



EXECUTIVE SUMMARY

This document is prepared by the Inclusive Financial Innovation Initiative (IFII) of J-PAL Southeast Asia/LPEM FEB UI in August 2020 to summarize the whitepaper “Towards Inclusive Digital Finance in Indonesia: A Literature Review and Landscape Analysis”. The whitepaper aims to share evidence on how DFS can be marshalled to support shared economic prosperity and explore research opportunities to support DFS development. This report is based on effort funded by the Bill & Melinda Gates Foundation. The findings and conclusions contained within are those of the authors and do not necessarily reflect positions or policies of the Bill & Melinda Gates Foundation.

A. OVERVIEW AND POLICY ISSUES

The rapid global spread of mobile phones and internet has been one of the most promising recent developments in financial inclusion, which is beginning to transform the financial services landscape in many low-and-middle income countries (LMICs). Digital financial services (DFS) have played a key role in enabling this transformation. DFS can address market failures by reducing the transaction costs of providing basic banking and money transfer services; generate and use data which can close information gaps; and, enable entirely new models of service delivery.

However, DFS risks exacerbating inequality by disproportionately serving the better off and the better educated if new products do not meet the needs and preferences of low-income users. These concerns are especially relevant in countries like Indonesia, where DFS are being rapidly adopted by individuals at

the top of the socioeconomic pyramid. To date, there is relatively little evidence to guide policymakers, organizations, and firms committed to this agenda, despite the clear potential for DFS innovation to advance Indonesia's financial inclusion goals and support inclusive growth.

The whitepaper consists of three sections, (1) global literature review which draws primarily from experimental or quasi-experimental literature on our four sectors of electronic money and payment technologies, savings, credit, and e-commerce; (2) overview of the Indonesian institutional, technological, and socioeconomic landscape including policy roadblocks and priorities context, and describing the current condition of financial inclusion in Indonesia and highlighting both gaps and opportunities; (3) identifies promising areas for future policy innovation and future research.

B. GLOBAL LITERATURE REVIEW AND INDONESIA LANDSCAPE

The global literature review focuses on insights related to use cases believed to be most relevant to the Indonesian markets.



- 1. E-money and payment technology:** In general, e-money reduces transaction costs by making payments faster and cheaper, which can have downstream welfare impacts by facilitating risk-sharing and informal insurance mechanisms. It can also help close information gaps by generating an electronic record of payments. When applied to government-to-people (G2P) payments context, there is also strong evidence that it can improve program efficiency and reduce leakage. Furthermore, despite mixed evidence on its impact to downstream welfare outcomes, digitizing payments – and design features enabled by digital payments – could potentially have broader, program specific, impacts on beneficiaries' economic lives.
- 2. Credit:** Evidence on digital credit products is sparse and much needed, in particular to overcome challenges like high interest rates and there is little regulation to protect users. However, early learnings are encouraging: digital credit has been found to improve access to finance and household resilience. Close attention to service or product design and understanding of users' needs are important elements to develop high impact products.
- 3. Savings:** Existing evidence on mobile-linked savings accounts suggests that accounts usually do not increase the total amount saved but can shift where savings are stored and what savings are used for. While the overall amount of savings does not increase when savings products are digitized, it does help users to reach specific financial goals, such as investment in productivity, education, or health.
- 4. E-commerce:** Amongst the limited evidence in e-commerce researchers found that e-commerce can increase access to markets and provide benefits to consumers, particularly in remote areas. On the other hand, substantial search frictions on the platform remains a challenge for small-firms to succeed in e-commerce.



To complement the literature review, the whitepaper also discusses Indonesian context, drawn from literature review, policy analysis, interviews with over 40 key stakeholders in the public and private sectors, and analysis of various datasets.

- 1. Institutional and technological context:** Indonesia has foundational policies and strong political appetite to expand inclusive DFS, particularly through further digitization of social protection transfers. However, improved infrastructure, technology, and coordination must be prioritized to ensure success. In recent years, the focus of DFS regulations has been to promote transparency in the sector, build infrastructure, expand DFS agents and branchless banking networks, promote the digitization of government aid, and protect consumers and their personal data.
- 2. Socioeconomic context - gender norms and financial decision making:** While formal institutions and regulations play a clear role in financial inclusion and access, informal institutions can be equally important. Overall, married women in Indonesia are more likely to report having a dominant role in household financial decision making, compared to married men. This suggests that Indonesian women may have reasons to potentially use DFS, regardless of whether they earn an income.
- 3. Current state of financial inclusion:** Access to and use of formal financial services has been on the rise in Indonesia, but a steep socioeconomic gradient remains. There is prevalence of account ownership amongst those with higher educational attainment, urban population and younger age group. However, analysis also suggests that demographics, socioeconomic status, and economic engagement rarely rank highly as predictors of account ownership. In contrast, institutional attachment matters, both in terms of government benefits and identity ownership as well as digital engagement matters.

C. AREAS OF OPPORTUNITY FOR DFS DEVELOPMENT

Only 4.6 percent of the population reported ever having used e-money in 2019, with use concentrated among the most educated. Despite that, there are important opportunities for DFS development. E-money and e-commerce could facilitate meaningful financial inclusion; furthermore, the COVID-19 pandemic may also hasten adoption of these technologies and increase the return to engagement with them. Accordingly, the government has an important window of opportunity to strengthen G2P payments' contribution to financial inclusion, especially as Indonesia works towards optimizing more technological innovation as part of its G2P reforms vision.

1. DIGITAL READINESS

A key question is whether Indonesians have the skills and devices needed to rapidly adopt new DFS technologies. While only 9.5 percent of smartphone owners in the 2019 Financial Inclusion Insights survey used e-money, our analysis estimates that 89-93 percent are “digitally ready”¹ to convert as DFS users. This indicates that digital readiness significantly outstrip demands for DFS use. To more concretely portray the opportunity, simply converting all digitally ready individuals would have a massive impact on e-money adoption, boosting the adoption rate to 42 percent.²

2. USE-CASES



A compelling use-case is another important component to drive DFS adoption. Promising opportunities lie in using e-money and digital banking to facilitate remittance; promoting financial use-cases of social protection accounts; as well as scaling digital credit, P2P lending and e-commerce for more among MSMEs and/or low-income populations.

- **Remittance:** Remittance is a very common use-case, with over 60 percent of Indonesians reporting sending or receiving money within the country and internationally in the past year. Our analysis reveals cash is by far still the dominant method of remittance, typically cited by four out in five individuals. This suggests there is significant scope to transition cash-based transfers to digital methods, which would change the way millions of Indonesians transfer money.

¹ Defined as possessing complete or partial ability to download applications or conduct internet searches.

² Based on the authors' calculations. In addition to existing e-money users, includes every individual who owns a smartphone and who has at least some or complete ability to use the internet or download an application.

- **G2P Payments:** Based on our machine learning computation, receipt of government benefits is highly correlated with financial inclusion, especially for women. At the same time, there is clear evidence of untapped impact: on average, only 60 percent of beneficiaries are aware that they own a financial account through their participation in government transfers.
- **Digital Credit and P2P Lending:** While it does not seem that P2P lending will likely scale to low-income populations in the immediate future, it is noteworthy that there are a handful of fintech firms doing innovative work to deploy P2P for pro-poor purposes (e.g. through microfinance models). Here, there are opportunities to explore the effects of deepening the digital engagement of borrowers, though e.g. disbursing loans or facilitating repayment through e-money.
- **E-commerce:** A critical challenge noted in our stakeholder interviews is ensuring MSMEs are able to thrive and fully reap the benefit of digital inclusion once onboarded to e-commerce platforms. Here, interventions on both the firm side (e.g. improving firms' ability to engage with the platform, building marketing skills, etc.) and the platform side (e.g. finding ways to better identify and showcase promising small firms) could be high-value.

DFS TRANSITIONS AND E-COMMERCE USE DURING THE COVID-19 PANDEMIC

The COVID-19 pandemic may hasten adoption of both DFS technologies and e-commerce. Our online survey reveals that overall, 21 percent of men and 22 percent of women used DFS for the first time during COVID-19, while 15 percent of men and women reported that they stopped using DFS in this period. It remains unclear whether these patterns will persist when life normalizes; however, preliminary insights from the survey suggests roughly half of DFS users expect to use DFS less after the pandemic, with 20 percent of individuals expecting to discontinue engagement completely.

Our online COVID-19 survey also found sizable reliance on e-commerce during the pandemic. Overall, the majority of DFS users had purchased at least some goods online since the pandemic began. Both urban and rural DFS user cited that the need to buy things online was a main trigger for DFS use. Beyond DFS users, the pandemic also pushed 32 percent of DFS users to shop online for the first time.

D. EVIDENCE GAP FOR POLICY INNOVATION AND FUTURE RESEARCH

Our Indonesia-based research, combined with the global literature review, points to several high-potential areas for research where there is opportunity to inform policy.

THEME	POTENTIAL RESEARCH OPPORTUNITIES
G2P Transfers	<ul style="list-style-type: none"> • How can different G2P payment mechanisms and channels affect program performance, how benefits are used, and overall downstream impacts on beneficiary economic activity and well-being? • How can opening up programs to multiple payment mechanisms and channels and transitioning new programs (like Indonesia's LPG

THEME	POTENTIAL RESEARCH OPPORTUNITIES
	<p>subsidy) to digital payment impact beneficiary welfare, program performance, and the shape of the local financial services market?</p> <ul style="list-style-type: none"> • How can strengthening and scaling digital ID systems impact program efficiency, inclusion/exclusion errors, and financial inclusion more broadly?
<p>Agent Networks and DFS and E-commerce Adoption</p>	<ul style="list-style-type: none"> • How do issues like agent exclusivity, (lack of) interoperability and third-party agent management impact agent performance and financial inclusion? • Since ATMs are widely used in both urban and rural areas in Indonesia, how can installing ATMs in uncovered communities impact financial service use, and how would this compare to e.g. banking a village through an agent? • Is there scope to increase use of bank and DFS agents for domestic and international remittances? • As the COVID-19 pandemic may accelerate adoption of DFS like e-money and e-commerce, to what extent is adoption “sticky”? Are tipping points or network externalities in adoption, and how can transition to digital payment systems impact consumer behavior and welfare? • How can we support MSME growth and sustainability on e-commerce platforms?

OPPORTUNITIES FOR COLLABORATION

Evidence in this area is not yet extensive; thus, this is a particularly opportune time for research to inform policies to both convert cash-based payments to digital and improve the functioning of existing programs. Accordingly, please feel free to reach out to **J-PAL Southeast Asia’s Inclusive Financial Innovation Initiative** (ifii@povertyactionlab.org) for follow-up conversations on incorporating the evidence into policy decisions.

ABOUT J-PAL & J-PAL SOUTHEAST ASIA

J-PAL Southeast Asia, based at the University of Indonesia, leads J-PAL’s work in the Southeast Asia region. JPAL Southeast Asia conducts randomized evaluations, builds partnerships for evidence-informed policymaking, and helps partners scale up effective programs. Since it was established in 2013, the Abdul Latif Jameel Poverty Action Lab in Southeast Asia (J-PAL SEA), based at the University of Indonesia, has worked with policymakers and national government partners to ensure that research addresses key policy gaps in Indonesia. Our work spans a wide range of sectors, including social welfare, migration, health, good governance, and financial inclusion. We conduct capacity building activities for policymakers, researchers, and academics seeking to learn and apply rigorous impact evaluation, and work with central and local governments to help build a culture of evidence-informed decision-making in the region.