DEMAND FOR MOBILE MONEY AND BRANCHLESS BANKING AMONG MICRO AND SMALL ENTERPRISES IN INDONESIA

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Demand for Mobile Money and Branchless Banking among Micro and Small Enterprises in Indonesia

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ABSTRACT

Micro and small enterprises (MSEs) represent a significant portion of Indonesia's economic and employment activity. They constitute 98 percent of all businesses and provide 94 percent of employment. MSEs represent the most significant portion of economic activity for the poor population of Indonesia; the poor are more likely than other income groups to use MSEs not only for employment and income generation but also for consumption. MSEs are therefore important links in the chain of financial inclusion and poverty reduction. By bringing more MSEs into the formal financial sector, it is expected that more of the poor population of Indonesia will also be provided with financial services.

The potential of mobile money and branchless banking (MM & BB) services to provide financial services to previously "unbanked" market segments has been widely noted around the world, but this potential has not been realised in Indonesia. These services use a combination of new technology using mobile phones and agents as local service points to provide financial services to customers and locations that would otherwise be uneconomical to reach with conventional financial services.

This study assesses the potential demand for MM & BB services from MSEs in Indonesia, drawing on both quantitative and qualitative data obtained through 400 survey interviews with MSE owners and 16 focus groups distributed evenly across four provinces: Bali, South Sumatra, South Sulawesi, and West Java. The study was conducted in August and September 2013.

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Abbreviations

BB	branchless banking
BPR	bank *perkreditan rakyat* (people's credit bank)
CICO	cash-in/cash-out
EDC	electronic data capture
GSMA	GSM (Groupe Spéciale Mobile) Association
ME	micro enterprise
MFI	microfinance institution
MM	mobile money
MSE	micro and small enterprise
POS	point of sale
Rp	Indonesian rupiah
SE	small enterprise
SIM	subscriber identity module
SMS	short message service
TNP2K	*Tim Nasional Percepatan Penanggulangan Kemiskinan* (National Team for the Acceleration of Poverty Reduction)
USSD	unstructured supplementary service data

Executive Summary

Micro and small enterprises (MSEs) represent a significant portion of Indonesia's economic and employment activity. They constitute 98 percent of all businesses and provide 94 percent of employment. MSEs represent the most significant portion of economic activity for the poor population of Indonesia; the poor are more likely to use MSEs, not only for employment and income generation but also for consumption. MSEs are therefore important links in the chain of financial inclusion and poverty reduction. By bringing more MSEs into the formal financial sector, more of the poor population of Indonesia are expected to receive financial services.

The potential of mobile money and branchless banking (MM & BB) services to provide financial services to previously 'unbanked' market segments has been widely noted around the world. These services use a combination of new technology using mobile phones and agents as local service points to provide financial services to customers and locations that would otherwise be uneconomical to reach with conventional financial services. The services typically use the text-based interfaces on simple mobile phones to perform simple financial transactions, and leverage local service points such as existing small businesses, telephone shops, or retail outlets to provide convenient cash-in and cash-out points to convert funds held in electronic accounts to and from physical cash. At the time of writing, none of these services had gained widespread use in Indonesia, but their potential to provide financial services to micro and small enterprises has been widely discussed.

This study assesses the potential demand for MM & BB services from MSEs in Indonesia, drawing on both quantitative and qualitative data; the survey consisted of 400 survey interviews with MSE owners and 16 focus groups distributed evenly across four provinces: Bali, South Sulawesi, South Sumatra, and West Java. The study was conducted in August and September 2013.

The data suggest a number of different MM & BB services that MSEs could potentially use regardless of province or the gender of the MSE owner. Some differences in market opportunities exist among MSEs due to the size of the transactions in which they engage and differences in their current levels of bank use. In particular, data from the study show the following:

- **A potential market exists for short-term savings accounts in which MSEs can deposit cash they have left over at the end of the day.**
  - About 85 percent of respondents have money left over at the end of the day at least half of the time, after paying for all business and household expenses.
  - More than a third have between Indonesian rupiah (Rp) 50,000 and Rp 100,000 left over at the end of the day, whereas about a quarter have between Rp 100,000 and Rp 1,000,000 left over.
  - Only a third of respondents with money left over put the money in a bank account; the rest keep the money on themselves or somewhere hidden at their home or business.
  - **Market opportunity:** An MM & BB service could enable MSE owners to visit a local agent and deposit cash left over at the end of the day in a savings account for security reasons. Money on deposit could then be used to pay suppliers and employees.
- **A potential market exists for business-to-business payments.**
  - MSEs regularly make large cash payments to suppliers; the typical supplier payment made by a microenterprise is Rp 400,000, whereas that of a small enterprise is Rp 1,000,000.

- ◦ To make these payments, MSEs carry large amounts of cash with them to the supplier's place of business where they make the payment and pick up the goods, although often they are not traveling very far: the farthest median distance of respondents is 5 km.
- ◦ A subset of MSEs are themselves suppliers to other businesses, receiving Rp 400,000 (micro) to Rp 1,500,000 (small), and might benefit from receiving payments from their business customers electronically and not in cash.
- ◦ **Market opportunity:** An MM & BB service could enable electronic payments to suppliers to reduce the amount of cash MSE owners have to carry.
- ◦ **Challenge:** The distances MSE owners travel to make purchases from suppliers are short, so they may not see the value in making payments electronically.
- **A potential market exists for MSE payments to employees.**
  - ◦ MSEs tend to hire and pay employees on a daily or monthly basis. Daily wage bills tend to be about Rp 50,000 for one employee, whereas monthly wage bills are about Rp 1,000,000 for two or three employees.
  - ◦ Almost all MSEs in the sample currently pay their employees with cash.
  - ◦ **Market opportunity:** An MM & BB service could enable MSE owners to pay their employees electronically.
  - ◦ **Challenge:** MSE employers may worry about the labour regulation implications of creating a record of employee payments through an electronic payment system.
- **Women are potentially a more viable market for MM & BB services because of the nature of their approach to managing money.**
  - ◦ Women track their money more thoroughly, making them a potential market for services that allow consumers to store their money in different 'subwallets' on a mobile money platform.
  - ◦ Women save small amounts of money on a daily basis for themselves and for their households.
  - ◦ Women have already integrated the use of mobile phone services into their business practices, potentially making the transition to mobile money easier.
  - ◦ **Market opportunity:** An MM & BB service could enable female MSE owners to deposit small amounts in a savings account for security reasons. A subwallet functionality on the mobile money platform could facilitate tracking of their money and the separation of their money into household and business accounts.
- **MM & BB must compete with payments made using both cash and existing bank services.**
  - ◦ Three-quarters of small enterprise owners in the sample have a bank account in which they save, whereas more than 40 percent of microenterprise owners do.
  - ◦ About 90 percent of those who have an account have used it in the past month.
  - ◦ One-third of small enterprise owners have sent or received a remittance in the past year, whereas about 15 percent of microenterprises have done so. Almost all of those remittances were sent or received through bank transfers.
  - ◦ MSE owners in the sample find using banks inconvenient because of the time needed to go to a bank branch and wait in line for service.
    - ▪ MSE owners do use ATMs to withdraw money from their bank accounts but deposit money through tellers in branches.
    - ▪ However, the tendency is higher to transact in cash than electronically because they are more likely to have cash on hand than in a bank deposit.
  - ◦ **Market opportunity:** Make banking more convenient through MM & BB services that reduce the distance travelled through a wider and more numerous network of agents as local service points to provide financial services to customers and locations.

The findings discussed above describe a variety of different market opportunities for MM & BB service providers. For those service providers to be able to take advantage of those opportunities to provide improved services to MSEs, a policy environment needs to be in place that can allow them the freedom to identify and scale a variety of services. As a result, the policy implications stemming from this study, which focused on the demand side of the equation, are necessarily broad:

- Enable a broad array of service providers, whether they are banks or MM & BB service providers, to experiment with different service offerings.
- Ensure adequate consumer protection measures are in place, including at a minimum the following:
  - a set of overriding principles or standards that clearly state what types of events or behaviours of service providers constitute a violation of consumer rights
  - an easy way for consumers to seek redress in cases in which they believe they have been harmed
- Promote the use of electronic payment systems directly through such means as benefit payments and government employee salary payments and the use of electronic payments for government payment flows such as taxation and mandatory insurance schemes.

Introduction

The Potential for MSEs and Financial Services to Reduce Poverty

The number of micro, small, and medium enterprises in Indonesia is growing rapidly, increasing from 51.3 million in 2010 to 55.2 million in 2011.[2] Micro and small enterprises (MSEs) represent more than 98 percent of the total number of firms in Indonesia, 94 percent of employment, but only 44 percent of value-added economic activity (Mourougane 2012; Nazara and Gitaharie 2008). **As a result, MSEs are important to poverty relief, as they provide a significant contribution to Indonesia's economic activity and employment for the poor or near-poor.**

MSEs suffer from lack of access to financial services. The World Bank (2010) reported that extending access to financial services encourages economic growth and can improve income distribution. However, especially in remote areas and the islands, people and businesses have limited access to financial services because banks predominantly operate in cities, districts, and the main subdistricts. This situation hinders access to banks by micro, small, and medium enterprises for deposits, withdrawals, credit, and other financial services. Limited access to banking services not only hinders day-to-day operations of these businesses but can also restrict growth because a formal financial history is often a prerequisite for access to formal credit.

About Mobile Money and Branchless Banking

'Mobile money and branchless banking' is the collective term used in this survey to describe a variety of potential financial services delivered using mobile technology and agent networks. Although they are operational in a number of other developing countries, these services are still in their infancy in Indonesia. In the quantitative survey for this research, the following definition was used:

> Mobile banking—or M-banking—is the term we use to describe financial services delivered via mobile networks using mobile phones. Normally, such services include depositing, withdrawing, sending and saving money, as well as making payments. You would also be able to go to convenient locations to deposit and withdraw money, such as a local convenience store, *warung, koperasi* or other local business.

MM & BB do not actually describe a specific technology or business model but encompasses a variety of methods of delivering financial services to populations that were previously not using formal financial services. Usage of financial services among poor and rural populations in developing countries is typically low. Common obstacles cited for this low usage include the following:

- Long distance or travel time to the nearest financial outlet
- High and complicated fees and minimum balance requirements
- Complex account opening and transaction procedures
- Perceived exclusivity of banks

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[2] Any Setianingrum ME Sy, "UMKM Indonesia vs Prinsip Ekonomi Syariah" Republika Online, 14 January 2013. http://www.republika.co.id/berita/nasional/opini/11/10/02/lsf53r-umkm-indonesia-vs-prinsip-ekonomi-

MM & BB are intended to counter these problems by introducing business models that rely on low-cost technology and locally available agents to provide financial services that are accessible to the poor. The technology used varies; some implementation relies only on low-end mobile handsets using Short Message Service, Unstructured Supplementary Service Data, or Subscriber Identity Module Toolkit (known respectively as SMS, USSD, and SIM Toolkit) applications to deliver text-based menus and financial instructions. Other implementation uses cards and point-of-sale (also known as POS) terminals (known in Indonesia as electronic data capture or EDC) or biometric devices to connect customers to financial systems. Common to all technology platforms is that they are designed to use devices that are simpler and lower in cost than traditional banking platforms and utilise mobile phone networks in order to reach locations that would be too expensive or difficult to reach with traditional data communications.

In addition to the use of technology, MM & BB rely heavily on a network of local agents to provide financial services. These agents are typically local businesses that are already present in a community, such as a small retail shop, mobile phone seller, petrol station, post office, etc. Rather than having to build a new branch or outlet, an MM & BB provider can rely on an agent to provide 'cash-in/cash-out' (known as CICO) services for its clients.

These agents use their own supply of cash and electronic 'float' or balance to perform transactions for customers. If a customer wants to deposit or cash-in money, the customer will give cash to the agent and the agent will transfer the electronic balance from his or her own account to the customer's account. Similarly, if a customer wants to withdraw money, the customer will transfer the electronic balance to the agent's account and the agent will provide physical cash to the customer in return. Either the customer or the service provider will pay a fee to the agent for providing this service, giving the agent additional revenue for his/her business.

By tapping into the local economy and using cash already available at the agents' locations, MM & BB service providers are able to provide transactional services at a much lower cost than transactions that take place at a typical bank branch.

Internationally, the most famous service of MM & BB is M-Pesa[3], run by the mobile network operator Safaricom in Kenya. Since its inception in 2007, it has reached widespread acceptance in the Kenyan market: more than 23 million customers use the service and more than 66 percent of the adult population say they have used a mobile phone to send or receive money (di Castri and Gidvani 2013). The key value proposition of M-Pesa is 'Send Money Home'. It uses a widespread network of retail agents and a simple text-based interface allowing Kenyans to send money around the country very quickly.

M-Pesa's success has spawned many copycat services, but few have been as successful. In 2013 the GSMA (GSM (Groupe Spéciale Mobile) Association) reported that there were 219 separate implementations of mobile money in 84 countries at the end of 2013, but only 13 had reached scale with more than 1 million active users (Pénicaud and Katakam 2013).

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[3] M-Pesa means 'mobile money'; *pesa* is Swahili for money.

Although some argue that M-Pesa in Kenya had a unique advantage because of Safaricom's dominant 80 percent market share in the mobile market (Mas and Ng'weno 2012), other MM & BB services seek to offer financial services that can operate independently of a particular mobile operator. Business models in Latin America predominantly rely on cards and automatic teller machines or ATMs or point-of-sale terminals that are available in retail agents for cash-in and cash-out services; Brazil for example has 400,000 banking correspondents (Sanford 2013). India allows banks to appoint 'business correspondents' as agents, and a range of services are being offered using a variety of technologies including biometrics, cards, computers, and mobile phones (Platt and Tiwari 2012).

To date, mobile money and branchless banking have seen only limited success in Indonesia. Although multiple banks and the three largest telecommunications companies have licenses to issue e-money, these have been restricted until recently in terms of the ability of agents to cash-in and cash-out from these accounts. The recent release by Bank Indonesia of regulation 16/8/PBI/2014 on Electronic Money[4] will allow some banks unfettered use of agents for e-money services, whereas non-bank issuers (including telecommunication companies) will be able use legal entities (as opposed to individuals or informal businesses) as agents.

Although some banks are licensed to issue e-money, restrictions still exist on using agents for bank accounts. A pilot[5] was conducted from April to November 2013 that allowed this in limited geographic areas, but has been terminated pending future release of regulations to allow Branchless Banking.

These regulatory changes, combined with recent expansion of information technology and telecommunication infrastructure in Indonesia, are expected to provide opportunities for extending financial services in both urban and remote areas and to markets that were previously economically unviable by providing access through the Internet, mobile phones, and agent banking services. Best practices in some countries show that MM & BB services help MSEs to speed up financial transactions over longer distances, typically to suppliers, allowing them to increase their turnover rate and hence making their working capital more productive (Bångens and Söderberg 2011).

MM & BB services are still in their infancy in Indonesia, and there is considerable uncertainty about their likely uptake. The majority of successful attempts to implement mobile money in other countries have relied largely on remittances, such as M-Pesa's 'Send Money Home' proposition in Kenya. However, internal remittances in Indonesia are already served by numerous formal channels, such as bank transfers, remittance via the Post Office, and dedicated remittance agents (World Bank 2010, pp. 42–43). This research is designed to elucidate questions about the potential demand for MM & BB services among MSEs, a market that is often underserved by banks but may represent a large potential customer base for new services.

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[4] Available at http://www.bi.go.id/id/peraturan/sistem-pembayaran/Pages/PBI_16814.aspx
[5] Guidelines and FAQs on Pilot Activities on Payment and Banking through Intermediary Financial Services. http://www.bi.go.id/id/publikasi/lain/lainnya/Pages/pedoman_uji_coba_UPLK.aspx

About This Survey

  The purpose of this study is to understand better the potential demand for mobile money and/or branchless banking services among MSEs in Indonesia. The study looked at business practices, business network cash flows, and spatial distribution of business activities to identify how MM & BB services can solve problems that MSEs face. In particular, the data allow us to answer the following questions:

- Do MSEs' relationships with suppliers and customers suggest a need for MM & BB services that can help MSEs make and receive payments more efficiently and effectively than they are doing now?
- Could MSEs pay their employees through an MM & BB service, and if so, how much would they pay for the service and at what intervals?
- Do MSE cash-flow patterns suggest a need for MM & BB services to enable them to store or save money in the short term in ways that are secure but allow for flexible and easy access to their money?
- How do MSEs currently manage their cash payments and cash flows?
- What type of financial services are they currently using?
- How familiar are MSE owners with the concept of MM & BB services?

A better understanding of the challenges faced by micro and small Indonesian enterprises will help in assessing potential solutions that MM & BB services offer.

We gathered both qualitative and quantitative data to answer these questions. To obtain the quantitative data presented in this report, we drew a purposive sample of microenterprise (ME) owners and small enterprise (SE) owners. That sample represents a variety of cash-flow types, supply and demand networks, and gender diversity and data from four provinces: Bali, South Sulawesi, South Sumatra, and West Java. Within these four provinces, urban and rural areas were evenly represented. There were 199 men and 201 women in the sample, and 320 MEs and 80 SEs. MEs were defined as having a total annual sales turnover of less than Rp 300 million and SEs as having a total annual sales turnover between Rp 300 million and Rp 2.5 billion.[6] There were 150 respondents in the 16–35 age bracket and 250 that were 35 and older. For the qualitative data, we conducted 16 focus groups: four at each of the research sites, each of which covered urban and rural areas and men and women. The following sections of this report discuss findings from the study in terms of gender and the size of the enterprise. We found little difference in answers from the four provinces.

Although this sample pulls from a diverse group of MSEs, it is not statistically representative of all MSEs in Indonesia; however, it can provide indicative information on trends and issues surrounding the financial services used by MSEs, as well as potential opportunities and challenges for MM & BB. This study was exploratory in nature and can be used to guide future MM & BB policies and programs in Indonesia and future studies intended to explain the successes and failures of such programs.

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[6] These definitions are those in the Law of Micro, Small, and Medium Business of 2008, Article 6, Sections 1.b and 2.b.

Sample

Characteristics of Respondents

This section describes the general characteristics of respondents in the sample. Based on three questions related to eyesight, hearing, and ability to walk, the majority of the respondents seemed in good health: 97.5 percent of the total sample had no difficulty seeing, 99 percent had no difficulty hearing, and 98.3 percent had no trouble walking. The United Nations Development Programme's country profile for human development indicators in Indonesia reported that the mean number of years of schooling for adults in 2010 was 5.8 years.[7] The educational data collected on the sample indicated that more than two-thirds of the respondents had completed at least the junior high school level (about eight years) of education. As figure 1 shows, more than half of the respondents reported a high school level of education and 17.8 percent reported a junior high school level of education (figure 1). Just less than 90 percent of the respondents in the sample were married, and 9.8 percent had never been married. There was a very low divorce rate in the sample (only 1.5 percent of respondents), and only 1 percent of women were widows.

Figure 1: Educational Level of Respondents

Percentage of sample
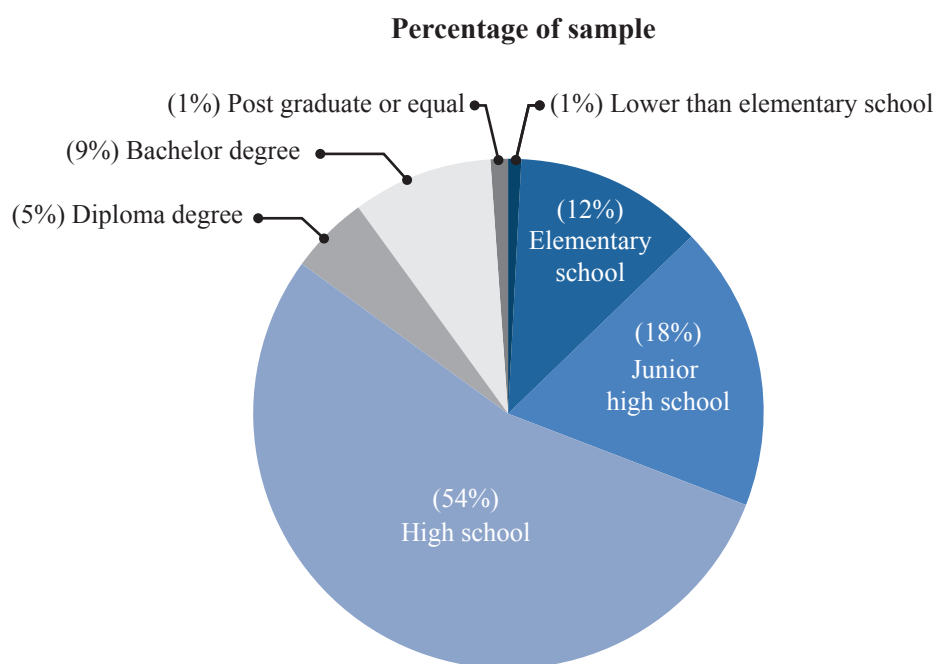
Based on the data collected, it was difficult to identify whether respondents fell above or below the poverty line. Monthly expenditure data was collected by asking respondents to select a range of values rather than nominating an exact amount. By examining the reported spending and family size, it is possible to make a rough estimate of the proportion of households that are below or near the poverty line. Twenty-one percent of respondents reported spending less than Rp 1,500,000 a month on their

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[7] Readers interested in accessing these data should go to UNDP (2013) and select Indonesia on the map provided. Reference data will be under the 'Education' header.

everyday household needs (figure 2). This figure represents spending by individuals on their own and their family's behalf and only covers regular spending, not intermittent expenses such as school fees. It is likely, therefore, that their overall spending is higher when intermittent expenses are included, but it is also likely that their spending is for more than one person. The national poverty line in Indonesia is Rp 292,951 a person a month.[8] The number of people living in a household ranges from 1 to 13, and the average household size is 4 people. So, the spending data from the survey suggest that the majority of the respondents in this survey live above the poverty line, but around 20 percent are below or near the poverty line.[9]

In terms of asset ownership, all respondents in the sample have a television, 94.8 percent had a mobile phone, 93.8 percent had a motorbike, and 96.3 percent had a gas stove. Some of the least common assets included a landline telephone (only 10.5 percent), a microwave (only 6.8 percent), and a credit card (8.8 percent).

Figure 2: Household Monthly Spending on Ordinary Family Expenses
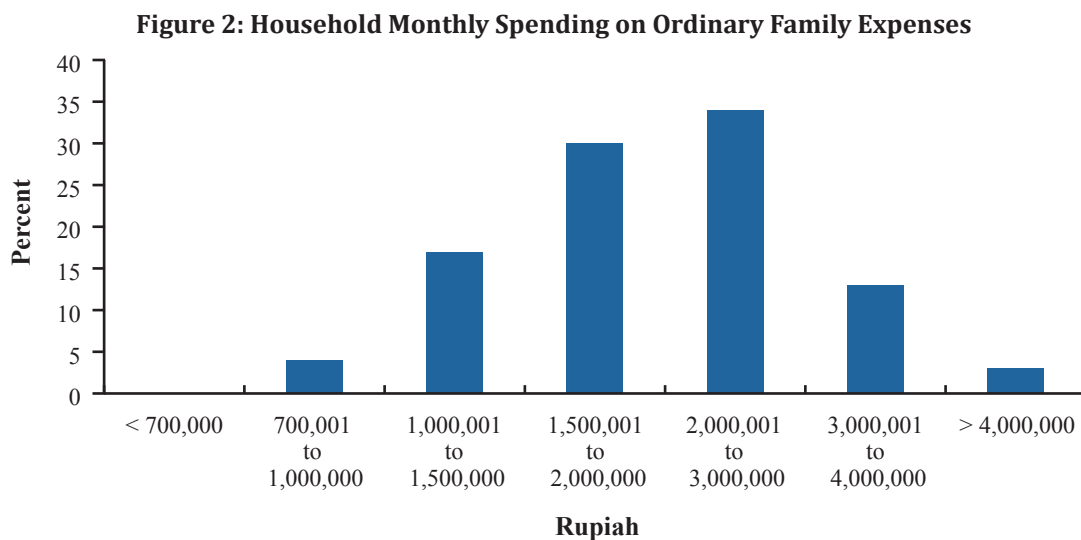
ME owners represent 80 percent (n=320) of the sample, while SE owners constitute the remaining 20 percent (n=80). The rest of this report presents data for ME owners as a whole, as well as disaggregated by gender to identify any differences between male and female owners of MEs. Due to the small sample size of SEs, data on these are presented without disaggregation, so all data on men and women in the tables and figures are for owners of microenterprises. The focus group data represent the broader picture of men and women across the entire sample. For easy reference, the figures and tables also include totals for the entire sample.

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[8]   See BPS (2013).
[9]   As an alternative method of calculation, tabulating the expenditure range and family sizes shows that between 10% and 28% of respondents and their family members live below the poverty line.

Business Attributes

Almost all the respondents in our sample (93 percent) reported that they do not have another business, and 94 percent reported that they do not engage in a form of casual/day labour. As a result, it is fairly certain that the responses in this survey primarily apply to only one business per respondent.

The data on the types of business that respondents in the sample own suggest some differences between male and female microenterprise owners, as well as between MEs and SEs (table 1).

The typical businesses owned by men were distributed fairly evenly across three sectors: trade, hotels, and restaurants; transportation and communication; and service. In contrast, almost half of female respondents were concentrated in one sector: trade, hotels, and restaurants. In most cases, micro and small businesses were distributed similarly across the different sectors of the economy. Two major differences stand out: microenterprises were more likely to be involved in agriculture, livestock, forestry and fisheries, whereas small enterprises were more likely to be involved in manufacturing.

Table 1: Type of Business by Enterprise Size and Owner Gender

	Microenterprises			Small Enterprises	All MSEs (%)
	Men	Women	All MEs		
Total responses (number)	156	164	320	80	400
What is the main business that you own to which you devote most of your working time?					
Trade, hotels, restaurants (%)	27.6	47.6	37.8	35.0	37.3
Manufacturing (%)	6.4	9.1	7.8	17.5	9.8
Agriculture, livestock, forestry, fisheries (%)	16.0	10.4	13.1	6.3	11.8
Transportation and communication (%)	25.0	12.2	18.4	22.5	19.3
Service (%)	23.7	18.9	21.3	18.8	20.8
Mining and quarrying (%)	1.3	1.8	1.6	0	1.3

Across the entire sample, 80 percent of the businesses were informal.[10] A larger percentage of small enterprises had integrated into the formal economy: 54 percent of SE respondents reported their businesses as formal, whereas only 12 percent of ME respondents reported that they were formal. After motorbikes, office equipment (tables, chairs, etc.) was reported as the most common business asset.

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[10]   For the purposes of this study, an informal business is one that is neither a CV (*commanditaire vennootschap*, a form of limited partnership or sole proprietorship) nor a PT (*perseroan terbatas* or limited liability) entity (types of legal business registration in Indonesia) and has no other legal status.

Median earnings were consistent between male and female ME owners but varied dramatically between ME owners in aggregate and SE owners (table 2). The range in daily earnings between these two groups, shown by best- and worst-day earnings, highlights the uncertainty that business owners face day to day due to inconsistency of earnings. The focus group findings indicated that MSEs owned by women serve mainly to support their households; their husbands had other forms of livelihood. Median earnings for female ME owners were slightly higher than men's earnings, but the range was the same for both.

Table 2: Median Earnings and Earnings Range by Enterprise Size and Owner Gender

Median Earnings (Rp)	Microenterprises			Small Enterprises	Total
	Men	Women	Total		
Daily	155,000	180,000	175,000	1,000,000	200,000
Weekly	1,200,000	1,225,000	1,200,000	6,150,000	1,500,000
Monthly	4,650,000	5,000,000	5,000,000	25,000,000	6,250,000
Range of Earnings (Rp)					
Best day	300,000	300,000	300,000	1,500,000	500,000
Worst day	100,000	100,000	100,000	500,000	100,000
Range	200,000	200,000	200,000	1,000,000	400,000

Male and female ME owners reported similar median monthly expenditures, respectively, Rp 12,000,000 and Rp 10,500,000. There was a large difference in the expenditures of micro and small enterprises. The median monthly expenditure for microenterprises was Rp 12,000,000, and for small enterprises Rp 30,000,000 or more than double (figure 3).

Figure 3: Median Monthly Business Expenditures by Enterprise Size and Owner Gender
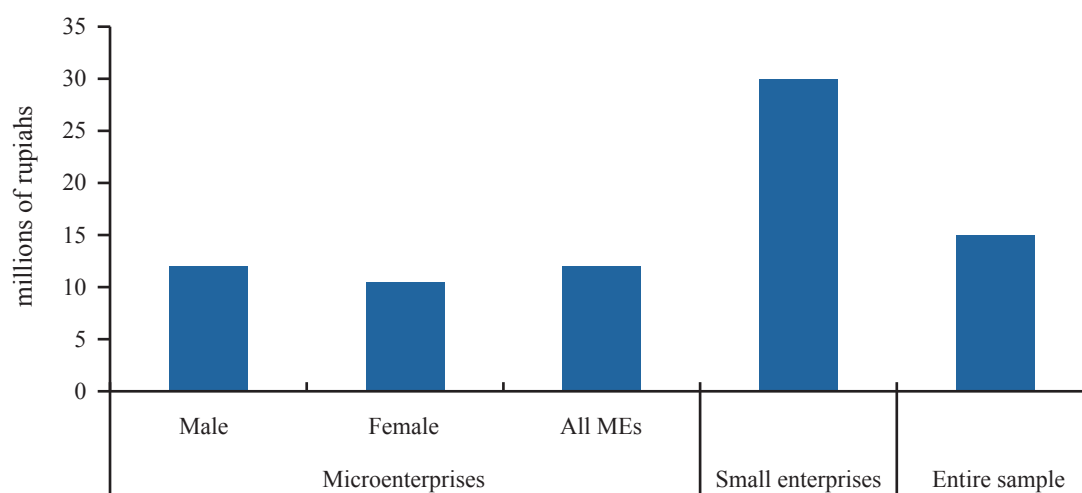
Use of Financial Services

The data show that a significant number of respondents are already using formal financial services in the form of remittances, savings, loans, and insurance.

Remittances

Just less than one-fifth (18.5 percent) of respondents reported receiving or sending at least one remittance in the past year (figure 4). Female ME owners were only slightly more likely to have received or sent a remittance than male owners (15.9 percent compared with 13.5 percent), whereas just more than a third of all SE respondents received or sent remittances within the past year, which is more than twice the share of ME owners that did so.

In almost all cases, respondents reported receiving or sending the remittance through a bank transfer (table 3). A small number of respondents also entrusted money to a family member to carry with them to the intended destination. Only a small fraction of respondents, 1.4 percent in total, reported receiving a remittance through a mobile money service; 3.7 percent of small enterprises did so. These data suggest that if mobile money is to become the preferred mode for sending remittances, it will have to offer a better service than the existing bank transfer system or reach people who do not have a bank account.

Figure 4: Remittances Transmitted in Past Year by Enterprise Size and Owner Gender
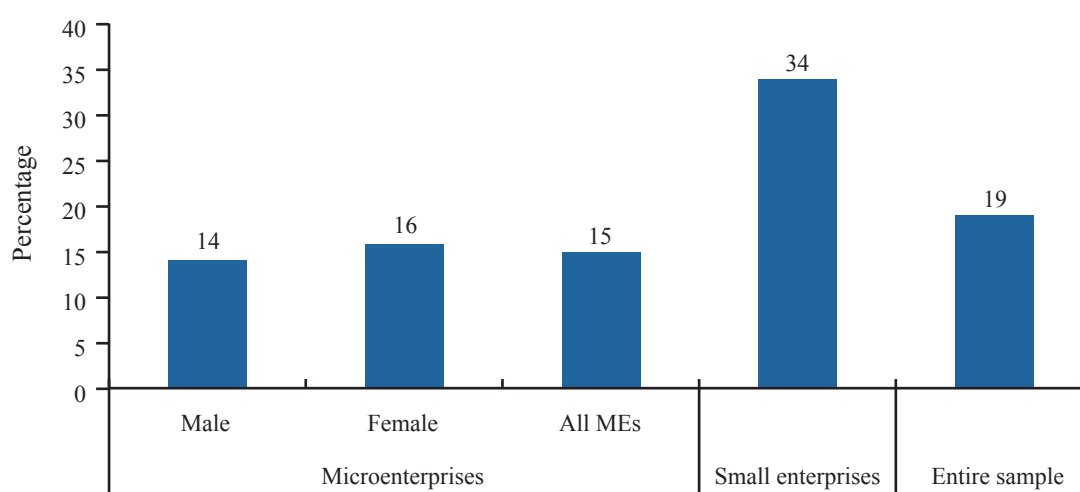
Table 3: Method Used to Transmit Remittances by Enterprise Size and Owner Gender

Method	Microenterprises (%)			Small Enterprises* (%)	All MSEs* (%)
	Men	**Women**	**All MEs**		
Mobile money service				3.7	1.4
Bank transfer account	100.0	96.2	97.9	100.0	98.6
Entrusted by the family	0	3.8	2.1	0	1.4

* Shares add up to more than 100 percent because some respondents used more than one remittance service.

Savings

Table 4 shows a variety of savings options used by ME and SE owners. SE owners were more likely to have a personal bank account than ME owners (72.5 and 43.8 percent respectively). Female ME owners were more likely to have a personal bank account than male ME owners. Nearly 17 percent of all respondents saved using an *arisan*.[11] Less than 6 percent of all respondents reported having savings in a saving cooperative, and 5.5 percent used a savings account at a bank for business. Less than 2 percent of all MSEs used money keepers to save, and more than 5 percent saved in gold and jewellery. Of all respondents, 8.5 percent saved with other unspecified methods. About a quarter of the respondents reported not saving in any of these institutions.

Table 4: Formal Savings Accounts and Other Methods by Enterprise Size and Owner Gender

Type of Savings Account	Microenterprises			Small Enterprises (%)	All MSEs (%)
	Male (%)	Female (%)	All MEs (%)		
Formal options					
Business bank account	5.1	4.3	4.7	8.8	5.5
Personal bank account	37.8	49.4	43.8	72.5	49.5
Savings cooperative	4.5	8.5	6.6	2.5	5.8
Other options					
Arisan	11.5	22.0	16.9	16.3	16.8
Gold/jewellery	4.5	4.9	4.7	7.5	5.3
Money keeper	1.9	0.6	1.3	3.8	1.8
Unspecified	12.8	7.9	10.3	1.3	8.5
None	33.3	24.4	28.8	15.0	26.0

As table 5 shows, more than three-quarters of respondents who reported using an *arisan* said that the social network of *arisans* was important or very important to them. *Arisan* social networks were very important to a larger percentage of ME owners than SE owners. A larger percentage of female ME owners reported that the *arisans*' social network was very important to them than male ME owners. A majority of both ME and SE owners reported that the social networks of *arisans* were important or very important (table 5).

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[11] An *arisan* is a rotating savings and credit association common in Indonesia, with variations depending on local norms.

Table 5: The Importance of *Arisan* Social Networks by Enterprise Size and Owner Gender

How important is the social network of *arisans* to you?	Microenterprises			Small Enterprises (%)	All MSEs (%)
	Male (%)	Female (%)	All MEs (%)		
Very important	27.8	37.1	34.0	8.3	29.2
Important	55.6	37.1	43.4	66.7	47.7
Fairly	16.7	14.3	15.1	25.0	16.9
Not important	0.0	11.4	7.5	0.0	6.2

About a quarter of respondents reported not using a savings service. As shown in table 6, roughly 36 percent of respondents in this group stated that the main reason for not using one is that they did not need it while about 25 percent reported that saving services were "not for people like me." Less than 3 percent of the respondents in this group answered that they did not want to use savings services because they were too far away, too expensive, or difficult to open. The most cited reason for not wanting to use a listed saving service was that they did not have the money to do so. Nine percent of respondents answered that they had better options with other service providers.

Table 6: Reasons for Not Using Savings Services by Enterprise Size and Owner Gender

What are the main reasons why you do not want to use them?	Microenterprises			Small Enterprises (%)	All MSEs (%)
	Men (%)	Women (%)	All MEs (%)		
Do not need it	40.4	39.0	39.8	7.7	35.8
Not for people like me	21.2	31.7	25.8	15.4	24.5
Too expensive	1.9	4.9	3.2	0.0	2.8
Not near enough to me	5.8	4.9	4.3	0.0	3.8
Difficult to open an account	5.8	2.4	3.2	0.0	2.8
Afraid to use the service; do not trust it	5.8	2.4	4.3	7.7	4.7
Do not have any money	40.4	41.5	40.9	46.2	41.5
Have better options with other service providers	11.5	7.3	9.7	23.1	11.3
Money is used for business capital	1.9	2.4	2.2	0.0	1.9
High administrative costs	0.0	0.0	0.0	7.7	0.9

More than two-thirds of all respondents that travelled to reach a personal bank account travelled less than two kilometres (table 7). A higher percentage of respondents (84.9) travelled within two kilometres to use another savings method such as an *arisan*, cooperative, BPR (*bank perkreditan rakyats*), LPD (village credit institutions or *lembaga perkreditan desa*), or purchase of gold jewellery. Patterns regarding distance travelled were very similar among ME and SE owners as well as men and women.

Table 7: Distance from Financial Institutions by Enterprise Size and Owner Gender

Distance from Financial Institution		Microenterprises			Small Enterprises (%)	All MSEs (%)
		Men (%)	Women (%)	All MEs (%)		
Personal Bank Account	< 2 km	69.5	67.5	68.3	70.7	69.0
	> 2 km	30.5	32.5	31.7	29.3	31.0
Others	< 2 km	85.5	83.3	84.3	88.0	84.9
	> 2 km	14.5	16.7	15.7	12.0	15.1

Roughly half of all respondents reported that they had a personal savings account (table 8). A strong majority of respondents with savings in a bank account were active users: 90 percent reported that they had used their account within the past month. Almost three-quarters of all small enterprise respondents reported that they saved in a personal bank account, and 8.8 percent reported that they had a bank account for business. All respondents who reported that they had savings in a business bank account reported using it within the past month.

Focus group respondents reported the general lack of practicality as a major hindrance to saving at banks. They specifically cited the long queue and their own lack of time to wait. These data suggest that if banks are to offer business banking services to MSE owners, they not only have to address their concerns about convenience but also provide value-added services above and beyond those they provide through a personal bank account. One potential market might be female MSE owners who focus on separating business and personal finances and value the ability to track their money. A business account that enabled them to do these two things might have some appeal.

Table 8: Use of Formal Savings Accounts by Enterprise Size and Owner Gender

	Microenterprises			Small Enterprises	All MSEs
	Men	**Women**	**All MEs**		
Use of personal bank account					
Save in personal bank account (%)	37.8	49.4	43.8	72.5	49.5
Of those who own in a personal bank account, have used it in the past month (%)	86.4	93.8	90.7	87.9	89.9
Times personal bank account used in past month (number)	1.8	1.5	1.6	1.8	1.7
Use of business bank account					
Save in bank account for business (%)	5.1	4.3	4.7	8.8	5.5
Of those who own in a business bank account, have used it in the past month (%)	100.0	100.0	100.0	100.0	100.0
Average transaction amount (Rp)					
Per personal account	975,490	648,684	779,921	2,801,961	1,359,270
Per business account	1,275,000	757,143	1,033,333	8,571,429	3,431,818

Respondents also said that they could not save as much as they wanted to due to obligations to family and traditional ceremonies. They reported that saving at a bank was impractical, because it was not worth the time to go to the bank to save a small amount. As mentioned in the section about cash flow and money management, women save at home because they can save a little at a time and they feel that it is not worth going to the bank. Men avoid the bank by giving their money to their wives or buying inventory for their business.

Well more than a third of all respondents reported saving by using other saving methods including *arisans* and savings cooperatives, keeping savings with money keepers, or purchasing other saving devices such as gold and jewellery (table 9). Less than a quarter (22.5 percent) of all microenterprise and small enterprise owners stated that they had used other informal financial institutions within the past month. The average transaction value when using one of these savings methods was Rp 937,500.

Table 9: Other Savings Methods Used by Enterprise Size and Owner Gender

	Microenterprises			Small Enterprises	All MSEs
	Men	Women	All MEs		
Save using other methods (%)	35.3	43.9	39.7	31.3	38.0
Have used at least one other savings method in the past month (%)	17.9	26.8	22.5	22.5	22.5
Average number of times used in the past month	0.8	0.5	0.6	0.7	0.6
Average transaction amount (Rp)	1,631,579	447,826	983,333	616,667	937,500

One important difference within the sample existed between urban and rural respondents' use of formal or semiformal savings accounts. Forty percent of rural respondents stated they did not use any type of savings method (other than storing money at home), whereas only 12 percent of urban residents stated this. The biggest driver of this difference was the extent of *arisan* savings and personal bank savings accounts. In both cases, urban respondents were more likely to have such accounts than rural residents: 11 percent compared with 4.5 percent, respectively, for *arisan* savings and 65.5 percent compared with 33.5 percent, respectively, for personal bank savings accounts.

Loans

A modest number of micro and small enterprises borrow and lend money, mostly from or to family members and to an extent to friends.

Micro and Small Enterprises as Borrowers

Slightly more than 20 percent of respondents reported that they had borrowed money from one of the lenders listed in table 10 within the past 12 months. The highest percentage (10 percent) said they borrowed from a family member within the past year.

Table 10: Types of Lenders Used for Loans by Enterprise Size and Owner Gender

In the past 12 months, from which of these lenders have you borrowed money?	Microenterprises			Small Enterprises (%)	All MSEs*	
	Men (%)	Women (%)	All MEs (%)		%	Number
Family member	13	10	11	5	10	40
Personal contact or friend	5	2	4	9	5	19
Money lender	2	1	1	1	1	5
Microfinance institution	0	1	0	0	0	1
Cooperative	1	4	2	6	3	12
Bank	1	5	3	5	4	14
Bank perkreditan rakyat	5	1	3	4	3	12
Pawnshop	0	1	0	1	1	1
None	80	77	78	79	79	316

* Totals add up to more than 100 percent and 400 respondents respectively because some respondents borrowed from more than one source.
Note: 5% of all MSEs borrowed from personal contacts over the last 12 months. Based on total respondents (rather than responses) as the denominator.

Banks were reported as the second most used lender (4 percent of total respondents), followed by people's credit banks (*bank perkreditan rakyat* or BPR)[12], cooperatives, and personal contacts or friends (all reporting at 5 percent). BPRs were a more popular lending option among male ME owners, whereas banks and cooperatives were more popular among female ME owners. Personal contact or friends and cooperatives were the preferred borrowing method among SEs. Family was the preferred borrowing method for ME owners followed by personal contacts or friends. Microfinance institutions, money lenders, and pawn shops were all used by less than 2 percent of all the respondents who borrowed.

The typical median loan amounts for each type of loan ranged from Rp 1,000,000 to Rp 10,000,000 (table 11). Banks and cooperatives typically lend larger amounts; respondents reported a median lending amount from banks of Rp 10,000,000 and a median lending amount from cooperatives of Rp 7,500,000.

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[12] *Bank perkreditan rakyat* is a term referring to a wide variety of Microfinance Institutions (MFIs) that have historical roots in Indonesian culture. The features of BPRs vary; some only offer credit while others offer only savings. For a more in-depth look at BPRs, see Bank of Indonesia and GTZ (2000).

Table 11: Typical Loan Amounts and Frequency by Enterprise Size and Owner Gender

	Microenterprises			Small Enterprises	All MSEs
	Men	**Women**	**All MEs**		
What was the typical median loan amount (Rp)*					
Family member	500,000	1,000,000	1,000,000	5,250,000	1,000,000
Personal contact or friend	750,000	1,000,000	1,000,000	0	1,000,000
Cooperative	5,000,000	2,250,000	3,000,000	15,000,000	7,500,000
Bank	10,000,000	8,500,000	10,000,000	9,000,000	10,000,000
BPR	18,000,000	12,500,000	18,000,000	5,000,000	5,000,000
How many times did you borrow from a service in the past 12 months? (average number)					
Family member	1	2	1	1	1
Personal contact or friend	2	2	2	0	2
Cooperative	1	1	1	2	2
Bank	2	1	1	2	1
BPR	2	1	2	2	2

Table excludes money lenders, microfinance institutions, and pawn shops from all following graphs on borrowing money because reported amounts were 2 percent or less.

Female ME owners reported borrowing double the amount of money from family members and borrowing a third more from friends than men did. Male ME owners reported borrowing larger sums of money from cooperatives, banks, and BPRs than women did. The typical amount borrowed from family members was largest among small enterprises (Rp 5,250,000), but no SEs reported borrowing money from friends or personal contacts.

Microenterprises borrowed larger amounts from banks and BPRs (respectively, Rp 10,000,000 and Rp 18,000,000); whereas SEs reported their highest typical borrowing amount came from cooperatives (Rp 15,000,000). The amounts that SEs borrowed from BPRs were much lower (5,000,000). On average, respondents borrowed one to two times from a lender. Male ME owners borrowed most frequently from personal contacts or friends, banks, and BPRs (two times each, on average), whereas female ME owners borrowed the most from personal contacts or friends and family members (two times each, on average). On average, ME owners borrowed twice from BPRs and twice from personal contacts and friends, and SE owners borrowed twice from cooperatives, banks, and BPRs.

As shown in table 12, cash was the preferred method of providing funds to the borrower for all lenders. Personal contacts or friends, BPRs, and cooperatives gave 100 percent of loan payments to respondents in cash. A little more than 90 percent of family members gave their loans in cash and the remaining gave the loans electronically. Banks gave 85.7 percent of their loans to respondents in cash and 14.3 percent of loans electronically. This small percentage of respondents who already receive loans electronically from banks represents a good starting place, perhaps a pilot, for mobile money.

About two-thirds of respondents reported having to travel less than 5 km to receive their money. Close to half or more than half of the respondents reported having to travel 1 km or less to receive their loans, except from cooperatives, depending on the lender; distance travelled to receive loan payments from cooperatives ranged from 1 to 15 km. As shown in table 12, between 21 to 33 percent of respondents reported traveling more than 5 km to receive their loan payments from a bank, a BPR, or cooperative.

Table 12: Loan Methods and Distance Travelled by Loan Source

Loan Source	Loan Payment Method		Distance Travelled	
	Receive cash (%)	Receive electronic payment (%)	Around 1 km or less (%)	5 km or more (%)
Family member	92.5	7.5	67.5	10.0
Personal contact or friend	100.0	0	41.5	16.6
Cooperative	100.0	0	33.3	33.2
Bank	85.7	14.3	49.9	21.4
BPR	100.0	0	50.0	33.3

The majority of the sample (79 percent) reported not receiving a loan in the past year (table 10). Of these respondents, more than 70 percent stated that they did not borrow money because they did not need a loan within the past year (table 13). A little less than 30 percent of respondents who did not receive a loan said that the loans they could access were too expensive, roughly 20.7 percent reported that the loans were not for "people like me", and 11.5 percent said they were afraid to use loans because they did not trust lenders. Female ME respondents reported the highest percentages of those not needing the service and being afraid to use the service due to lack of trust. About 10 percent of respondents said that they did not have any money to engage in lending services. More than 15 percent of male ME owners said that they did not use the services because they had better options with a different service provider, suggesting that men have better financial service options than women.

Table 13: Reasons for Non-use of Lending Services by Enterprise Size and Owner Gender

What are the main reasons why you do not want to use a lending service?	Microenterprises			Small Enterprises	All MSEs
Total respondents (number)	251			63	314
	Men (%)	Women (%)	All MEs (%)	All SEs (%)	All MSEs (%)
Do not need it	56.5	71.7	64.1	63.5	64.0
Not for people like me	20.2	22.0	21.1	19.0	20.7
Too expensive	27.4	29.1	28.3	30.2	28.7
Not near enough to me	5.6	3.9	4.8	1.6	4.1
Not open at convenient hours	4.8	0.8	2.8	1.6	2.5
Difficult to open an account	2.4	2.4	2.4	0.0	1.9
Afraid to use the service because do not trust it	8.9	16.5	12.7	6.3	11.5
Do not have any money	13.7	7.1	10.4	7.9	9.9
Have better options with other service providers	15.3	3.9	9.6	11.1	9.9

Note: Some percentages add up to more than 100 percent because some respondents provided more than one answer.

Micro and Small Enterprises as Lenders

About 10 percent of respondents within the sample lent money within the past year (table 14). The majority of respondents who lent money did so to family members. Around 2 percent lent money to personal contacts or friends. Respondents lent money to family and friends or personal contacts an average of two times within the past year. There was no difference in the median amount lent by male and female ME owners to family (Rp 1,000,000), but men lent almost double the amount than women to personal contacts or friends. SE owners lent significantly larger amounts to personal contacts or friends than MEs, and the typical median amount was Rp 20,500,000. Cash was the preferred method for lending money. Roughly 97 percent reported loaning money to family with cash, and 93.3 percent reported loaning money to friends or personal contacts with cash. The remaining percentage that sent loan payments electronically were all SE owners.

Table 14: Loans to Other People by Enterprise Size and Owner Gender

	Microenterprises			Small Enterprises	All MSEs
	Men	**Women**	**All MEs**		
In the past 12 months, have you ever lent money to any of these?					
Family member (%)	7.7	6.1	6.9	11.3	7.8
Personal contact or friend (%)	3.2	2.4	2.8	2.5	2.3
None (%)	89.1	91.5	90.3	88.8	90.0
Times in past year (average number)					
Family member	2	2	2	2	2
Personal contact or friend	2	2	2	3	2
Typical median amount (Rp)					
Family member	1,000,000	1,000,000	1,000,000	2,000,000	1,000,000
Personal contact or friend	1,000,000	550,000	1,000,000	20,500,000	1,000,000
Used cash to loan money (%)					
Family member	100	100	100	88.9*	97.0
Personal contact or friend	100	100	100	50.0*	93.3

* The remaining percentage sent money electronically.

Insurance

Insurance coverage was low among the respondents; slightly fewer than 5 percent of respondents reported making a payment on an insurance policy for their business within the past year (table 15). Male ME owners were more likely to report making an insurance payment than female ME owners by a 3 to 2 ratio, but the share of men doing so was still very low: only 3.8 percent. Ten percent of SE owners reported making an insurance premium payment, while only 3.1 percent of ME owners did so.

Table 15: Business Insurance Purchased by Enterprise Size and Owner Gender

	Microenterprises			Small Enterprises	All MSEs
	Men	Women	All MEs		
In the past 12 months, have you made a payment on an insurance policy to cover your main business in some way?					
Yes (%)	3.8	2.4	3.1	10.0	4.5
No (%)	96.2	97.6	96.9	90.0	95.5
Typical mean payment amount (Rp)	858,333	575,000	745,000	768,750	755,556
How many years did you make the payment? (average)	5.7	8.1	6.6	2.8	4.9
Distance travelled to make payment (average km)	3.0	2.3	2.7	2.9	2.8

The average payment amount was Rp 755,556, and the payment amounts were roughly equivalent across all ME owners and all SE owners, although there was considerable variation by gender among ME owners (table 15). Although female ME owners and ME owners in general had the lowest percentages of insurance policies, they reported the longest insured periods (8.1 and 6.6 years respectively). SE owners reported insured periods of less than three years. On average, respondents travelled nearly three kilometres to make payments on their insurance plans. A little less than half of the respondents with insurance reported Prudential as their insurer, and 20 percent reported using Bumi Putra. Almost two-thirds of uninsured respondents reported that they did not use business insurance because they did not need it. Almost 30 percent of all respondents said they did not use this insurance because it was not for people like them.

Business Practices

A central activity in which all businesses engage is the purchase and sale of goods and services. This section describes typical sales and purchases (transactions) in which businesses engage to help understand how mobile money or branchless banking might assist them in performing their day-to-day activities by facilitating their transactions. The questions asked in the survey attempted to get at areas in which mobile money or branchless banking could add value. As a result, this section of the report focuses on the extent to which respondents are transacting with cash, whether they are doing so in person or remotely, and how far the business owner or their customers have to travel to conduct in-person transactions.

Customer Transactions

A majority of respondents in our sample were retailers (300 microenterprises and 62 small enterprises) selling to retail customers and not to other businesses (i.e., business to customer). However, a subset of businesses in the sample sold to other businesses (i.e., business to business), and the data from their sales activity suggest they are a potential market for use of mobile money for everyday sales transactions.

This subset of 41 business-to-business enterprises makes up about 10 percent of the total enterprises in the sample and reported an average of 16 sales transactions a week (table 16).[13]

Across MSEs, customers made purchases on average between 13 and 17 times a week. Almost all the transactions (90 percent) took place face to face, and some customers travelled long distances to make them; the median distance that the most distant customers travelled was 10 kilometres. Just more than half (51.2 percent of transactions) were paid for with cash at the time of purchase: 70.6 percent of payments to male-owned MEs, 50.0 percent to female-owned MEs, 65.2 percent to all microenterprises, and 33.3 percent to small enterprises. Just more than 30 percent of respondents were paying with a mix of cash up front and delayed cash payments. The amounts customers were paying varied by the size of the enterprise: from Rp 400,000 for microenterprise customers to Rp 1,500,000 for small enterprise customers. In sum, these data suggest that about half of all business customers were carrying large sums of money to make in person payments for goods or services they purchased from the businesses in our sample that sold to other businesses.

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[13] Three respondents reported selling both to retail customers and to businesses.

Table 16: Typical Transactions with Business Customers by Enterprise Size and Owner Gender

	Microenterprises			Small Enterprises	All MSEs
	Men	Women	All MEs		
Respondents with business customers (number)	17	6	23	18	41
Times/week customers make purchases (average number)	16.5	13.0	15.6	16.9	16.1
Median range of customer distance (km)*	1–5	1–10	1–5	1–12	1–10
Face-to-face transactions (%)	88.2	83.3	87.0	94.4	90.2
Median purchase amount (Rp)	500,000	300,000	400,000	1,500,000	900,000
Up-front cash payments (%)	70.6	50.0	65.2	33.3	51.2
Delayed cash payments (%)	17.6	33.3	21.7	11.1	17.1
Mixed (delayed and up-front) Cash payments (%)	11.8	16.7	13.1	55.6	31.7

* The median range refers to the range between the shortest median distance a customer had to travel to the longest.

Enterprises selling to retail customers had a higher frequency of purchases per week (64), and those purchases were for much lower amounts (table 17). The median purchase amount was Rp 50,000 and almost all of these purchases were made face to face. Nearly 90 percent of payments were made with cash at the time of the purchase. Slightly more than 10 percent of payments were made with a mix of up-front cash and delayed cash, and only 1.4 percent of purchases were paid only with delayed cash. The farthest median distance that retail customers travelled (5 km) was smaller than business customers (10 km).

Table 17: Typical Transactions with Retail Customers by Enterprise Size and Owner Gender

	Microenterprises			Small Enterprises	All MSEs
	Men	Women	All MEs		
Respondents with retail customers (number)	141	159	300	62	362
Times/week customers make purchases (average number)	51	61	56	99	64
Median range of customer distance (km)*	1–5	1–3	1–5	1–5	1–5
Face-to-face transactions (%)	100.0	99.4	99.70	100.00	99.70
Median purchase amount (Rp)	50,000	30,000	40,000	150,000	50,000
Up-front cash payments (%)	87.9	86.8	87.30	91.90	88.10
Delayed cash payments (%)	2.1	1.3	1.70	0	1.4
Mixed (delayed and up-front) cash payments (%)	9.9	11.3	10.7	8.10	10.2

* The median range refers to the range between the shortest median distance a customer had to travel to the longest

Supplier Transactions

The survey asked respondents about their transactions with suppliers. More than three-quarters of respondents have three or fewer suppliers; a third of respondents had only one. Suppliers were most likely larger than the enterprises in the sample. On average, respondents bought from suppliers once a week, almost always through face-to-face transactions (table 18) and most likely at the supplier's place of business. Suppliers tend to be close to the enterprises in our sample; the median distance of the most distant supplier is only 5 kilometres.

As shown in table 18, the median respondent spent about Rp 500,000 on supplier purchases, although the median SE spent about Rp 1,000,000. Almost three-quarters of transactions (72.1 percent) involved cash payments at the time of the purchase, whereas 3.3 percent of transactions were made with a delayed cash payment. About a quarter of all transactions involved a mix of up-front cash and delayed cash payments. The focus group respondents reported that it is more practical to pay their suppliers in cash because customers pay with cash and it saves a step in not having to go to the bank. Microenterprises within the focus group reported no need to order by phone or to use Short Messaging Services because they go directly to their suppliers in the market or their agent in the city. Focus group respondents said they chose to use noncash payment methods when the amount of money was too large or when the suppliers were from another city.

Table 18: Supplier Purchases by Enterprise Size and Owner Gender

	Microenterprises			Small Enterprises	All MSEs
	Men	**Women**	**All MEs**		
Suppliers (average number)	2	3	3	3	3
Purchases/month (average number)	3	3	3	5	4
Median normal purchase amount (Rp)	400,000	350,000	400,000	1,000,000	500,000
Median range of supplier distance (km)*	1–5	1–5	1–5	1–5	1–5
Face-to-face purchases (%)	99.4	98.8	99.1	100.0	99.3
Respondents paid all the time in cash at time of purchase (%)	74.4	69.5	71.8	73.7	72.1
Respondents paid all the time through delayed cash payment (%)	2.7	4.2	3.4	2.6	3.3
Respondents receiving mixed (delayed and up-front) cash payments (%)	23.2	26.3	24.9	23.7	24.7

Note: Only 216 respondents reported a share of payment greater than zero in at least one of the categories as a denominator. The percentages calculated for "cash at time of purchase," "delayed cash payment," and "mixed cash payments" were all calculated using these 216 respondents. This choice was made to mitigate a data entry error that prevented researchers from distinguishing between missing data and a correctly entered "0" for this question.
* The median range refers to the range between the shortest median distance a customer had to travel to the longest.

Focus group results also highlight a difference in how female and male business owners keep their business's financial records. Women tend to keep notes of every product that is sold in order to track business profits and manage money properly for paying loans and daily expenditures and for saving. Men generally keep an inventory of valuable stocks and do not take note of small amounts of money received. Men also only tend to keep track of the total supplier or customer purchase. In summary, women keep more thorough business records to facilitate better money management.

Payments to Employees

As shown in table 19, more than a quarter (26.5 percent) of respondents reported that they regularly employed (at least one day per week each week) people for their businesses. Only 15.9 percent of microenterprises reported having employees, whereas 68.8 percent of small enterprises reported employing people on a regular basis. The majority of employees were paid daily (38.7 percent) or monthly (42.5 percent) and the remainder on a weekly basis or upon completion of specific work.

Enterprises that paid their employees daily paid them each about Rp 50,000 a day and had about one or two employees. For enterprises that paid monthly, respondents reported a monthly wage bill of Rp 1,000,000, which covered two employees on average. All the microenterprises reported that they pay their employees cash (table 19). Around 2 percent of small enterprises said that they put money in their employee's bank account.

Table 19: Payments to Enterprise Employees by Enterprise Size and Owner Gender

	Microenterprises			Small Enterprises	All MSEs
	Men	**Women**	**All MEs**		
Regularly employ people at least one day a week, each week					
Total respondents (%)	18.6	13.4	15.9	68.8	26.5
If yes, payment methods used*					
Total Respondents (N)	29	22	51	55	106
Daily (%)	41.4	36.4	39.2	38.2	38.7
End of the week (%)	13.8	13.6	13.7	16.4	15.1
End of the month (%)	41.4	45.5	43.1	41.8	42.5
Once assigned project completed (%)	6.9	4.5	5.9	7.3	6.6
For all enterprises with regular employees, how they are paid					
Hand them cash (%)	100.0	100.0	100.0	98.2	99.1
Put money in their bank account (%)	0	0	0	1.8	0.9

* Totals add up to more than 100% because some respondents answered multiple times.

Cash Flow and Money Management

The survey asked respondents a number of questions about their cash-flow and money management practices, for example, how much cash they had (1) left over at the end of the day, week, and month and (2) after receiving an unusually large payment from a customer. The survey also asked how respondents stored that money in the short term and saved it in the long term. The purpose of these questions was to identify opportunities that MM & BB service providers might have to make it easier for owners to manage their money. For example, if respondents have money left over at the end of the day and are currently keeping it at home, could an MM & BB service provider facilitate the movement of some of that cash into a bank account where it might be safer and used to make electronic payments?

Daily Cash Flow

As shown in table 20, across the entire sample about half (51.3 percent) of respondents have money left over at the end of 'most days' and an additional third (35.3 percent) have money left over 'about half the days'. Of those respondents who did have money left over, more than 75 percent of them kept their money close to them and hidden overnight, 2.2 percent gave it to someone else to look after, 3.9 percent deposited it in a savings group, and 2.2 percent bought gold or jewellery. Just more than 80 percent of the sample reported using informal methods (keeping it hidden, giving it to a friend, placing it with a savings group, or buying gold/jewellery) to save their money at the end of the day. About a third (32.2 percent) deposited the money they had left over into a bank account; more than half of small enterprise respondents said they did so. More than one in ten respondents reported using multiple savings methods at the end of the day with the most common combination being 'Keep it somewhere close to me and hidden' and 'Deposit in a bank account.'

Table 20: Typical Money Management by Enterprise Size and Owner Gender

|	Microenterprises			Small Enterprises	All MSEs
	Men	Women	All MEs		
Cash balances and typical money management (%)					
Have money left over at the end of most days	49.4	48.8	49.1	60.0	51.3
Have money left over about half the days	35.9	37.2	36.6	30.0	35.3
Infrequently have money left over	3.8	4.3	4.1	1.3	3.5
What respondent does with that money (%)					
Keep it somewhere close to me and hidden	80.6	73.6	77.0	69.9	75.6
Give it to someone else to look after	2.9	1.4	2.1	2.7	2.2
Deposit in a savings group	4.3	4.7	4.5	1.4	3.9
Deposit it in a bank account	28.1	26.4	27.2	52.1	32.2
Buy gold or jewellery	5.7	2.3	1.7	4.1	2.2

Percentages total more than 100 percent because some respondents reported using more than one method.

The focus groups revealed differences in the way women and men among MSEs handle cash flow and manage their money. Female small enterprise owners separate their business and household money. Female microenterprise owners did not separate their business and household money because of the low level of their income. Men across MSEs did not separate their money, but they did give a portion of their business earnings to their wives for household expenses. Women managed the money in their households and kept better financial records for their businesses. Women, specifically female small-enterprise owners, reported behaviours that suggest they were more adept than men were at managing money.

Women focus group respondents reported saving for short-term purposes through a variety of methods. They save cash at home to have on hand in case they need to pay a supplier and to accumulate money before they take it to the bank. They also reported saving their money in cooperatives, and in some areas female respondents reported saving through an *arisan* for traditional ceremonies. The women reported that they save in a national bank when saving for long-term purposes. They also cited specific reasons to save, such as their children's education. Male respondents reported that they give money to their wives to save at home. Men also said that they prefer to save their money in the form of assets. For long-term savings, men reported saving in the national banks and buying jewellery or gold to pawn if cash became needed. In sum, women, reported being more open to different saving methods and financial services.

Those respondents using informal methods to save comprise more than half of all respondents and 68 percent (figure 5) of those who already save (saving respondents). Only one in ten respondents reported no savings at all. Slightly less than one in five respondents who save (19 percent) said they use formal methods to save, and 13 percent reported using a mix of formal and informal methods to save money (figure 5).

Figure 5: Use of Formal Compared with Informal Savings Methods by Respondents that Save
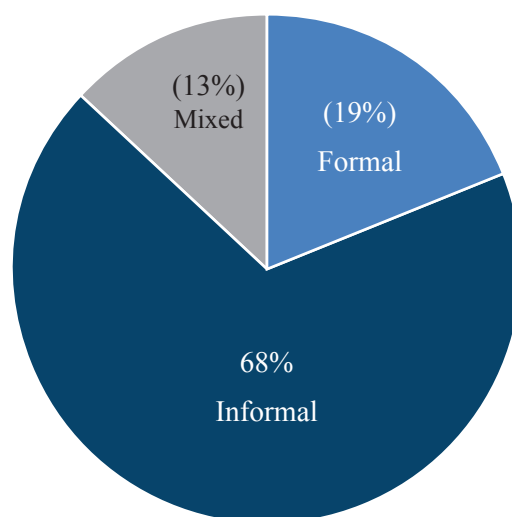
As shown in figure 6, more than a third (36.1 percent) of respondents reported that the typical amount of money they had left over at the end of the day was less than Rp 50,000, whereas another 37.5 percent reported that they had Rp 50,000 to Rp 100,000 left over, and 22.2 percent said they had between Rp 100,000 and Rp 1,000,000 left over. The amount left over varied considerably by the size of the enterprise: only 18.1 percent of all microenterprises reported having more than Rp 100,000 left over, while about 59 percent of all small enterprises had more than Rp 100,000 left over. There did not seem to be large differences in the amount left over between men and women, except that almost 20 percent of male ME owners had between Rp 100,000 and Rp 1,000,000 left over, and only 13 percent of female ME owners fell into that category.

Figure 6: Typical Daily Leftover Amounts of Money by Enterprise Size and Owner Gender
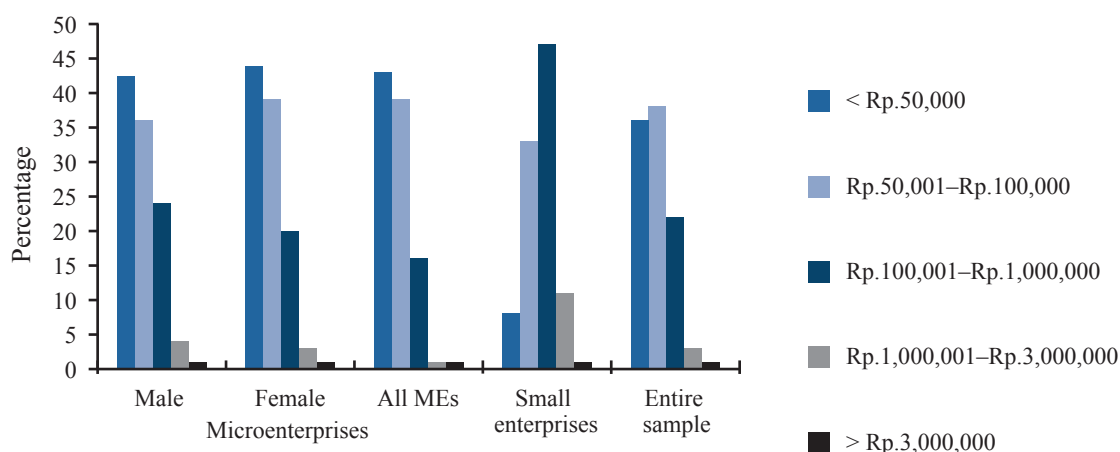
Note: Forty respondents reported no money left over at the end of the day

The larger the sum of money that respondents reported having left over at the end of the day, the more likely they were to deposit that money in a bank account: depending on the amount deposited, the percentage of respondents who saved formally rises from 11 percent (<Rp 50,000) to 16 percent (Rp 50,001–Rp 100,000) to 38 percent (Rp 100,000–1 million) to 67 percent (Rp 3 million–Rp 5 million). The exception to this rising trend was the Rp 1 million–Rp 3 million category.

Table 21: Saving Method by Amounts of Leftover Money

	Amount Left Over at End of Day (Rp)					
Saving Method	<50,000	50,001–100,000	100,000–1 million	1 million–3 million	3 million–5 million	All amounts
Formal (%)	11	16	38	25	67	19
Informal (%)	85	73	40	25	33	68
Mixed (%)	5	12	23	50	0	13
Total (%)	100	100	100	100	100	100
Total (N)	130	135	80	12	3	360*

* Forty respondents reported they had no money left over at the end of the day; therefore, they were not included in this table and the total number is 360.

Unusual Receipts

The survey asked respondents whether they had received a large payment from a customer in the months preceding *Ramadan* and during *Ramadan*, as a way to understand how respondents managed unusually large cash inflows.[14] The data suggest that there was not much difference in the size of large payments before and during *Ramadan*, although the data do suggest that the number of large payments was greater during *Ramadan*. Twenty-two percent of respondents received a large payment in the months before *Ramadan*, and 20.5 percent of respondents received a large payment from a customer during *Ramadan*. Focusing on large payments before *Ramadan* (a typical period), the data show that those who receive large payments are more likely to deposit that money directly into a bank account in comparison to what they usually do with money left over at the end of the day. Of respondents who did receive a large payment, 42.3 percent of male-owned MEs, 35.7 percent of female-owned MEs, 38.9 percent of all MEs, and 60.7 percent of SEs deposited the large payments into bank accounts (table 22). Overall, 46 percent of respondents saved their large payments formally and 54 percent saved them informally.

As shown in table 22, the average large payment amount (before *Ramadan*) for all respondents who reported receiving large payments was Rp 3,460,556. The average amount of large payments for small enterprises was Rp 6,998,387. This amount is many times larger than the average size for microenterprises, which was reported as Rp 1,601,695. The average male-owned ME payment was greater than the average payment for female-owned MEs, and their median amounts differed by Rp 1,000,000. The median amounts show more consistently across the subsectors, but small enterprises still reported the highest median amount: Rp 3,000,000 (table 22).

Of respondents who received a large payment of Rp 1,000,000 or more, 55 percent saved the payment formally and 45 percent saved it informally. At a higher payment amount of Rp 10,000,000 and more, 78 percent of respondents saved it formally and 22 percent saved the payment informally.

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[14]   The survey was conducted right after the Islamic fasting month of *Ramadan*, in August and September 2013. *Ramadan* spending patterns are typically unusual due to daytime fasting, special celebration meals, expenses and gift-giving. To avoid only capturing data on the unusual spending and earning patterns that are typical of the month of *Ramadan*, the survey asked questions about more typical months preceding *Ramadan*, as well as questions about cash flows during *Ramadan*. The "typical period" questions were intended to capture data about the eleven months of the year excluding *Ramadan*, without the seasonal distortion

Table 22: Large Nonseasonal Payments by Enterprise Size and Owner Gender

	Microenterprises			Small Enterprises	All MSEs
	Men	**Women**	**All MEs**		
Received large payment from customer in months before *Ramadan* (%)	18.6	18.3	18.4	38.8	**22.5**
Average payment amount (Rp)	2,001,724	1,215,000	1,601,695	6,998,387	**3,460,556**
Median payment amount (Rp)	1,500,000	500,000	1,000,000	3,000,000	**1,250,000**
What is done with that money					
Spent it immediately (%)	10.3	6.7	8.5	9.7	**8.9**
Moved it immediately (%)	34.5	43.3	39.0	48.4	**42.2**
Kept for a few days and then moved it (%)	55.2	50.0	52.5	41.9	**48.9**
If and to where money moved					
Somewhere close to me and hidden (%)	57.7	57.1	57.4	35.7	**50.0**
Deposited in a bank account (%)	42.3	35.7	38.9	60.7	**46.3**
Payments that were made from across a distance (%)	6.9	0.0	3.4	9.7	**5.6**

Data on whether savings behaviour differed between regular savings habits and savings when a person received a large amount of money could inform product and service design for a financial service provider. Eighty-two respondents reported both having savings at the end of the day and receiving a large payment before *Ramadan*; it was possible to see whether their regular savings behaviour changed when they received a 'windfall' sum. As shown in Figure 7, 84 percent of people who regularly saved formally also saved formally when they received a large payment. The remaining 16 percent reported saving informally when they received a large payment. Of the 41 respondents who reported using informal savings regularly, 22 percent used formal saving methods when they received a large payment and the remaining 78 percent continued to use informal methods for large payment receipts. Of all of the respondents who had savings at the end of the day and had received a large payment before *Ramadan*, 24 percent reported used mixed savings methods regularly. Roughly two-thirds (60 percent) of respondents who regularly save using mixed methods reported saving formally when they received a large payment and the remaining (40 percent) saved informally upon receipt of a large payment. These data suggest some change in behaviour on the part of some respondents when they receive large payments but, overall, that respondents were consistent in how they saved both on a regular basis and when receiving windfalls.

Figure 7: Regular Savings vs. Savings Method Used for Large Payments Received

**Savings Method Use When Large Payments are Received
Given Respondents Regular Savings Method**
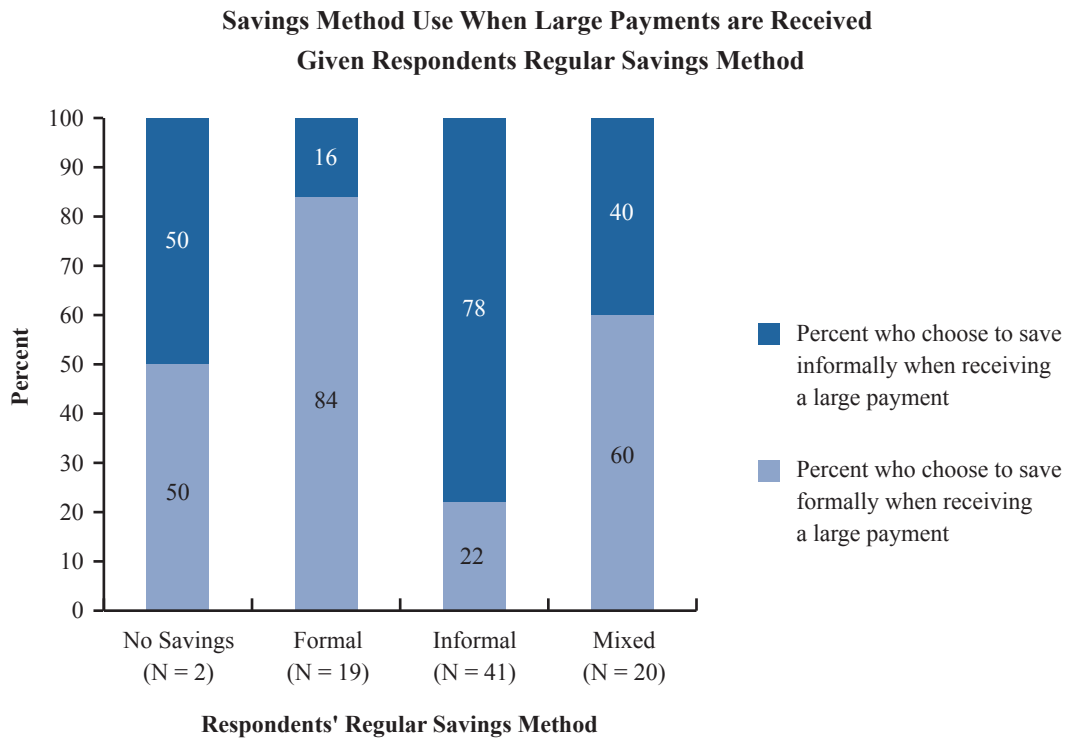
Unusual Purchases

Forty percent of MSEs reported that they had to make unusual purchases during the months preceding *Ramadan*. They reported making all of these purchases in person and in cash; almost all of them used cash they already had on hand. Focus group respondents discussed several barriers to receiving cash payments. They reported concerns about receiving counterfeit money and feeling insecure when holding large amounts of cash. Only 3.1 percent of microenterprises who paid cash for these purchases withdrew this money from a bank account, whereas 16.1 percent of small enterprises who paid cash withdrew it from a bank account.

Bill payment is also a potential demand area for MM & BB services, but 2.5 percent or less for men, women, micro, and small enterprises reported that they currently used a mobile phone to pay bills. Currently, 42 percent of all respondents used an agent or third party to pay bills.

Interest and Readiness for Change

The survey asked respondents a series of questions to assess the current level of knowledge about mobile money and other branchless banking services, and evaluate whether this type of service provision would even be feasible among the MSE respondents. As shown in table 24, almost all respondents (93 percent) already have a mobile phone: 93.6 percent of male-owned MEs, 92.1 percent of female-owned MEs, 92.8 percent of all MEs, and 93.8 percent of SEs reported owning a mobile phone. A difference exists between urban and rural areas in terms of mobile penetration rates: 97 and 89 percent respectively.

The survey asked respondents if they owned a basic phone (voice and text only), a feature phone (with a camera, colour screen, music and internet) or a smart phone (with a Blackberry, Android, iPhone or Windows operating system). A majority (60.8 percent) owned a basic phone whereas 36.6 percent owned a feature phone with some advanced features. Of those who own mobile phones, a small but significant share (12.4 percent) has a device with smart phone capabilities. Some respondents owned more than one device, so totals are greater than 100 percent.

Slightly more than 20 percent of the mobile phones owned by small enterprises have smart phone capabilities, whereas about 10 percent of microentrepreneurs reported owning a mobile phone with smart phone capabilities. There was no difference between men and women in the level of smart phone ownership.

Feature phones (with features such as cameras, music and internet / data) are more common in urban areas (50.5 percent of MSE owners have one) than in rural areas, where only 21 percent of MSE owners have one.

Male and female owners of MEs differed a little in their knowledge of mobile money services: 25.6 percent of men and 20.1 percent of women reported having knowledge of it (table 24). There was a significant difference in knowledge level by enterprise size: 22.8 percent of all microenterprise owners knew about MM services, whereas 41.3 percent of SE owners did. About 9 percent of all respondents reported having used mobile banking services. The highest incidence of use was within small enterprises (16.3 percent). The respondents in the focus group who had used the service reported that they used it to check their account balances but still preferred conventional methods to make payments. Urban respondents are also more likely to be interested in trying out a mobile money service (43.5 percent) than rural respondents are (33.5 percent).

Use of Blackberry Messenger is very popular among female small enterprise owners in both rural and urban areas. They use this service to chat with suppliers and customers and also to promote their business and its products. This suggests that female small enterprise owners have already integrated the use of mobile phones into their business practices.

Table 23: Current Feasibility and Knowledge on MM & BB Services by Enterprise Size and Owner Gender

Respondents that…	Microenterprises			Small Enterprises (%)	All MSEs (%)
	Men (%)	Women (%)	All MEs (%)		
Own a mobile phone	93.6	92.1	92.8	93.8	93.0
Have a cell phone with smart phone capabilities	9.6	10.6	10.1	21.3	12.4
Have heard of mobile banking service	25.6	20.1	22.8	41.3	26.5
Have used mobile banking services	11.5	3.7	7.5	16.3	9.3
Would be interested in using the service if it was on their phone (based on description)	34.6	35.4	35.0	52.5	38.5
Are very interested or interested to use this service for their business	39.7	39.7	39.7	63.8	44.5

The data suggest considerable interest exists in the use of the product but take-up has been limited so far: less than 10 percent of respondents have used a mobile money service. More than half, 54.3 percent of respondents reported that 'technical use' was the thing they would need to understand better before they started using the product. Focus group results indicated that the respondents' main concerns about mobile money are technical or security concerns (hacking or the lack of a PIN) or that it simply would not work. This response mirrors those in other studies: users complain that they do not know how to use the service on their phone or they have experienced a malfunction of a service due to incorrect use. This indicates that, to increase consumers' comfort level, the introduction of such services may need to be coupled with education on how to use the services appropriately .

Additionally, 35 percent of respondents reported an interest in using mobile banking services to pay utility bills and make bank deposits, suggesting that these two avenues may be a viable starting point for mobile money pilot project.

Overall, female enterprise owners saw more advantages to using mobile money than men. Women in urban areas cited mobile money as practical because they no longer would receive coins for change and would not need to bring as much cash with them. Women in rural areas said that mobile money could be a good alternative for saving, because it is so difficult to open a bank account. Men in rural areas also cited the advantage of not having to go to the bank. The focus groups revealed that women were more likely to use MM & BB services to make business and household purchases and to save.

ME owners reported that it is still very difficult to save, because of their small incomes. However, they reported that mobile money could help them manage their microsavings. Small enterprise owners reported that mobile money is an interesting concept and that it could be a practical way to manage their money. For both types of enterprise, respondents reported that they would use mobile money if their suppliers and other people in their business environment already used the service.

Respondents participating in the focus groups expressed a number of concerns related to the use of mobile money services. They had technical concerns related to what would happen if a phone's battery died during a transaction, how they would gain access to their money if they lost their phone, and whether their simple phone could be used to conduct MM transactions. They were also concerned that the service would be difficult to use, especially for the elderly. Security was also a concern, including having to use a PIN to secure transactions each time and fearing that a hacker might hack into their phone and hence their personal bank account.

One frequently cited reason for a preference for informal, cash-based transfers to formal payments and bank usage is the suspicion that formal accounting and banking will lead to higher tax liabilities for business owners. Although governments are obviously interested in widening their tax base to include more of the informal sector, informal business owners are supposedly interested in remaining informal to avoid taxation. Our focus groups did not prompt respondents about tax issues, and it is interesting to note that this issue was not mentioned by respondents in any of the 16 focus groups. This would seem to indicate that, of the reasons businesses have for not entering the formal sector or using bank accounts, taxation is a secondary concern compared with issues of convenience, proximity, and accessibility. Indeed, electronic payments could present an opportunity for the Government of Indonesia to increase its tax base with a minimum of friction by increasing the convenience of making tax payments. This is relevant in Indonesia as a range of new initiatives such as micro, small, and medium enterprise taxation and universal health coverage will require an increasing number of person-to-government payments.

In addition, respondents expressed concern about paying fees for the service, especially if there is a fee charged per transaction. This last point is pertinent as many bank transactions, including inter-account transfers, do not incur fees.

Conclusions

This report has documented the business practices, cash-flow and money management practices, financial service use, and interest and readiness for change in a sample of MSE owners from four different provinces in Indonesia. The data suggest that a number of market opportunities exist for MM & BB service providers among MSE owners, especially female owners.

Business and Market Opportunities for MM & BB Providers

The cash-flow and money management data suggest that MSE owners are currently keeping money left over at the end of the day in cash on themselves or somewhere hidden in their home or place of business. This leftover cash constitutes a potential market for MM & BB service providers who can provide MSE owners with a cheap and highly accessible way to deposit and withdraw their money from an electronic account. Being able to capture this daily cash flow electronically could potentially open up other markets suggested by the data on business practices.

The business practice data looked at payments from customers and to suppliers. The data suggest that MSEs make regular large payments to suppliers, which requires them to carry cash to the point of sale to make the payment, and those who sell to other businesses receive large payments from customers. There is a potential market for an MM & BB service provider to make it possible for MSE owners to make electronic business-to-business transactions, helping them to avoid carrying cash. Such a service would have to address two issues. First, the distances MSE owners currently travel are not far in most cases—about one kilometre—so the value proposition of an electronic payment might not be apparent. Second, the existing system of account-to-account transfers through banks is well established; an MM & BB provider will have to clearly distinguish themselves from this payment method, for example through ease of transactions, user interface, or integration with other business processes.

The business practice data also show that MSEs employ people—about one or two—and pay them either daily or monthly. There is potential for an MM & BB service provider to market some sort of payroll service to MSE owners, but only if MSE owners get in the habit of putting their spare cash into a mobile account because only then would they have the means to pay employees electronically. Furthermore, for such a service to make sense, policy makers would have to address employee tax payment and other labour issues.

The data from the report also suggest that women's money management and business practices make them a particularly amenable target for MM & BB services. They regularly save small amounts of cash, track their money carefully in ways that might be assisted by a subwallet functionality on a mobile platform, and tend to be the household member who manages the household accounts; an electronic subwallet functionality would easily differentiate between household and business accounts. In addition, women are more likely to already have integrated the use of their mobile phone into how they run their businesses and they are more likely to have received or sent a remittance.

Because most MSEs have supply chains that operate in cash from customer through to supplier, it is unlikely there will be a large-scale shift to electronic payments unless other participants in the 'ecosystem' also start to make the shift to electronic payments. This includes both consumers who are willing to use payment methods such as debit cards, credit cards, or mobile money to make payments, and suppliers who have a preference for receiving payments electronically into bank accounts. Thus, a push for electronic payments by MSEs will also need a push for electronic payments by consumers and other businesses. Such a drive would need considerable coordination among banks, payment providers, and regulatory bodies.

Policy Environment

If MM & BB service providers are to take advantage of the business and market opportunities observed above, they will need a policy environment that encourages a switch to electronic transactions. Rather than focus on the distance to agents and services in rural areas, policy emphasis could be placed on agents that provide services that are more convenient than banks, for example, longer opening hours, shorter queues, and less paperwork. Furthermore, policies should be in place that support the integration of MM & BB services with existing banking and payment networks, for example, interoperability and integration with existing banking networks, rather than creation of closed-loop networks.

The branchless banking trials undertaken in 2013 by Bank Indonesia were a positive step towards this poverty environment; however, the pilots were restricted in terms of locations and duration. Future activities should give service providers greater certainty in terms of allowable activity and also allow service providers to develop services that are suitable in urban as well as rural areas.
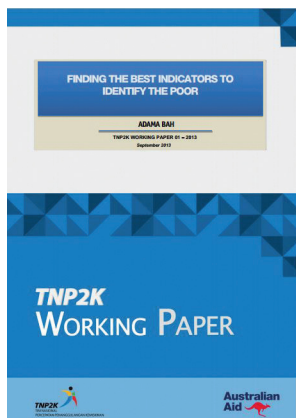
In particular, policies should be in place that allow the informal, semiformal, or localized actors with which MSEs engage to participate in payment networks. Such policies could include simplifying 'know-your-customer' requirements for opening accounts, allowing informal businesses to act as banking agents, or allowing cooperatives and rural banks to participate in agent networks and payment systems.

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TNP2K Working Paper Series

Working Paper 1
Finding the Best Indicators to Identify the Poor
Author : Adama Bah

Proxy-means testing (PMT) is a method used to assess household or individual welfare level based on a set of observable indicators. The accuracy, and therefore usefulness of PMT relies on the selection of indicators that produce accurate predictions of household welfare. In this paper the author proposes a method to identify indicators that are robustly and strongly correlated with household welfare, measured by per capita consumption. From an initial set of 340 candidate variables drawn from the Indonesian Family Life Survey, the author identifies the variables that contribute most significantly to model predictive performance and that are therefore desirable to be included in a PMT formula. These variables span the categories of household private asset holdings, access to basic domestic energy, education level, sanitation and housing. A comparison of the predictive performance of PMT formulas including 10, 20 and 30 of the best predictors of welfare shows that leads to recommending formulas with 20 predictors. Such parsimonious models have similar predictive performance as the PMT formulas currently used in Indonesia, although these latter are based on models of 32 variables on average.
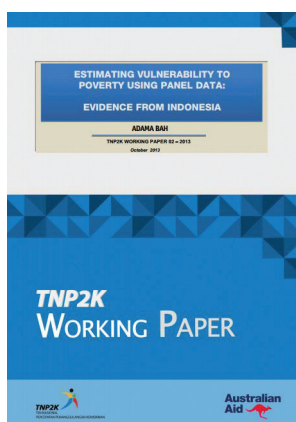
Working Paper 2
Estimating Vulnerability to Poverty using Panel Data: Evidence from Indonesia
Author : Adama Bah

Traditional poverty measures fail to indicate the degree of risk of becoming or remaining poor that households are confronted to. They can therefore be misleading in the context of implementing poverty reduction policies. In this paper the author proposes a method to estimate an index of ex ante vulnerability to poverty, defined as the probability of being poor in the (near) future given current observable characteristics, using panel data. This method relies on the estimation of the expected mean and variance of future consumption conditional on current consumption and observable characteristics. It generates a vulnerability index, or predicted probability of future poverty, which performs well in predicting future poverty, including out of sample. About 80% of households with a 2000 vulnerability index of 100% are actually poor in 2007. This approach provides information on the population groups that have a high probability of becoming or remaining poor in the future, whether currently poor or not. It is therefore useful to complement traditional poverty measures such as the poverty headcount, in particular for the design and planning of poverty reduction policies.
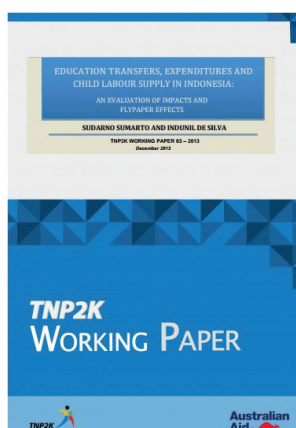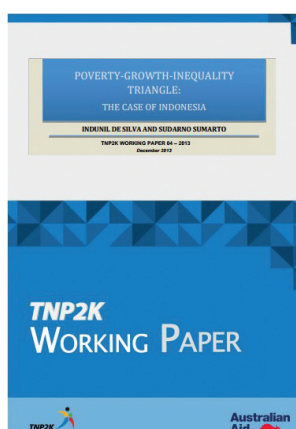
Working Paper 3
Education Transfer, Expenditures And Child Labour Supply in Indonesia: An Evaluation of Impacts And Flypaper Effects
Author : Sudarno Sumarto and Indunil De Silva

In this paper the authors investigate how the receipt of educational transfers, scholarships and related assistance programmes affects the labour supply of children and the marginal spending behaviour of households on children's educational goods. The authors use a nationally representative household survey of unusual scope and richness from Indonesia. They found strong evidence of educational cash transfers and related assistance programmes significantly decreasing the time spent by children on income-generating activities in Indonesia. Households receiving educational transfers, scholarships and assistance were also found to spend more at the margin on voluntary educational goods. These results were stronger on children living in poor families. The findings of this study lend support to the growing view in the literature that educational transfers, scholarships and related assistance can actually have a positive impact on economic development by increasing the level of investment in human capital. The results are particularly relevant for understanding the role of cash transfers and education assistance in middle-income countries, where enrolment rates are already at satisfactory levels, but the challenge is to keep post-primary students in school. Finally, the principal message that emerges from the study is: there are quantitatively non-negligible, average gains from educational transfers and support programmes on household education spending and child labour, especially for the poor.
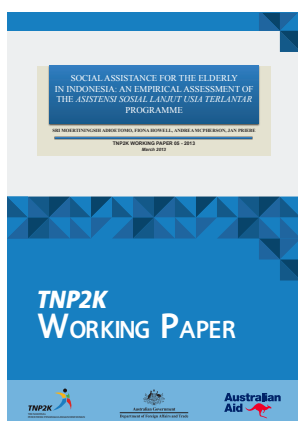
Working Paper 4
Poverty-Growth-Inequality Triangle: The Case of Indonesia
Author : Sudarno Sumarto and Indunil De Silva

This paper decomposes changes in poverty into growth and redistribution components, and employs several pro-poor growth concepts and indices to explore the growth, poverty and inequality nexus in Indonesia over the period 2002-2012. The authors find a 'trickle-down' situation, which the poor have received proportionately less benefits from growth than the non-poor. All pro-poor measures suggest that economic growth in Indonesia was particularly beneficial for those located at the top of the distribution. Regression-based decompositions suggest that variation in expenditure by education characteristics that persist after controlling for other factors to account for around two-fifths of total household expenditure inequality in Indonesia. If poverty reduction is one of the principal objectives of the Indonesian government, it is essential that policies designed to spur growth also take into account the possible impact of growth on inequality. These findings indicate the importance of a set of super pro-poor policies. Namely, policies that increase school enrolment and achievement, effective family planning programmes to reduce the birth rate and dependency load within poor households, facilitating urban-rural migration and labour mobility, connect leading and lagging regions and granting priorities for specific cohorts (such as children, elderly, illiterate, informal workers and agricultural households) in targeted interventions will serve to simultaneously stem rising inequality and accelerate the pace of economic growth and poverty reduction.

Working Paper 5
Social Assistance for the Elderly in Indonesia: An Empirical Assessment of the Asistensi Sosial Lanjut Usia Terlantar Programme*

Asistensi Sosial untuk Usia Lanjut di Indonesia: Kajian Empiris Program Asistensi Sosial Lanjut Usia Terlantar

Author : Sri Moertiningsih Adioetomo, Fiona Howell, Andrea McPherson, Jan Priebe

Indonesia has undergone a demographic transition since the 1970s that has led to significant changes in the population age structure of the country. Life expectancy at birth increased from 45 years to 67 years. The number of elderly people aged 60 and above rose from about 5 million in 1970 to 18 million in 2010, and is projected to increase to over 71 million in 2050. The economic situation for many elderly persons is precarious. In 2011, 12 percent of older people were below the official poverty line. Older people, especially those in their 70s and those aged 80 and above, have the highest poverty rates among the population groups, 13.3 percent and 16 percent respectively. At the same time, a much greater proportion of the elderly population than officially classified as poor is vulnerable to falling into poverty. Moreover, many of the elderly suffer from poor health and have low literacy levels.

Currently, the coverage of the elderly with the existing formal pension schemes is very low. The Government of Indonesia (GOI) recognizes the gaps in the social insurance schemes and is explicitly taking actions to improve pension coverage. ASLUT, the current social assistance programme targeted directly at poor and neglected elderly, started in 2006 in six provinces reaching 2,500 beneficiaries. It has recently expanded to all 33 provinces and increased the number of recipients to 13,250 in 2011, and 26,500 beneficiaries in 2012. This paper explores the strengths and weaknesses of the coverage provided to the elderly and recommends that the ASLUT programme be developed further to meet the demographic challenges that Indonesia faces.

*This Working Paper has been republished in 2014
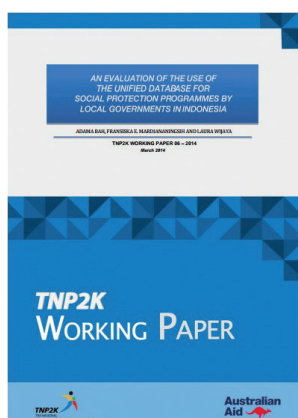
Working Paper 6
An Evaluation Of The Use Of The Unified Database For Social Protection Programmes By Local Governments In Indonesia
Author : Adama Bah, Fransiska E. Mardiananingsih and Laura Wijaya

The Unified Database for Social Protection Programmes (UDB) contains detailed socioeconomic and demographic information, as well as the names and addresses of the poorest 40 percent of the Indonesian population. Since 2012, the National Team for the Acceleration of Poverty Reduction (TNP2K), which manages the UDB, has provided this data to over 500 local government institutions to facilitate the implementation of local poverty reduction programmes. This paper evaluates the use of the UDB data based on the results of a qualitative assessment of data utilisation at the local level and a self-administered user feedback survey. To improve the cooperation with local governments for increased effectiveness of poverty reduction programmes, the authors' main recommendations are for TNP2K to engage more proactively with the institutions that request data, through (i) regular follow-ups with these institutions, (ii) a broad dissemination of socialisation material explaining the UDB, and (iii) the provision of specialised training on the use of UDB data for the planning and implementation of local programmes.
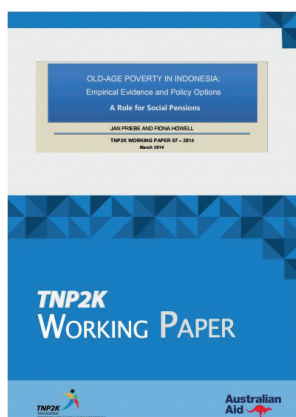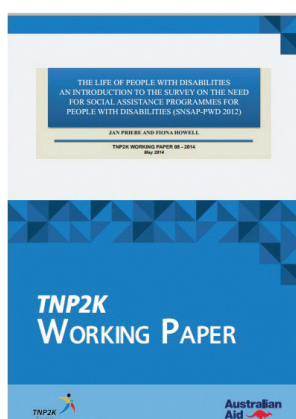
Working Paper 7
Old-Age Poverty in Indonesia: Empirical Evidence and Policy Options - A Role for Social Pensions
Author : Jan Priebe and Fiona Howell

Indonesia in 2013 is an ageing society with an elderly population (60+) of approximately 18 million or eight percent of the total population. Due to continuously low fertility levels, lower mortality and higher life expectancy rates, the number of elderly in the country is predicted to increase to more than 80 million individuals by 2050 who will by then constitute about 25 percent of the total population. Considering the rise in its elderly population and the low pension coverage, the Indonesian government has shown strong commitment towards raising the number of elderly who have access to formal pensions. In line with a variety of social welfare laws, the National Security Law (SJSN), declarations under ASEAN and commitments to a comprehensive social protection floor policy, Indonesia has endorsed a mutli-pillar approach to providing income support in old age. However, the current reforms associated with the SJSN Law; aim only at providing income support to the future elderly generation - those working age adults that will retire in 15-40 years. While the success of these reforms needs to be demonstrated, there remains substantial scope to address the need for pension coverage among the current elderly population. Old-Age Poverty in Indonesia: Empirical Evidence and Policy Options – A Role for Social Pensions aims at filling several evidence gaps in the discussion on elderly and old-age poverty in Indonesia. Firstly it provides a detailed and comprehensive picture of the socio-economic circumstances of the current elderly generation. By doing so it provides Indonesia's first nationally representative poverty assessment on the elderly addressing aspects of education, health and remittances as well as poverty measurement. Second, the report outlines Indonesia's legal, political and programme commitments to alleviate old-age poverty and contrasts it with recent international experience on pension reform. This report discusses in particular the benefits of social pensions for Indonesia's elderly, and outlines the pros-and cons of poverty-targeted and universal pension schemes. Finally, the report provides ex-ante simulation results on the poverty and fiscal impacts for selected social pension schemes.
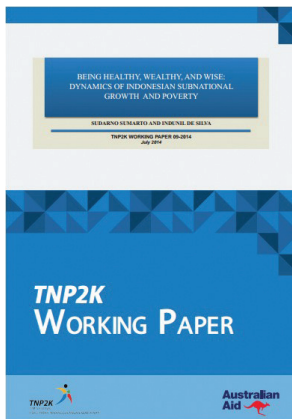
Working Paper 8
The Life of People with Disabilities: An Introduction to the Survey on the Need for Social Assistance Programmes for People with Disabilities
Author : Jan Priebe and Fiona Howell

In 2012, the Demographic Institute of the University of Indonesia conducted on behalf of TNP2K a unique survey on disability that sheds new light on the needs and living conditions of people with disabilities (PWDs) in Indonesia. This new dataset is called the Survey on the Need for Social Assistance Programmes for People with Disabilities (SNSAP-PWD 2012) and is available free of charge from TNP2K and PRSF. This paper provides an introduction into the SNSAP-PWD 2012 by describing its sampling design and the topics covered.
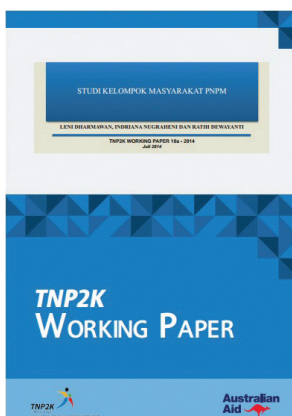
Working Paper 9
Being Healthy, Wealthy, and Wise: Dynamics of Indonesian Subnational Growth and Poverty
Author : Sudarno Sumarto and Indunil De Silva

The aim of this study is twofold. First, despite the vast empirical literature on testing the neoclassical model of economic growth using cross-country data, very few studies exist at the subnational level. The authors attempted to fill this gap by using panel data for 2002–12, a modified neoclassical growth equation, and a dynamic-panel estimator to investigate the effect of both health and education capital on economic growth and poverty at the district level in Indonesia. Second, although most existing cross-country studies tend to concentrate only on education as a measure of human capital, the authors expanded the analysis and probed the effects of health capital as well. To their knowledge, no study has done a direct and comprehensive examination of the impacts of health on growth and poverty at the subnational level. Thus, this study is the first at the subnational level, and the findings will be particularly relevant in understanding the role of both health and education capital in accelerating growth and poverty reduction efforts. The empirical findings are broadly encouraging. First, nullifying any doubts on the reliability of Indonesian subnational data, the results suggest that the neoclassical model augmented by both health and education capital provides a fairly good account of cross-district variation in economic growth and poverty in Indonesia. The authors found that the results on conditional convergence, physical capital investment rate, and population growth confirm the theoretical predictions of the augmented neoclassical model. They also found that both health and education capital had a relatively large and statistically significant positive effect on the growth rate of per capita income. Economic growth was found to play a vital role in reducing Indonesian poverty, reinforcing the importance of attaining higher rates of economic growth. Findings from the poverty–human capital model showed that districts with low levels of education are characterized by higher levels of poverty. Regions with mediocre immunization coverage and greater than average prevalence of waterborne diseases had higher poverty rates and lower output per capita. Similarly, regions with higher numbers of births attended by a skilled birth attendant were associated with lower poverty rates and higher economic output. The results in particular suggest that, in designing policies for growth, human development, and poverty reduction, it is necessary to broaden the concept of human capital to include health as well.

Working Paper 10
## Studi Kelompok Masyarakat PNPM
Lampiran Studi Kelompok Masyarakat PNPM
Author : Leni Dharmawan, Indriana Nugraheni dan Ratih Dewayanti, Siti Ruhanawati, Nelti Anggraini

The PNPM Community Groups study was conducted in four villages and two towns. It demonstrates successful programs but also highlights the limitations in terms of adopting PNPM principles and processes.

There is recognition of the expertise of individual actors in managing the project but their influence is limited since each project has its own rules and tends to form new groups instead of utilizing existing ones. Local governments are not obliged to conform to the principles and processes of PNPM outside of the PNPM program.

Facilitation does not build collective consciousness in the society to correct any imbalances in authority or power among groups within a community. Groups that implement the project need to be integrated into local institutions and there need to be better checks and balances in place to prevent specific groups from becoming dominant.
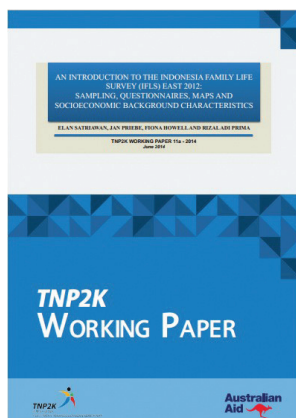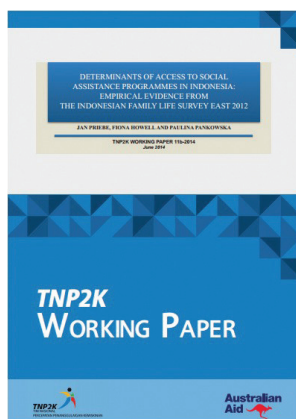
Working Paper 11a
An introduction to the Indonesia Family Life Survey IFLS East 2012 : Sampling Questionnaires Maps and Socioeconomic Background Characteristics

Author : Elan Satriawan, Jan Priebe, Fiona Howell and Rizal Adi Prima

The first round of the Indonesia Family Life Survey (IFLS) East was conducted in Eastern Indonesia in 2012. This paper is intended to provide researchers and policy makers alike an introduction to and brief overview of this new dataset. Topics covered include technical details of survey implementation (sampling procedure, calculation of weights, and field implementation) and a socioeconomic overview using Central Bureau of Statistics (Badan Pusat Statistik or BPS) data and IFLS East data of the prov- inces selected in the region.
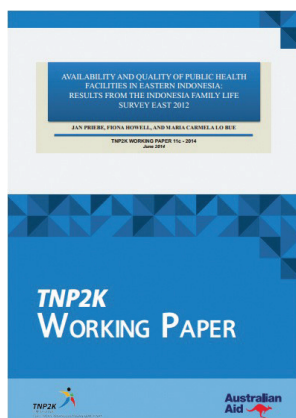
Working Paper 11b
Determinants of Access to Social Assistance Programmes in Indonesia Empirical Evidence from the Indonesian Family Life Survey East 2012

Author :Jan Priebe, Fiona Howell and Paulina Pankowska

In the past 15 years, the Government of Indonesia has implemented a variety of social assistance programmes intended to improve the lives of the poor and help them escape poverty. Many of these programmes are now operating at a national scale and cover millions of Indonesians. Using a new household survey dataset that covers the eastern areas of Indonesia (Indonesian Family Life Survey East 2012), this paper investigates the household-level determinants of access to social assistance programmes. The analysis reveals that social assistance programmes are relatively more available in poorer provinces and that poorer households—all things being equal—are more likely to access social assistance programmes than nonpoor households, which suggests that social assistance programmes in eastern Indonesia are successful in their efforts to target the poor (poverty targeting), both across regions and households. However, poverty targeting still has scope for improvement in terms of accuracy. Besides the poverty status (as measured in per capita consumption expenditures), the authors found that several other factors influence programme access. Having a disabled household member or having a household head who is a widow(er) appears to increase the likelihood of receiving social assistance programmes. Likewise, the level of trust and conflict in a community affects access to social assistance programmes. Particularly in the case of Raskin, the authors found that the programme is distributed more widely among those communities that are characterized by higher levels of conflict and lower levels of trust. The authors did not find that poor access to infrastructure and remoteness influences household access to social assistance programmes once they controlled for province fixed effects in the regression framework. Furthermore, the findings suggest that possession of a local 'poverty letter' strongly improves household access to social assistance programmes, even after controlling for a wide set of socioeconomic characteristics. In general, determinants of programme access differ significantly among provinces and between rural and urban areas.
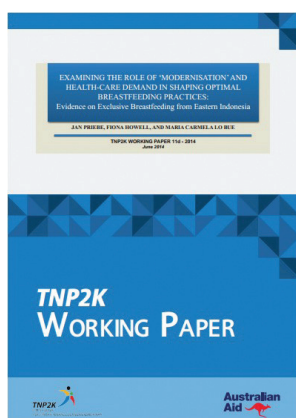
Working Paper 11c
Availability and Quality of Public Health Facilities in Eastern Indonesia : Results from the Indonesia Family Life Survey East 2012
Author: Jan Priebe, Fiona Howell and Maria Carmela Lo Bue

Little is known about public health-care supply in Eastern Indonesia, a region that shows worse health outcomes than the rest of the country. Drawing on a new dataset (IFLS East 2012), this paper examines the availability and quality of public health-care facilities (puskesmas and posyandu) in Eastern Indonesia. The findings suggest that public health-care supply plays a larger and more important role in Eastern Indonesia compared with Western Indonesia. However, this stronger reliance and dependence on public health-care provision has not necessarily resulted in quality health-care supply. Although significant improvements have been achieved over time, the authors found that many puskesmas and posyandu could benefit from more and better-trained staff (education, training, availability, absenteeism) and better physical endowment (infrastructure, medical equipment, and medications). The results further suggest that remarkable differences in the provision of health care exist between urban and rural areas; urban areas have on average better-equipped puskesmas, whereas rural areas seem to have better-equipped posyandu. Furthermore, the authors found that direct funds from the central level (central government funds and Jamkesmas), despite the decentralization process, play a major role in financing the operations of public health facilities. In rural Eastern Indonesia, these central-level funds constitute about 80 percent of the total operational budget of a puskesmas.
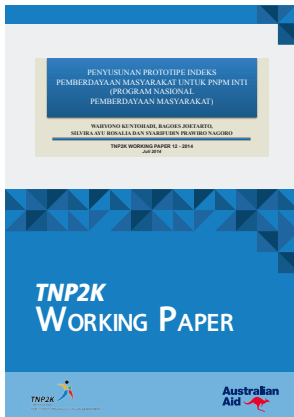
Working Paper 11d
Examining the Role of Modernisation and Healthcare Demand in Shaping Optimal Breastfeeding Practices: Evidence on Exclusive Breastfeeding from Eastern Indonesia
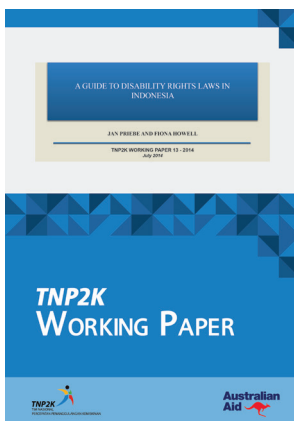Author: Jan Priebe, Fiona Howell and Maria Carmela Lo Bue

The health benefits to mothers and children in adopting optimal breastfeeding practices are well recognized. However, despite many efforts to promote optimal breastfeeding practices in developing countries, only modest progress has been achieved in past decades. This paper attempts to fill several important research gaps on the socioeconomic determinants of optimal breastfeeding. In contrast to previous studies that have focused on the timely initiation and duration of breastfeeding, this article examines exclusive breastfeeding practices. Using a new data set from Eastern Indonesia, the authors revisited the 'modernisation' hypothesis and, as a first study in this field, investigated to what extent health-care demand and supply factors influence optimal breastfeeding behaviours. Controlling for a wide range of individual, household, and community characteristics, the findings suggest that mothers' labour market participation under 'modern' employment contracts negatively affects optimal exclusive breastfeeding practices, and hence provide support for the 'modernisation' hypothesis. Moreover, the results indicate that a higher availability and quality of health-care supply does not necessarily lead to better breastfeeding practices. Only when health-care supply was matched with a significant demand for such services, did the authors observe a higher chance for optimal exclusive breastfeeding

Working Paper 12
Penyusunan Prototipe Indeks Pemberdayaan Masyarakat untuk PNPM Inti (Program Nasional Pemberdayaan Masyarakat)
Author: Wahyono Kuntohadi, Bagoes Joetarto, Silvira Ayu Rosalia and Syarifudin Prawiro Nagoro

PNPM is a national program for community driven development and poverty reduction. To date the program has used output-based performance indicators for evaluation purposes. An index that effectively demonstrates the performance of the community empowerment process has not been used yet. An effective index is needed to monitor and evaluate activities given the large number of participants, the gradual empowerment process, and the tight schedules for field validation.

Working Paper 13
A Guide to Disability Rights Laws in Indonesia
Author: Jan Priebe, Fiona Howell

In the past few decades, the Government of Indonesia has passed and signed a substantial number of domestic laws and international conventions/treaties that deal with the rights and opportunities of persons with disabilities (PWDs). Disability is a cross-cutting issue and requires an extensive review and monitoring of multiple pieces of legislation that have already been passed in or ratified by Indonesia. In this context, the objective of this report is to provide an overview for a broad audience of the crucial elements of the Indonesian legal framework on PWDs' rights.
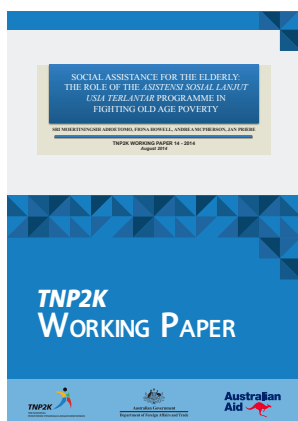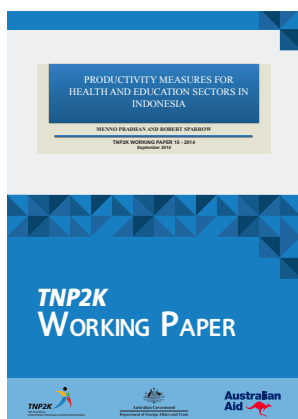
Working Paper 14
Social Assistance for the Elderly: The Role of the Asistensi Sosial Lanjut Usia Terlantar *Programme in Fighting Old Age Poverty*
Author: Sri Moertiningsih Adioetomo, Fiona Howell, Andrea Mcpherson, Jan Priebe

Indonesia has undergone a demographic transition since the 1970s that has led to significant changes in the population age structure. Life expectancy increased from 45 years to 67 years. The number of elderly people (60 years and above) rose from about 5 million in 1970 to 18 million in 2010, and is projected to increase to over 80 million by 2050. The economic situation of the elderly is precarious. In 2012, 12.65 percent of older people (60 years and above) lived below the official poverty line. Older people, especially those aged 70 and above, have the highest poverty rate among all population groups, 14.92 percent. At the same time, a much greater proportion of the elderly population officially classified as poor is vulnerable to falling into poverty. Currently, the coverage of existing pension schemes for the elderly is very low. The proportion of older people in receipt of civil service and military pension schemes, the only formally available pensions in Indonesia, was 15.5 percent of the population aged 60 years and above in 2010. These pension benefits, available to government workers, civil servants, military personnel and formal sector employees only, are usually insufficient to cover the basic needs of retirees. The Government of Indonesia has recognised these gaps in the social insurance schemes and is taking actions to improve pension coverage.

ASLUT, the current social assistance programme targeted directly at the elderly, started in 2006 in six provinces targeting 2,500 beneficiaries. It has subsequently expanded to all 34 provinces and increased the number of recipients to 26,500 beneficiaries in 2013. Fighting old-age poverty: The role of ASLUT examines empirically, both quantitatively and qualitatively, the socio-economic conditions of poor elderly persons in Indonesia. In contrast to other reports, a particular focus is given to investigating the operations of ASLUT, Indonesia's only targeted cash transfer programme for the elderly. By doing so, the report draws on a unique household survey of 2,200 elderly households from 11 provinces which was conducted by SurveyMETER and the Demographic Institute of the University of Indonesia on behalf of TNP2K in 2012.

Working Paper 15
Productivity Measures for Health and Education Sectors in Indonesia
Author: Menno Pradhan and Robert Sparrow

This study analyses the relative efficiency of district public health and education service delivery in Indonesia over the period 2003 to 2008. The authors production frontier models to assess the efficiency of districts in achieving education and health outputs, and costs functions to assess the efficiency of public spending. The analysis combines data from the Ministry of Finance on district spending, Susenas household surveys, and health and education infrastructure indicators from the PODES village census.

The data show a strong increase in district health and education public spending, as well as service availability. Yet, the authors also see a large disparity in spending between districts in terms of per capita public spending, both within and between regions. To a large extent this is driven by relatively static characteristics of districts. However, there is some evidence of convergence in spending levels as well as scope for local policy changes to overcome initial public spending differences. This suggests that the central government transfers remain an important policy tool for equalizing investment in health and education in districts.

The analysis reveals substantial variation in efficiency across regions in Indonesia. Given the level of service delivery, district public spending per capita is on average relatively low in Java and Bali. In contrast, Sulawesi and Kalimantan are relatively less efficient in terms of spending, while in Sumatra spending efficiency by district governments has declined strongly since 2006. Districts in Java and Bali also perform well in terms of technical efficiency, as service delivery in these districts is relatively high, given the level of spending and available infrastructure.

Micro and small enterprises (MSEs) represent a significant portion of Indonesia's economic and employment activity. They constitute 98 percent of all businesses and provide 94 percent of employment. MSEs represent the most significant portion of economic activity for the poor population of Indonesia; the poor are more likely than other income groups to use MSEs not only for employment and income generation but also for consumption. MSEs are therefore important links in the chain of financial inclusion and poverty reduction. By bringing more MSEs into the formal financial sector, it is expected that more of the poor population of Indonesia will also be provided with financial services.

The potential of mobile money and branchless banking (MM & BB) services to provide financial services to previously "unbanked" market segments has been widely noted around the world, but this potential has not been realised in Indonesia. These services use a combination of new technology using mobile phones and agents as local service points to provide financial services to customers and locations that would otherwise be uneconomical to reach with conventional financial services.

This study assesses the potential demand for MM & BB services from MSEs in Indonesia, drawing on both quantitative and qualitative data obtained through 400 survey interviews with MSE owners and 16 focus groups distributed evenly across four provinces: Bali, South Sumatra, South Sulawesi, and West Java. The study was conducted in August and September 2013.