Digital financial literacy (DFL) is becoming an increasingly important aspect of education for the digital age. The development of financial technology (fintech) products and services creates greater opportunities for financial inclusion. However, it requires greater knowledge on the part of consumers to understand their costs and benefits and to know how to avoid fraud and costly mistakes. The key challenge is that there are significant gaps in DFL between men and women, between urban and rural residents, and between small and large firms, among others. Digital financial education (DFE) strategies should therefore target disadvantaged groups to narrow these gaps.

Digital financial literacy (DFL) has been gaining traction as an important requirement for effective digital financial inclusion, along with consumer protection and financial regulation. It has, therefore, gained an important position in the policy agenda of many countries. In 2016, the Group of Twenty (G20) leaders advocated for DFL by endorsing the “High-level Principles for Digital Financial Inclusion.” Among these, Principle 6 encourages countries to “strengthen digital and financial literacy and awareness” (Global Partnership for Financial Inclusion [GPFI] 2016). However, most national financial education strategies do not specifically address DFL, but instead focus on basic financial concepts. Moreover, the G20 has not yet developed guidelines for either DFL or digital financial education (DFE), which are pertinent in an age where digital technology can make financial services borderless. This would subsequently allow people to easily access financial products and services in other countries. For this reason, global coordination is crucial not only for regulating financial technologies (fintech), but also for improving the DFL of the community.

DFL overlaps with financial and digital literacy but has its separate aspects as well. In particular, the development of fintech products and services creates greater opportunities for financial inclusion. At the same time, it requires greater knowledge on the part of consumers to understand the costs and benefits of the various products and to know how to avoid fraud and costly mistakes. These developments point to the need to develop country-level DFE strategies to improve DFL, with a focus on the skills likely to be critical for those participating in the digital economy.

The key challenge reported in the literature is the existence of significant gaps in financial inclusion and financial literacy between men and women, urban and rural residents, those with higher and lower incomes, and small and large firms, among others. While digital finance has been expected to help reduce such gaps, its early adopters, however, tend to be those with higher levels of education, income, and DFL. For example, studies of fintech adoption in the People’s Republic of China (PRC), Japan, and Viet Nam showed that individuals in higher-income groups are significantly more likely than those in low-income groups to adopt fintech services, and that men are significantly more likely than women to adopt fintech services (Huang, Wu, and Yang forthcoming; Yoshino, Morgan, and Trinh 2020; Morgan and Trinh 2020 see Appendix for more details). Additionally, men in many African countries exhibit a higher tendency than women to use mobile money for both
saving and other financial transactions. The proportion of African men who own mobile money accounts is higher than that of African women (Chamboko et al. 2018). Gaps in digital literacy are also observed in many developed countries. Using the Eurostat database on Digital Economy and Society, Martínez-Cantos (2017) reports that digital skills gaps by gender in Europe are significant and persistent.

DFL is expected to become an even more important aspect of education in the postCOVID-19 world. This environment would be characterized by increased online transactions, presenting greater challenges to the financially-excluded disadvantaged groups[1] and micro-, small and medium-sized enterprises (MSMEs).

The aforementioned disparities indicate that, rather than taking a one-size-fits-all approach, DFE strategies should be targeted at disadvantaged groups of individuals and firms in order to narrow these gaps. Thus, fintech would be enabled to contribute to more inclusive financial and economic development.

Proposal

Background

G20 leaders have already endorsed the "High-Level Principles on National Strategies for Financial Education” in 2012 (OECD/INFE 2012). However, these principles have been limited to traditional financial education, which focuses on the understanding of basic principles of finance, such as compound interest, inflation, and asset diversification. We recommend that these principles be augmented with additional guidelines specifically focusing on ways to promote DFL.

In particular, G20 leaders should enunciate principles for developing targeted approaches to enhancing the DFL of the groups disadvantaged by the differences in gender, urban/rural, and small/large firms, rather than a uniform approach. One promising avenue is to enlarge the group of private stakeholders in national financial education strategies to include fintech and bigtech companies[2]. This is because such firms possess the necessary technology as well as extensive networks of customers. Fintech and bigtech companies should be required to provide a certain level of financial and digital knowledge education to their customers by using their platforms and technology. With the wide networks established through their platforms, fintech and bigtech companies can easily extend financial knowledge to a large number of people of different ages, backgrounds, locations, and levels of education. Given that bigtech and fintech companies know their customers’ experiences very well, they should be able to design attractive mobile apps that can help users gain financial literacy in an easy, interesting, and interactive way. This could be an important means of leveraging financial technology to promote DFL. Some specific examples of such programs are described below.

Definition of Digital Financial Literacy (DFL)

While previous literature (e.g., OECD 2017) has described various aspects of DFL, there is still no standardized definition. The OECD (2018b) discusses the importance of DFL, but does not provide a definition, which indicates a lack of consensus at the level of international coordination. According to Morgan, Huang, and Trinh (2019), DFL includes knowledge of and capability in four main areas:

1. Fintech products and services, their benefits and drawbacks,
2. new kinds of risks associated with fintech products and services,
3. ways to protect oneself from these risks, and
4. redressal methods in case of losses or other damage from such risks.

These products and services generally fall into four major categories:

(i) Payments: Electronic money, mobile phone wallets, crypto assets, remittance services;
(ii) Asset management: Internet banking, online brokers, robo advisors, crypto asset trading, personal financial management, mobile trading;
(iii) Alternative finance: Crowdfunding, peer-to-peer (P2P) lending, online balance sheet lending, invoice and supply chain finance, etc.; and
(iv) Others: Internet-based insurance services, etc.

Policy Recommendations

Extending DFL to disadvantaged groups is critical to achieve equitable financial inclusion in the digital age. Necessary preliminary steps...
include promoting the development of standardized measures of DFL and carrying out surveys to locate the gaps. These are covered in the first recommendation below. Our second recommendation concerns the development of DFE strategies and programs to be integrated with overall financial education strategies. Including stakeholders such as fintech and bigtech companies, as well as NGOs and financial institutions in national financial education strategies and seeking innovative means of collaboration for delivering DFE are promising avenues, which is our third recommendation. These are corroborated by three case studies of PRC, India, and Latin America. Our fourth and fifth recommendations deal with the need to monitor such innovative programs and to address related issues such as consumer protection for digital consumers.

1. Develop and implement tools to measure DFL
The OECD recommends that dedicated national surveys or coordinated international studies be used to collect high-quality, comparable data on levels of financial literacy (OECD 2019). Internationally standardized surveys of general financial literacy have been developed by the OECD (OECD 2018a), the World Bank (World Bank 2018), and others. However, these surveys do not include the aspects of DFL described in the previous section. We recommend that a standardized set of questions be developed to cover these dimensions and be included in these questionnaires. The augmented surveys should be carried out as soon as is practicable to acquire baseline literacy data on the state of DFL in individual countries.

The data so acquired should be analyzed to identify aspects of DFL that may be of particular significance, especially for the vulnerable groups in greatest need of DFL. Furthermore, it should be used to analyze the financial behavior of the population (or specific subgroups in relevant areas), such as accessing and using digital financial services for the purpose of saving, borrowing, investing, and acquiring insurance.

2. Develop DFE strategies and programs
The OECD also recommends that countries establish and implement national strategies to ensure a coordinated approach to financial education (OECD 2019), which includes the following aspects:

- Recognizing the importance of financial education, through legislation where appropriate, at the national level;
- Involving cooperation with relevant stakeholders and identifying a national leader or coordinating body/council;
- Establishing a roadmap to support the achievement of specific and predetermined objectives;
- Providing guidance on individual programs to be implemented under the national strategy in order to efficiently and appropriately contribute to the overall strategy; and
- Incorporating monitoring and evaluation processes to assess the progress of the strategy and amend it accordingly.

All these aspects should be applied to the development and implementation of national strategies as well as DFE programs. The OECD and other relevant organizations should incorporate such recommendations in their guidelines for national financial education policies such as OECD/INFE (2012).

3. Extend DFE strategies and programs to include fintech and bigtech firms
The G20 member countries should establish guidelines for the inclusion of fintech and bigtech companies in national financial education strategies. They must promote recommendations that fintech and bigtech firms be required to provide a certain level of DFE to their customers, especially disadvantaged groups. With their wide networks, advanced digital tools, and detailed user databases, fintech and bigtech companies can easily extend financial knowledge training to a large number of individuals in a targeted manner.

However, online training alone may not be sufficient. Given that disadvantaged groups are usually under-educated, in-person training implemented by NGOs and financial institutions in their neighborhood will also be needed to increase the effectiveness of such programs. The combination of the online and offline education model has great potential to diminish these digital gaps. Therefore, G20 member countries should also develop guidelines for including integrated online and offline models in national financial education strategies. There are a number of successful examples of such programs which could serve as models, three of which are described here.

People’s Republic of China: With the rapid growth of the PRC’s fintech industry, hundreds of millions of financially underserved people and micro- and small- businesses now have access to a range of new digital financial products and services. However, advancing financial inclusion in rural areas is very difficult, because a large proportion of rural residents are under-educated and have a very low level of
The pilot financial education program implemented in Inner Mongolia by the China Foundation for Poverty Alleviation (CFPA; an NGO) and China Doorstep Finance (CD Finance; a microloan provider in rural areas), with support from Visa, is an example of a promising approach. It combines the provision of financial knowledge with the use of financial services. This case indicates that collaboration among the government, NGOs, fintech companies, and rural financial institutions can lead to a win-win solution. In 2016, the three organizations jointly initiated a three-year financial education pilot program in ten poverty-stricken “banners” or counties in the Inner Mongolia Autonomous Region. They aimed to advance financial inclusion and support poverty alleviation efforts through education and capacity building. CD Finance developed a series of financial education courses for loan officers and organized in-person financial education activities for farmers. Subjects included insurance, credit, financial management, and fraud prevention. After training, CD Finance’s loan officers, most of whom were also farmers, became instructors. They visited rural residents and imparted financial knowledge, teaching them how to use financial services through their mobile phones. With the pilot program’s progress, loan officers at CD Finance not only helped others but also expanded their individual businesses and skill sets.

With improved knowledge of loan repayment conditions, farmers not only abide by their credit agreements with CD Finance in a better manner, but also pay more attention to their credit standings with banks, rural credit cooperatives, and other financial institutions. Following the publicity and explanation of digital finance tools such as mobile banking transfers, more farmers are beginning to use these new technologies. This has greatly improved loan officers’ efficiency and connected them more closely with their customers. CD Finance’s online-to-offline service model enables ordinary farmers to access the most advanced digital technology services, largely eliminating the digital divide. As of late 2018, a total of 209 financial education sessions had been held with 10,740 participants, of whom 63% were women and 95% were farmers. The program has benefited more than 10,000 families and 44,000 farmers[3].

**India**: During 2016–2018, Sahyog Foundation, an Indian NGO specializing in empowering the powerless and educating the uneducated, collaborated with Indian fintech companies such as Oxigen World. They carried out financial awareness campaigns in twenty-two rural areas in nine Indian states, where the share of the unbanked population is high. Reaching the most isolated villages was one of the major targets of its campaigns. In these campaigns, Sahyog Foundation and its sponsor companies made the villagers and the semi-urban population aware that digital literacy is the ability of individuals and communities to understand and use digital technologies for meaningful actions in life situations. The participants also experienced various transactions through fintech apps. The awareness program covered best practices, tips, and tricks to be followed while conducting transactions through the digital channels. To promote digital banking, Sahyog Foundation associated with villagers, slum dwellers, schools, and colleges. Thus, they created awareness and educated various stakeholders such as employees, students, teachers, and traders on the benefits of going cashless to promote the use of digital banking channels for financial transactions. To get target audiences involved, they made the activities interactive, educative, and entertaining through street theater, drum beating, games on banking benefits and saving, group gatherings, and announcements (Sahyog Foundation 2019).

**Latin America**: Million, a telecommunications company registered in the European Union and operating in a few Latin American countries, cooperated with Grameen Foundation, a global non-profit organization based in the US. Together, they implemented a program entitled “Conectadas: Building Financial Capabilities and Entrepreneurship Skills among Latin American Women and Girls via Mobile Technology.” The program, which began in Guatemala in 2017, will be expanded to eight other Latin American countries in 2020. In this program, Grameen Foundation designed educational content for a mobile phone application that teaches women entrepreneurs how to grow their businesses and manage their finances using various technology platforms. The educational content consists of modules that enable learners to achieve various learning goals including understanding personal finance concepts, digital finance options, and accessing financial options. Several teaching materials such as short videos and quizzes have been adopted to facilitate the learning process (Grameen Foundation 2020). This program could be viewed as an ideal cooperation between one party with advanced technology in the telecom industry and another with robust knowledge of gender disparity issues and experiences in advancing women’s economic empowerment.

**4. Develop frameworks for monitoring the efficacy of DFE strategies**

Monitoring of the efficacy of financial education strategies is a key element of such strategies. OECD/INFE (2012, 11) states that “the national strategy] should preferably be initiated, developed and monitored by a widely credible and unbiased leading authority or governing mechanism. It should be recognised and promoted at the highest policy level.” The G20 countries should thus promote efforts to augment these monitoring frameworks to cover activities related to DFL, including those of both public and private stakeholders, including fintech and bigtech firms. As noted in OECD/INFE (2012, 10), “the assessment[s] can also draw information from sources such as consumer surveys and
market research, opinions polls, consumers’ complaints, financial market surveys, financial and economic indicators or other consultative processes.” Relevant government bodies should be charged with monitoring complaints, both to gather information about abuses and to redress them.

5. Extend consumer protection schemes to cover fintech products and services

As described above, consumers of fintech services are subject to a wide variety of novel risks. These include phishing, pharming, spyware, SIM card swap, unauthorized or unknown use of one’s digital footprint, bias due to profiling based on online activities, hacking, excessive borrowing, and other kinds of mis-selling (see Morgan, Huang, and Trinh (2019) for a more detailed description). Consumers may be reluctant to make use of fintech products and services if they lack trust in those service providers. The “High-level Principles on Financial Consumer Protection” were endorsed by the G20 Finance Ministers and Central Bank Governors in 2011 (OECD 2011). However, they do not specifically address the new risks associated with fintech products and services. Therefore, the G20 countries should promote the extension of the existing principles of financial consumer protection to establish guidelines in this area, particularly with respect to international transactions.

Disclaimer

This policy brief was developed and written by the authors and has undergone a peer review process. The views and opinions expressed in this policy brief are those of the authors and do not necessarily reflect the official policy or position of the authors’ organizations or the T20 Secretariat.

References


Appendix

[1] . The groups considered to be disadvantaged would vary by country. According to the World Bank (2016) ‘‘disadvantaged or vulnerable’ refers to those individuals or groups who, by virtue of, for example, their age, gender, ethnicity, religion, physical, mental or other disability, social, civic or health status, sexual orientation, gender identity, economic disadvantages or indigenous status, and/or dependence on unique natural resources, may be more likely to be adversely affected by the project impacts and/or more limited than others in their ability to take advantage of a project’s benefits.”

[2] . Bigtech refers to large technology companies such as Amazon, Apple, and Google that also provide financial services.


Existing Initiatives & Analysis