in economic systems provide an opportunity to achieve significant financial and technological integration (Holloway et al., 2017). The inclusion of women in financial services has long been recognized as a key driver of women's economic participation and household well-being leading to more sustainable economic growth and social development, as well as more diversified financial systems. In particular, this was highlighted as early as 2013 at an international conference (Conference on expanding access to financial services for women, 2013) on expanding access to financial services for women. The conference was organized by the World Bank, the International Finance Corporation and the Ministry of Finance of the Russian Federation and took place within the framework of the spring session of the International Monetary Fund (IMF) and the World Bank Group. Conference speakers emphasized that increasing women's access to financial services contributes to poverty reduction. In addition, women in developing countries which include Tajikistan have lower levels of financial integration due to various legal, institutional, cultural and information barriers. Therefore, access to the necessary financial services will allow women and their families to increase their incomes, invest in education and health, and reduce their vulnerability during economic crises.

Table 1: Key indicators of access to economic opportunities

Indicator	Europe and Central Asia		Tajikistan	
	Men	Women	Men	Women
Level of participation in the labour market (% of population aged 15-64 years)	80	62	78	63
Unemployment (% of the labour force)	11.5	9.6	9.7	9.5
Youth unemployment (% of population aged 15-24 years)	17.7	12.4	21.7	22.4
Self-employed (% of employed men/women)	53	42	22	16

Source: National Bank of Tajikistan, 2017; United Nations, 2015.

Indeed, not all countries have the same level of financial inclusion of women and men. In the research area, the gender gap is particularly wide in developing countries.

Similar tendencies can be also observed in the Republic of Tajikistan, but it should be noted that at present the promotion of financial technologies (electronic payments, deposit servicing, crediting, and mobile and Internet banking, etc.) is not intensive enough in the country. This study aims to analyse the level of financial inclusion of women in order to identify the challenges and constraints of economic empowerment through financial technologies and instruments.

Table 1 presents key indicators of access to economic opportunities, which

demonstrate a significant gender gap (Table 1).

The analysis of the data presented in Table 1 shows that key indicators of access to economic opportunities in the Republic of Tajikistan are lower than in Europe and Central Asia. We believe that to overcome this situation, digital financial integration should be promoted; it shows great potential for overcoming many of the challenges faced by women in accessing and using financial services (World Bank, 2016).

LITERATURE REVIEW

Many researchers and analysts have identified financial technology as one of the factors that can lead to significant progress in addressing the challenges of poverty reduction and expanding financial integration over the next 15 years (Annibale, 2015; Staschen, Meagher, 2015; Toronto Leadership Centre, 2018).

According to World Bank research, over the past few years, financial inclusion has been increasing worldwide. According to The Global Financial Inclusion (Global Findex) for 2017, which demonstrates the behaviour and intensity of use of various financial services, 1.2 billion people of the world's population have opened bank accounts since 2011, including 515 million since 2014. Between 2014 and 2017, the proportion of adults having accounts in a financial institution increased from 62% to 69% worldwide. In developing countries, the figure rose from 54% to 63%. However, women in developing countries still have 9 percentage points less total number of bank accounts than men (World Bank, 2017).

Thus, despite the overall progress made in terms of financial integration worldwide, the gender gap has remained unchanged since 2011. The most promising ways to address this issue are: to support and expand women's financial participation (Workplace Gender Equality Agency, 2018); to implement various measures to reduce the gender gap by reducing the number of women excluded from the financial sector (Noland et.al, 2016); and to support women business leaders through their access to and use of financial services (Alliance for Financial Inclusion, 2016).

We can agree with the opinion that narrowing the gender gap in the course of financial integration can have a positive effect on consumption smoothing, reducing financial risks and costs, ensuring security, increasing savings and investment rates and expanding new business opportunities (Annibale, 2015). Women can contribute to economic growth not only by creating enterprises but also by managing their financial resources more effectively. Access to and use of various financial services not only enhance women's contribution to the national economy but also promotes women's autonomy, allows them to make better use of their personal and domestic resources and reduces their vulnerability to crisis situations and negative trends in the external environment. Ultimately, increasing women's financial inclusion can be an incentive for economic growth, reduction of inequality, business and social development.

MATERIALS AND METHODS

The research methodology is based on a systematic approach, which foundation now is a combination of the following tools: a sociological survey of women, as well as a comprehensive analysis of trends being a strategic analysis of the external environment for the implementation of financial technologies in the Republic of Tajikistan. Such a combination is effective in studying the structural problems of the gender aspect of the problems under study. During the sociological survey, 105 clients of financial institutions of the Republic of Tajikistan have interviewed: 35 clients of Alif Sarmoya microcredit and depository organization; 35 clients of Eshkata Bank; 35 clients of Imon International microcredit and depository organization.

In the present study, probabilistic sampling has been used, as its objectives do not imply additional sampling quotas, as well as the formation of additional filters that exclude any representatives of the general population from the survey or imply the prevalence of any groups of the general population or the distribution of the sampling population in relation to any parameters of the general population.

The minimum sample size of 105 respondents was set in the survey. The sampling calculated on the basis of statistical analysis according to accepted formulas and data on the size of the general population indicates that the sample size used in the project is sufficient to ensure accuracy of $\pm 3\%$.

In order to understand the situation and identify potential problems, we conducted a study to determine the current state of financial technology in the Republic of Tajikistan. The study was commissioned by the Resource Research Center on Sustainable Development of Tajikistan through a survey of the population on this issue. Table 2 presents a plan of study on the extent to which financial technologies are used by women in the financial market of Tajikistan.

Table 2: Plan of study on the extent to which financial technologies are used by women in the financial market of Tajikistan

Study phase name	Study phase content
1. Study concept development	
1.1 Definition of objectives	The study objective is to obtain information on the level of use of financial technologies by women in the financial market of Tajikistan and to identify existing problems in order to develop recommendations to increase their financial inclusion
1.2 Problem identification	In order to achieve the study objective, it was necessary to determine potential development of financial technologies in the financial market of Tajikistan; <ol style="list-style-type: none"> 1. compliance of the proposed financial technologies with the demand of women in the Republic of Tajikistan; 2. problems of interaction in the gender context; 3. institutional problems and possible measures to overcome them
1.3 Formation of the working hypothesis of the study	The study is based on a probabilistic assumption that the prospects for the development of financial inclusion of women are related to the level of use of financial technologies in the Republic of Tajikistan, which is characterized by a level of awareness of women, compliance of proposed financial products with the demand for government initiatives

2. Selection of information sources	
2.1 Primary information	– Results of the survey of women-participants of the financial market in the Republic of Tajikistan
2.2 Secondary information	– Studies of foreign authors on the theme of the present study; – INTERNET resources
The process of obtaining and processing the data was carried out in accordance with the objectives of the study. Empirical data were obtained from a sample survey of women being consumers of financial technologies. The main working tools of the survey are specially designed questionnaires	
4. Analysis of information, conclusions, and recommendations	Traditional statistical methods are used to analyze the information obtained: comparisons, groupings, classifications. The results of the analysis are presented in the form of tables and diagrams. They should confirm the main working hypothesis of the study, serve as a basis for the formulation of conclusions and development of recommendations for the prospects of financial technology development in the Republic of Tajikistan
5. Execution phase	The study was conducted in September-December 2018

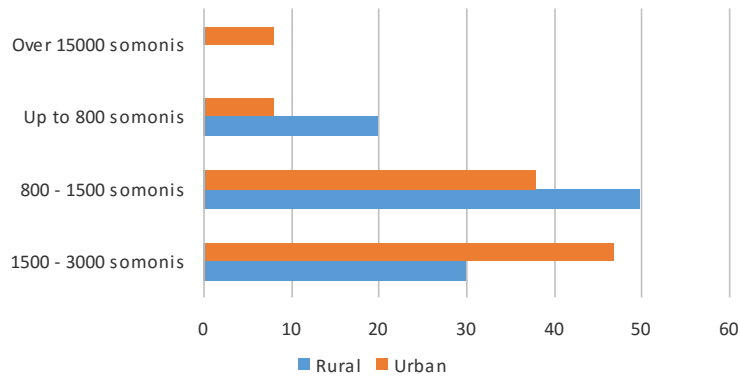
Source: Own survey.

1. **Socio-demographic characteristics of respondents:** gender, age, level of education, monthly income. This set of questions is aimed at determining the main socio-demographic characteristics of the sample.
2. **Awareness of financial technology.** This block of questions is aimed at revealing the respondents' awareness of what financial technologies are, what services are included in the group of "financial technologies", and what financial and technological companies the respondents are familiar with.
3. **Prospects for the use of financial technologies.** This block allowed us to determine the extent to which changes in the regulation and functioning of financial technologies can affect the use of financial and technological services by respondents; the answers will allow us to draw conclusions on the necessary areas of improvement of the financial sphere.

RESULTS

There were 13 women (32 percent) between the ages of 18 and 59 among the female respondents. According to the results of the survey, the largest number of female respondents are in the age groups from 30 to 44 years (35 people - 33% of the total sample) and 45-59 (33%), 18% - in the age group from 18 to 29 years, 17% of female respondents were over 60 years. The majority of the interviewed women live in rural areas - 65 people (62%). Most of the interviewed women (46%) living in urban areas have income from 1500 to 3000 somonis per month, 38% receive 800-1500 somonis monthly. In rural areas, the majority of respondents belong to the category of income from 800-1500 somonis (50%) (Fig. 1).

Figure 1: Distribution of respondents by income level and gender by place of residence

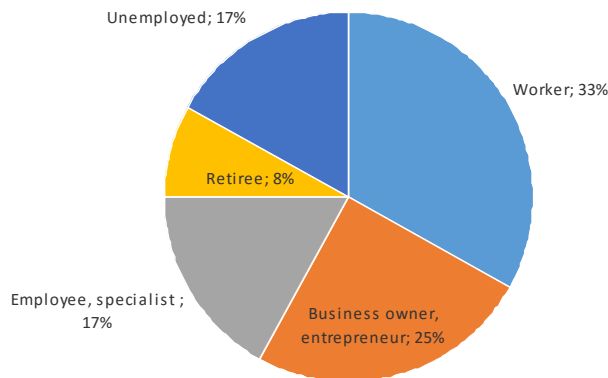


Source: Own survey.

As we can see, 100% of rural women have an income of up to 3000 somonis, and 8% of urban women receive more than 15000 somonis monthly. A comparative analysis of this indicator among women and men has shown that women's income level is lower, while only 7% of men are in the category with the highest income level over 15,000 somonis.

The distribution of urban women by type of activity is as follows: 38% classified themselves in the category "Worker" (five women), 31% in the category "Employees, specialists" (four), 15% in the category "Managers" (two women; there were 5 men in the category or 18%), and in the categories "Business owner, entrepreneur" and "Student", there was one woman each. The sectors from which there was one woman each are civil servants; IT sector, handicraft workers, construction workers, education workers, medical workers, and financial workers. The distribution of rural women by occupation is shown in Figure 2.

Figure 2: Distribution of rural women by occupation

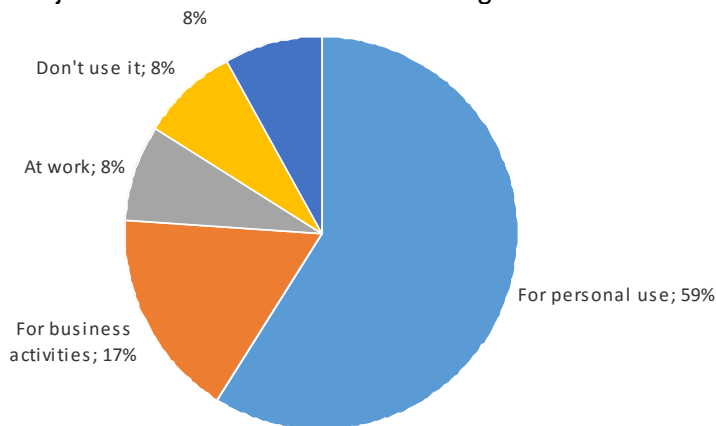


Source: Own survey.

As we can see, the largest number of women is in the "Worker" category, followed by "Business Owner, Entrepreneur", "Employee, Specialist", etc. The survey revealed deep penetration of the Internet among women living in urban areas, as 100% of respondents use the Internet at home, 92% use it at work, compared with 85% of men. In contrast, only 50% of women in rural areas use the Internet at work, and 75% at home. It seems interesting that almost all households have a TV (98 %) and a mobile phone (96 %), a refrigerator (69 %), but only 21 % of the rural women interviewed have a computer. And only an insignificant 2% of households have a bank account.

Answers to the questions on the awareness of the population about financial technologies made it possible to identify the main trends and characteristics of the general perception by women about the development in this sphere. Thus, it became clear that the majority of the interviewed women have never heard of the term "financial technologies": 15% of urban women and 58% of rural women, although only 8% of respondents answered the question on the use of financial technologies that they do not use them (Fig. 3).

Figure 3: The objectives to use financial technologies

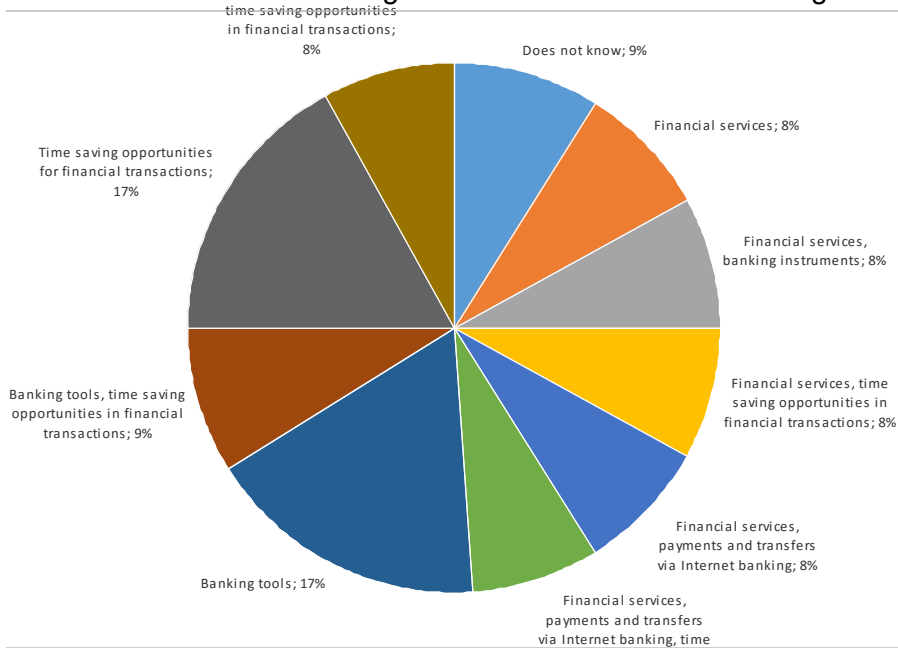


Source: Own survey.

These figures show that financial technologies are most often used for personal needs (59%), while 17% use them for an entrepreneurial activity or at work (8%). We believe that most women would be able to use digital financial services if they started their own businesses. This circumstance is very optimistic for the forecast of further development of the financial market in the Republic of Tajikistan.

It should be noted that regardless of their age and profession, during the interviews rural women showed a low level of knowledge about financial technologies: internet banking and electronic money transfer to the card is their entire vision and understanding of the term "financial technologies". Figure 4 presents a complete picture of women's understanding of the term "financial technology".

Figure 4: Women's understanding of the term "Financial Technologies"



Source: Own survey.

Answers to the question "What do you think about financial technologies?" showed a rather primitive view of women about this financial instrument. Unlike men, most of them, or 69%, believe that these are financial services, 31% - payments and transfers via Internet banking. Men have shown a greater knowledge of the issue pointing out that financial technologies save time in financial transactions. That is, there is a need for in-depth educational work among women about the benefits of financial technologies and the potential impact of its use on economic empowerment. This is confirmed by the answers to questions about knowledge of specific types of financial technologies. Thus, 38% of the interviewed women are practically not familiar with all the terms listed in the question, except for one or two; 31% of respondents answered that all the terms are familiar, some of them are not clear to them, 8% are familiar with all the listed terms, and 23% of women have never heard of them at all.

It should be noted that women are aware of the types of organizations that can provide or are providing financial technologies. The majority of respondents (43%) believe that banks can provide financial technologies through branches and internet banking, 21% admit that financial technologies can be provided by microfinance institutions and 13% - by payment systems. Similar responses were received among men. According to respondents of both genders, the most popular are Eskhata Bank and MDO IMON International, that is, those financial institutions that work in the field of electronic payments. Besides, those organizations are large companies known in the market, while smaller organizations were little known to the respondents.

An interesting question is the level of trust of the population in the

traditional banking system: the results of the survey showed that none of the women surveyed do trust at a level of 100% or 90%, 23% - trust at a level of 80%, and a half of those surveyed (51%) trust at a level of up to 50%. On average, trust in the banking sector is 59.1 %, which indicates a lack of trust, while 46 % of women are completely unfamiliar with the legal framework governing financial technologies (70 % of men). In addition, the survey revealed that women assess the level of understanding of the customers' needs in financial services by the banking sector less positively than men; the average level is 48.3%, which is a negative trend that limits the development of financial technologies in the Republic of Tajikistan.

When asked about the disadvantages and advantages of financial technologies, women explained that the key point in choosing a banking institution for them is the competence of staff - 26%, technical accessibility - 17%, recommendations of friends and acquaintances - 11%. Assessment of the level of satisfaction with the activities of the banking sector organizations (quality, accessibility, convenience) showed that in general, 69% of respondents are satisfied with the financial services provided, 8% of respondents assess the quality of financial institutions as high, and 15% are not satisfied with their work. The level of satisfaction of women is lower than that of men. It is worth noting that 31% of the interviewed women are not satisfied with the competence of the staff of financial institutions, 23% - are not satisfied with the cost of financial technologies, 23% believe that the price does not correspond to the quality of financial services, 31% are not satisfied with the level of simplicity and accessibility, which indicates the need to improve the quality of financial technologies and financial literacy of women. Similar results were obtained in the process of answering the question on the assessment of the level of satisfaction with financial technologies in general.

The most frequent problems called by respondents were communication problems (Internet), technical problems, delay/transfer/cancellation of financial transactions. 92% of women respondents said they were satisfied with the level of availability and accessibility of additional financial services provided by banking institutions (availability of a personal account, SMS-information, etc.). 63% consider themselves satisfied with the level of information security when using financial technologies and 17% were not satisfied with the level of information security.

DISCUSSION

The results of this study show that the level of use of financial technologies in the Republic of Tajikistan is not high enough, although it continues to grow annually. A large number of financial market participants at the national and regional levels, as well as various international organizations, have helped to reduce the gap in access to finances.

Many women remain dependent on their husbands, and about one in three married women from developing countries do not control household spending on large purchases (The world's women 2015: trends and

statistics, 2015). Only one in ten women does not consult with family members about how their own income should be spent. In addition, women often have limited opportunities for education, employment, property and land acquisition, an inheritance of assets and control over financial resources in general.

Globally, only 58% of women are clients of formal financial institutions, compared to 65% of men (Demirguc-Kunt et al., 2014). This gender gap is even greater between men and women in emerging markets, with the largest gap of 18 percentage points in South Asia. Providing low-income women around the world with effective and affordable financial instruments to borrow money, make payments and manage risk is critical to both women's empowerment and poverty reduction. However, the way to increase women's financial participation depends on the establishment of a more comprehensive gender-responsive financial system that takes into account the specific demand and supply-side barriers faced by women supported by a comprehensive regulatory environment. These barriers range from something as basic as the lack of assets to ensure loan repayment to more structural constraints such as account opening requirements that discriminate against women (Meleshkina, 2016).

At the same time, greater financial integration of women requires a more effective gender-responsive financial system that takes into account the specific supply and demand barriers faced by women. Also relevant is the need to improve the regulatory and legislative environment. It is also important to recognize that broader social constraints related to public authorities, the interaction between households, and the social status of women limit the broader impact of financial inclusion on women's economic empowerment. It is essential to recognize these limitations in order to ensure financial inclusion, which can have a transformational impact in this area.

Various measures can be used to overcome these barriers, and it is important that financial institutions take them into account when designing inclusive financial services. Positive measures include the collection of gender-disaggregated data for the development of individual value propositions oriented on women needs, and gender-sensitive intellectual products; the staff training to provide expertise, the provision of advisory services on financial training and education to women, and the development and expansion of women social networks.

CONCLUSIONS AND PROPOSALS

Summarizing the conducted study, it is possible to draw a conclusion that today the level of use of financial technologies by women in the Republic of Tajikistan is not high enough and is characterized by a significant gender gap. This appears to be a very negative trend, the elimination of which is indispensable for increasing women's financial inclusion. It should be noted that financial opportunities and financial literacy for women may be less pronounced in relation to digital financial services than in relation to traditional financial services, given the technical nature of digital access (use

of mobile phones for transactions, use of computer applications).

At the same time, we should not forget about rural women of the Republic who participated in the survey. Rural areas, where the majority of Tajik women live and work, have limited channels for the dissemination of financial technologies. In order to expand the use of financial technologies, it is necessary to improve the efficiency of regulation of this sphere, financial literacy, and information security; banks and the state should provide economic incentives, etc. This will allow not only realizing their own preferences and interests but also to diversify the business sector and open new opportunities for women. The fact is that the inclusion of women in the use of financial technologies is a key driver of their participation in the economy and household well-being. This leads to more sustainable economic growth and social development, as well as more diversified financial systems.

REFERENCES

- Alliance for Financial Inclusion. (2016). Policy Frameworks to Support Women's Financial Inclusion. Retrieved from: https://www.afii-global.org/sites/default/files/publications/2016-08/2016-02-womenfi.1_0.pdf (accessed June 19, 2019).
- Annibale, R. (2015). New Financial Technologies Offer Big Benefits to World's Poor. Retrieved from: <https://www.forbes.com/sites/skollworldforum/2015/06/05/new-financial-technologies-offer-big-benefits-to-worlds-poor/#3410cf4a5ee5> (accessed June 19, 2019).
- Conference on expanding access to financial services for women. (2013). Retrieved from: http://ru.g20russia.ru/events_summit/20130421/781041454.html (accessed June 19, 2019).
- Demircuc-Kunt, A., Klapper, L., Singer, D. & Van Oudheusden, P. (2014). The Global Findex Database 2014: measuring financial inclusion around the world. Retrieved from: <http://pubdocs.worldbank.org/en/681361466184854434/2014-Global-FindexReport-DKSV.pdf> (accessed June 19, 2019).
- Holloway, K., Niazi, Z. & Rouse, R. (2017). IPA Women's Economic Empowerment Through Financial Inclusion. A Review of Existing Evidence and Remaining Knowledge Gaps, 12.
- Meleshkina, A.I. (2016) Osobennosti institutsional'nogo proektirovaniya gendernoi politiki c uchetom ekonomicheskikh posledstviy gendernogo neravenstva. 9(91). Retrieved from: <https://cyberleninka.ru/article/n/osobennosti-institutsionalnogo-proektirovaniya-gendernoy-politiki-s-uchetomekonomicheskikh-posledstviy-gendernogo-neravenstva> (accessed June 19, 2019).
- National Bank of Tajikistan. (2017). Macroeconomic Report. Dushanbe. Retrieved from: http://www.nbt.tj/ru/statistics/monetary_sector.php (accessed June 19, 2019).
- Noland, M., Moran, T. & Kotschwar, B.R. (2016). Is gender diversity profitable? Evidence from a Global Survey. Peterson Institute for International Economics Working Paper, 16–30.
- Staschen, S. & Meagher P. (2015). Basic Regulatory Enablers for Digital Financial Services, Lessons from CGAP's Experience in Ten Focus Countries. Washington, DC: CGAP.
- The world's women 2015: trends and statistics. (2015). Retrieved from: https://unstats.un.org/unsd/gender/downloads/worldswomen2015_report.pdf (accessed June 19, 2019).
- Toronto Leadership Centre. Advancing women's digital financial inclusion. (2018). Retrieved from: <https://res.torontocentre.org/guidedocs/Advancing%20Womens%20Digital%20Financial%20Inclusion%20FINAL.pdf> (accessed June 19, 2019).
- United Nations. The World's Women 2015: Trends and Statistics. (2015). United Nations, Department of Economic and Social Affairs, Statistics Division, 15(8).

Workplace Gender Equality Agency. The Business Case for Gender Equality. (2018). Retrieved from: <https://www.wgea.gov.au/sites/default/files/wgea-business-case-for-gender-equality.pdf> (accessed June 19, 2019).

World Bank (2017). The Global Findex database. Retrieved from: <https://globalfindex.worldbank.org> (accessed June 19, 2019).