THE NATIONAL RESEARCH INSTITUTE
PAPUA NEW GUINEA

DISCUSSION PAPER

UNDERSTANDING FINANCIAL INCLUSION OF THE INFORMAL ECONOMY: CASE STUDY OF OPEN MARKET VENDORS IN PORT MORESBY, PAPUA NEW GUINEA

Elizabeth Kopel

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This paper is based on data collected for a study about understanding the informal economy through a case study of open market vendors in the National Capital District, Papua New Guinea (PNG). This is the third of three papers to have come out of the same data set. The first two papers were *Understanding gender dynamics of the informal economy: The case of open markets in Port Moresby* (PNG National Research Institute [PNG NRI] Discussion Paper 156), and *Understanding the dynamics of the informal economy: Open market services and vendor concerns in the National Capital District* (PNG NRI Discussion Paper 159). The author thanks the many market vendors who were consulted for this study, and the National Capital District Commission Market Services Division. Special thanks to the 55 research assistants, mostly third and final year students, from the University of PNG at the time of data collection, who conducted interviews in the scorching December heat. I am grateful to Dr Lindsay Kutan for leading the fieldwork, data entry, and preparation of this work. Appreciation is extended to Dr Francis Odhuno and Associate Professor Eugene Ezebilo of PNG NRI for doing the tedious job of peer review and providing constructive comments, which massively improved this paper. This study was made possible with funding from the Australian Department of Foreign Affairs and Trade (DFAT).

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About the Author

Dr Elizabeth Kopel is a Senior Research Fellow and Program Leader of the Informal Economy Research Program at the Papua New Guinea National Research Institute.

Abbreviations & Acronyms

AFI	Alliance for Financial Inclusion
APEC	Asia–Pacific Economic Cooperation
BPNG	Bank of Papua New Guinea
CEFI	Centre for Excellence in Financial Inclusion
INA	Institute of National Affairs
MFI	micro finance institution
NCD	National Capital District
NCDC	National Capital District Commission
NGO	non-government organisation
PFIP	Pacific Financial Inclusion Programme
PNG	Papua New Guinea
SME	Small and Medium Enterprise

Abstract

Financial exclusion is a critical issue in Papua New Guinea. This study aimed to understand financial inclusion of informal economy participants through a case study of open market vendors in Port Moresby. Using a survey instrument, data were collected from 205 randomly selected vendors conducting business in 10 randomly selected markets (five planned and five unplanned spontaneous markets) and analysed using descriptive statistics. The findings of the study revealed that market vending is dominated by vendors who have limited or no education, especially women. Financial exclusion is high (75 percent) among vendors, including 22 percent of vendors who opened a bank account but do not use it. Over 60 percent of vendors save part of their earnings, but, of these, 41 percent keep their savings at home and just 22 percent have savings with a financial institution. The majority of vendors (88%) used personal funds to start the enterprise and 3 percent borrowed from informal sources. Two-thirds of the vendors would like to expand and formalise their enterprises, which can be made possible by access to credit, but most vendors are not willing to borrow from formal sources. This paper outlines a number of policy implications. It concludes that financial inclusion efforts need to have a broader focus on basic literacy and financial literacy and competency, as well as developing and nurturing collaborative partnerships between financial institutions, government, and industry partners to deliver financial services to the informal market entrepreneurs.

Introduction

Financial inclusion is critical for people to meaningfully participate in and benefit from the monetary economy. Despite the importance of financial inclusion, about 90 percent of the world's financially excluded citizens live in developing countries (Shafi & Medabesh, 2012; Alliance for Financial Inclusion [AFI], 2010). Within the South Pacific region, Papua New Guinea (PNG) has one of the lowest levels of financial inclusion (Voigt-Graf & Cornford, 2018; Pacific Financial Inclusion Programme [PFIP], 2017). The PFIP report estimated financial inclusion to be around 20 percent (Sibley, 2013) while the PNG National Financial Inclusion Strategy 2016 2020 (Bank of Papua New Guinea [BPNG], 2017) estimated inclusion to be 25 percent. Recent estimates by the PFIP suggest inclusion has increased to 37 percent (PFIP, 2017). The slightly increased estimates of financial inclusion indicate impact of targeted interventions, but the exact figures are not clear and the level of financial exclusion remains high.

In terms of definition, the financially included are the proportion of individuals and organisations with access to formal financial services. Agarwal (2007) defined financial inclusion as the delivery of affordable banking services to under-privileged and low-income groups. Financial inclusion is considered from a wider perspective to include not only access to savings and deposit accounts, but also access to a full range of financial services. Financial inclusion is the process of ensuring access to appropriate financial products and services (payments and remittance facilities, savings, loans, and insurance services), is provided by formal financial institutions at an affordable cost. Financial exclusion is the proportion of people without access to financial services.

Research into financial inclusion in PNG is a new area and, with the exception of a handful of studies, very little research has considered both demand and supply aspects. Eves and Titus (2017) investigated female coffee farmers in the Eastern Highlands Province and highlighted a number of issues affecting women's access to financial services. The International Monetary Fund's (IMF) country report No.15/319 of PNG Selected Issues (IMF, 2015) identified some major issues that cause specific barriers to financial inclusion. The most detailed study of financial inclusion and financial capability in Morobe and Madang Provinces was jointly conducted by the BPNG, Institute for National Affairs (INA), and the World Bank and published in 2015. A Women's World Banking research report collated by Banthia et al. (2013) focused on PNG and Samoa and explored women's ability to access and control financial resources. The report analysed the challenges and opportunities faced by low-income female entrepreneurs. The PFIP, in association with central banks of Fiji, Solomon Islands, and Samoa, and with sponsorship from donor partners and the Alliance for Financial Inclusion (AFI), conducted a benchmarking study of financial inclusion in Fiji, Solomon Islands, and Samoa (PFIP, 2016). These studies point to a number of key challenges that impede financial inclusion for the majority of people living in both rural and in urban areas.

This paper reports the financial inclusion component of a study conducted in Port Moresby's open markets to understand the dynamics of the informal economy. The main objective of this paper is to explore the extent to which market vendors are financially included. The findings of the study will contribute to discussions of financial inclusion issues and inform the search for policy options to improve financial services for informal economy participants.This paper has four main sections. The first section provides the background to financial inclusion as a global issue and the policy context in PNG. The second section provides a brief outline of the methods used, the third section presents the results of the study, and the fourth section discusses the findings. The paper concludes with policy implications.

Financial exclusion as a global concern

In 2014, analysis of the Global Findex Database showed that approximately two billion adults in the world were unbanked (Demirguc-Kunt et al., 2015). Financial exclusion is a global issue and levels of exclusion vary across and within countries. In advanced countries, financial inclusion is higher than in developing countries where a significant proportion of citizens are excluded. Even within developing countries, financial exclusion affects some groups and regions more than others; for example, rural inhabitants, the unemployed, women, and individuals operating in the informal economy are more likely to be financially excluded.

Financial inclusion is essential and the reasons are compelling. Ardic et al. (2011) reviewed evidence from household level data that demonstrates that access to financial services in terms of savings, payments, and credit can contribute massively to increasing incomes and improving the lives of individuals who are poor. People who are financially included are better able to access financial services for savings, withdrawals, funds transmission, loans, and insurance. The World Bank (2014) also noted that individuals who are poor benefit substantially from financial services.

Internationally, the United Nations commenced discussions in 2003 to address financial exclusion and since then financial exclusion has been prioritised as a development issue and addressed at high-level meetings (United Nations, 2006; United Nations Capital Development Fund, 2005). Central among actions taken at the international level to address financial exclusion was the founding of the Alliance for Financial Inclusion (AFI) in 2008. AFI members include developing countries who are represented by policy makers and regulators — mostly central banks of economies with a shared interest in improving financial inclusion through promoting and developing evidence-based policy solutions (AFI, 2010).

Within the South Pacific region, the Pacific Financial Inclusion Programme (PFIP) is donor funded by the governments of Australia and New Zealand and the European Union and is co-administered by the United Nations Capital Development Fund and the United Nations Development Programme. With its head office in Fiji, the PFIP has enabled more than two million Pacific Islanders to benefit from financial education and access formal financial services. This is done by working with governments to support the development of policy and regulatory initiatives, as well as working with financial institutions to develop innovative ways to provide financial services to consumers (PFIP, 2017).

The potential to accelerate financial inclusion appears promising with the adoption of innovations in technology and mobile banking by making it easier to access financial services in developing countries (Allen et al., 2014). Further, Owens (2013) investigated innovations in digital financial services in developing economies and the lessons these offer for financial inclusion. Owens found that mobile technology combined with other digital services through non-traditional banking channels such as electronic payments, transfers, smartcards, electronic money or institutional partnerships can excellerate low-cost and sustainable financial inclusion. PNG and its Pacific neighbours stand to benefit from these innovations.

Financial inclusion policy context in Papua New Guinea

PNG has committed to international and regional efforts to address financial exclusion in the country. These commitments are prominent in key policy documents, although the interventions are in their infancy. Table 1 below provides a snapshot of PNG's international and regional commitments to financial inclusion.

Table 1: PNG's international and regional commitments to financial inclusion

Policy level of commitment	Nature/type of commitment	Details of commitment
International commitments	PNG joined AFI	AFI has membership from developing countries with a shared interest in improving financial inclusion. PNG signed the Maya Declaration for financial inclusion at AFI's annual Global Policy Forum 2013 and set a range of financial literacy and financial inclusion goals.
	Asia–Pacific Economic Cooperation (APEC)	APEC is committed to increasing financial inclusion and financial literacy in member countries. APEC gives prominence to financial inclusion, with the assumption that financial inclusion/financial literacy is important to alleviate poverty and grow inclusive economies. As a member of APEC, PNG's commitment to increasing financial inclusion reflects APEC priorities.
	G20 Principles for Innovative Financial Inclusion	G20 Principles for Innovative Financial Inclusion are based on and draw from global experiences of lessons learned. These principles aim to create an enabling policy and regulatory environment for innovative financial inclusion and PNG's national financial inclusion strategies are based on the G20 Principles.
	Signed up with 'Better than Cash Alliance'	As a member of the 'Better than Cash Alliance', PNG is committed to promote non-cash government-to-person payment modalities. Non-cash state payments are made into individual and company bank accounts, which reduces the reliance on cash and significantly increases the use of bank accounts for transfer of payments.
Pacific commitments	AFI–Pacific Islands Regional Initiative	BPNG is a member of AFI–Pacific Islands Regional Initiative for financial inclusion. Given its unique setting, the Pacific Islands Regional Initiative aims to create favourable conditions for people in the region to be financially included.
	Money Pacific Goals 2020	PNG is also aligned with the Money Pacific Goals 2020. The objective of achieving financial inclusion and financial literacy by 2020 was set at the 2009 Finance and Economic Forum Meeting of Pacific Island countries. The commitment of member countries is to work with the private sector to achieve financial inclusion through providing financial education to school children, setting up consumer protection, and doubling the population of Pacific Islanders with access to basic financial services.

Note: Table adapted from GoPNG, 2016.

National financial inclusion efforts are driven by the Bank of Papua New Guinea (BPNG), which has the mandate for financial policy and regulatory functions in the country. PNG's financial inclusion initiatives are aligned with international, regional, and national development priorities including the *PNG Development Strategic Plan 2010–2030* (Department of National Planning and Monitoring, 2010a) and *PNG Vision 2050* (Department of National Planning and Monitoring, 2010b).

In 2013, BPNG launched PNG's first National Financial Inclusion and Financial Literacy Strategy 2014–2015 (GoPNG, 2014). This strategy was to implement PNG's commitment to the Maya Declaration with an ambitious aim to expand financial service delivery to reach one million unbanked low-income people, of whom half were to be women. In the same year (2013), the Centre for Excellence in Financial Inclusion (CEFI) was established under the *Association Incorporation Act* 1966 and endorsed by the National Executive Council to coordinate, advocate, and monitor all financial inclusion activities including stakeholder dialogue towards responsible and improved financial service delivery. These interventions are consistent with, and have the potential to support, the objectives of two related policies: the National Policy for the Informal Economy 2011–2015, and the SME Policy 2016 with an accompanying SME Master Plan 2016–2030.

Two years of implementation of the first strategy brought remarkable achievements: 1,187,024 new accounts were opened, of which 35 percent were female-owned, and 124,375 people (of whom 47% were women) were given financial education. Significant expansion of financial service outlets were created adding to 12,599; micro insurance products were taken out by 696,792 policy holders, and 315,993 customer accounts were linked to mobile phone banking (GoPNG, 2016).

On the back of progress in implementing the first strategy, CEFI and BPNG developed the second *National Financial Inclusion Strategy 2016–2020* (Bank of PNG, 2016). This strategy established the strategic framework to coordinate, advocate, and sustain efforts in partnership with stakeholders with the vision of creating a financially inclusive and sustainable country. The strategy was developed in consultation and collaboration with other government departments and stakeholders. It is essentially aimed to support the implementation of the financial inclusion objectives set out in the *National Policy* for the *Informal Economy 2011–2015* (GoPNG, 2011). The *National Financial Inclusion Policy* was adopted in 2019 (GoPNG, 2019) with the policy capturing the vision, objectives and priority areas of the second Strategy. With the Strategy approaching the end of its final year of implementation, CEFI and BPNG are in the process of developing the third National Financial Inclusion Strategy for 2021-2025.

The National Informal Economy Policy 2011–2015 (GoPNG, 2011) acknowledged that the majority of Papua New Guineans depend on income from informal economic enterprises to support their livelihoods, and that most of these individuals are financially excluded. The policy identified financial inclusion and financial literacy as one of two key priority areas where state intervention is required to encourage growth and expansion of the economy. The other key priority area was provision of public goods and services. Effective implementation of the policy requires targeted intervention to bring informal entrepreneurs into the formal financial system. Related to the above policy is the Small and Medium Enterprise (SME) Policy 2016 (Department of Trade, Commerce and Industry, 2016a) and the SME Master Plan 2016–2030 (Department of Trade, Commerce and Industry, 2016b), which promote the growth of SMEs from 49,500 to 500,000 by 2030. It is assumed that the growth of SMEs will create employment opportunities and sustain economic growth; therefore, achievement of this goal inevitably requires access to finance for micro, small, and medium enterprises (GoPNG, 2016). Growth and expansion of the SME sector will need increased access to financial services.

Methods

Data for this study were collected over five days (12–16 December 2016) in ten randomly selected markets covering both planned and unplanned spontaneous markets. Two methods were used: a market vendor survey questionnaire using face-to-face interviews at the selected markets, and an observation of the dynamics of the sampled markets. Observations of market dynamics were recorded in enumerator note books for three one-hour intervals (9–10.00 am, 12–1.00 pm, and 4–5.00 pm) over five days.

All markets in the National Capital District (NCD) were stratified into two groups: planned and unplanned. A random sample from each stratum was taken that comprised five planned or approved and five unplanned spontaneous markets. Although there are numerous unplanned spontaneous markets in the NCD, only 10 of the largest were included for sampling from which five were selected. Vendor respondents within the selected markets were also randomly chosen. To ensure representativeness of the sample, 10 percent of vendors were included in the five planned markets and 20 percent of vendors were included in the five unplanned markets. The sample comprised 205 respondents of whom 155 (75.6%) were women and 50 (24.4%) were men. Refer to Appendix A for an extract of the survey questionnaire used. More details about the data collection methods used for this research can be found in Kopel et al. (2017a, 2017b).

Results

The case study below of Tony brings to light the lived experience of financially excluded market vendors in Port Moresby. Tony's case demonstrates an example of how informal market vendors' lives exist almost parallel to and outside the formal financial system.

Case study of Tony's life in the city

Tony and his wife self-funded their market sales income generation activity. His family depends entirely on income from market sales. They collect and clean used plastic soft drink containers, fill them with water, freeze and sell at the Gordons market gate. Tony helps his wife transport the frozen water using a second-hand vehicle that they purchased with market income. His wife sells each water container for K1.00. They take 100 containers out each day, so if Tony's wife sells all water containers in a day, she makes K100. While she is at the market, Tony transports bags of produce for retailing vendors from Gordons market to the suburbs or other markets. Tony charges K10 per bag for this service and makes up to K100 per day. If both husband and wife consistently earn about the same (K200 per day) and work for 6 days a week as they do, their weekly household income, excluding expenses, can be close to K1,200 (K2,400/fortnight). The income is used to sustain their living. Tony has a bank account, but he rarely uses it and he has never borrowed from formal financial institutions.

Like so many other market vendors, the couple operate completely outside the formal economy. They keep their income in cash at home. Their earnings are often spent on financial contributions to pay for social and cultural obligations for family, community, and clan both in the city and their home village. Their investment for the future is locked in reciprocal social investments. Any spare money is kept in cash at home. A few weeks ago, Tony's brother died in the city and the repatriation of the body to the home province was made possible by contributions from their network of family, friends, and neighbours as well as tribal and clan members. Tony wants to expand his business to wholesale supply of vegetables, but he does not want to borrow from the bank. He will instead borrow from family and friends. This is the reality of Tony's life as a market vendor in the city.

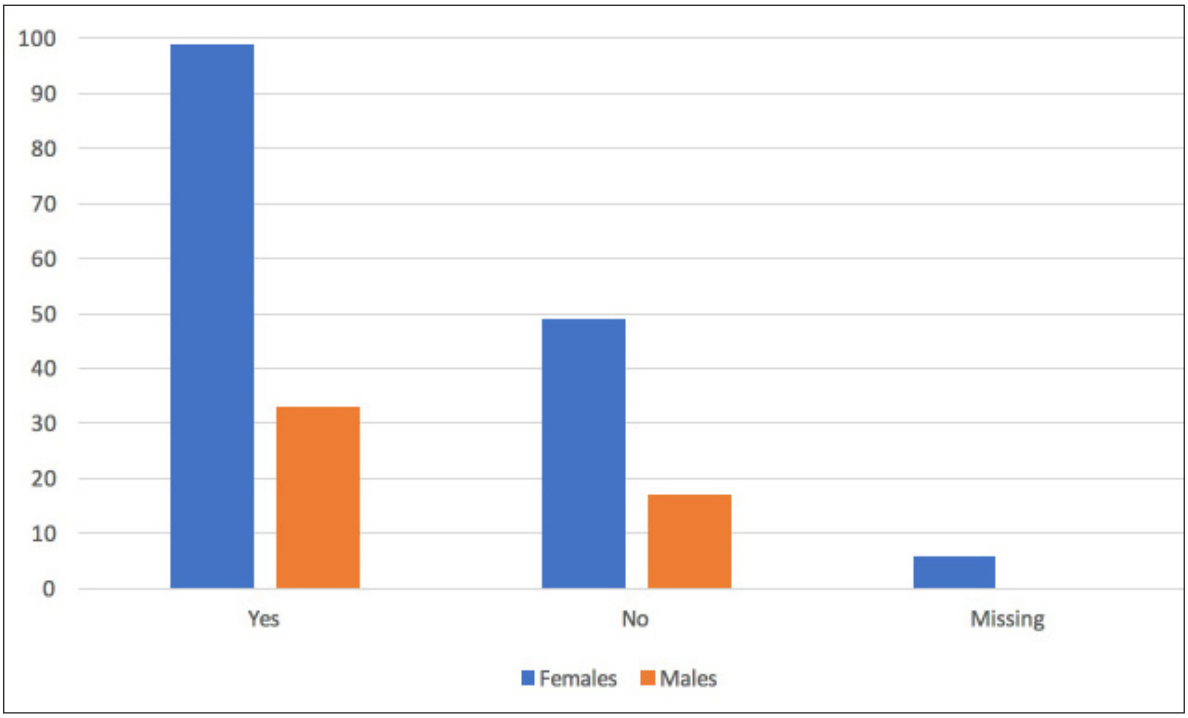
Financial inclusion of market vendors

Financial inclusion extends beyond just ownership of a bank account; it covers active use of accounts for savings and withdrawals and a full range of additional financial services. Genuine financial inclusion exists when vendors with bank accounts become active users of formal financial services by accessing appropriate financial products and services, which may include: making deposits, withdrawals, payments, and remittances; building savings; and taking out loans and insurance products at an affordable cost.

Savings

Nearly two-thirds (63%) of all vendors (n = 130/205) save part of their earnings regularly, whereas one-third (33%) do not (Figure A). There was little difference between men and women's saving practices: 64 percent of female vendors and 62 percent of male vendors save part of their earnings. The main reason given for not saving is that the earned income is spent on everyday living expenses, the principal is reinvested to continue market enterprises, and often nothing is left for savings. Earnings would have to increase significantly to enable vendors who are currently not saving to meet livelihood needs and continue to save part of their earned income.

Figure A: Vendor savings



Reasons for not saving at home or in a bank account

The most common reason vendors gave for not saving is that their earnings are not sufficient. The main priority for most vendors is to put food on the table for their families (i.e., to meet survival needs), and any extra cash is often spent fulfilling reciprocal social and cultural obligations. These activities sustain and improve the welfare of individuals and families. If there is any money left after the cost of basic needs and reciprocal social obligations are met, then it is put aside for savings, either at home or in a bank account. Many vendors without any leftover cash do not save at all. Other reasons cited by vendors for not saving include not having a bank account or do not know how to save.

The current habit of vendors is to spend first and save last. Saving is given the lowest priority. In many cases, the limited earnings are all spent. It is more tempting to spend cash than to save earnings in a bank account. This behaviour reflects Sibley's (2007) idea of lack of financial competency skills to plan and to control spending of earned income. Market vendors, as is the case for most individuals with low income, need to develop the skill and ability, and have the opportunity, to gain control over their money. This needs a targeted financial literacy and financial inclusion program.

Interventions that will provide incentives for people to save smaller amounts consistently need to be created and supported, to slowly enable vendors to accumulate savings and build a credit history. Vendors can then use this to borrow small loans from micro finance institutions (MFIs). The following example demonstrates an initiative that provided vendors an opportunity to save small amounts regularly.

Example of UN Women initiative:

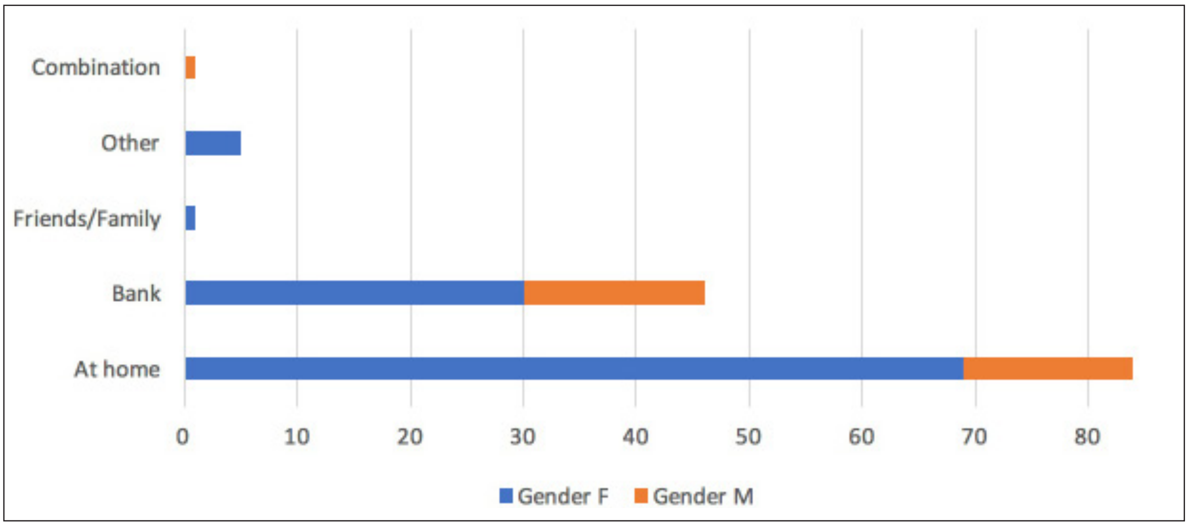
> The initiative of National Capital District Commission (NCDC) and UN Women under the Safe City Program in partnership with MiBank and Digicel saw the establishment of banking agents at Gerehu market. This provided an opportunity for vendors to deposit their takings before leaving the market. That made it easier for vendors to save and eliminated potential problems of loss through theft on the way

home or the temptation to spend cash. Such initiatives require working in partnership with industry players: telecommunications firms, financial institutions, municipal authorities, and the government represented by BPNG/CEFI. Unfortunately, this service ran into difficulties and has been discontinued, but the valuable experience should inform the establishment of an improved initiative.

Where vendors keep their savings

The 132 vendors who save income were asked to indicate where their savings are kept. Responses indicated that 84 vendors (63.6%) with savings keep their savings as cash at home. Refer to Figure B. Just 46 (34.8) of the market vendors keep their savings in a bank account, whereas the remaining 2 vendors (1.5%) keep their funds in places other than home or the bank. For example, the money may be handed over to friends and family for safe keeping. Comparatively more female vendors than male vendors did not have a bank account: over two-thirds (67.0%) of female savers (n = 69) keep cash at home while one-third (33.0%, n = 30) have savings in bank accounts. The difference between male vendors is less pronounced as nearly half (48%) of the male respondents who save, keep cash at home while slightly more than half (52%) save it in a bank account.

Figure B: Location of savings



An explanation for women not using banks could be the low level of education and literacy among female vendors. The majority of women (84.5%) have not studied beyond primary school education, whereas for men it was 64.0 percent. Education and literacy are fundamental to financial inclusion. Being unable to read and write excludes vendors at the outset, because they lack the confidence to approach banks and fill out forms to open bank accounts. Even when they do, regular use becomes an issue because of long queues and account-keeping fees. Further, earnings from market sales trickle in small amounts daily making it inconvenient for vendors to make constant trips to and from the banks for small transactions.

Access to and use of banking services

Over half (53.2%) of the vendors in this study do not have an account. Ninety-one respondents (44.4%) own a bank account with a formal financial institution. Refer to Table 2 below. A higher percentage of male vendors (60.0%) have a bank account compared to female vendors (39.3%) .

Table 2: Ownership of a bank account (n = 205)

Own a bank account	Gender				Total	
	Female		Male			
	Number	%	Number	%	Number	%
Yes	61	39.3	30	60.0	91	44.4
No	90	58.1	19	38.0	109	53.2
Missing	4	2.6	1	2.0	5	2.4
Total	155	100	50	100	205	100

The 91 vendors with bank accounts were asked if they are active users. Just over half (n = 46) of the vendors with a bank account reported they do not make regular use of the account with the other half (n = 45) of the account holders being regular users. A closer look at active users revealed that bank accounts are used mainly for deposits and withdrawals. Account holders have not accessed additional financial services for payments such as remittances, loans, or insurance products and services.

Vendor-reported reasons for not having a bank account

A number of explanations were given as to why respondents do not have a bank account. These reasons are presented in Table 3 below. Most vendors listed a combination of reasons for not having a bank account, and these include the following:

- All the money is used for household expenses — nothing left to keep in bank;
- too many requirements to open accounts;
- don't understand the process of account opening;
- too many charges viewed as 'theft' by banks;
- other reasons combined with above:
    - o not formally working, so no need for a bank account;
    - o time consuming to open account, make deposits, and withdraw when needed;
    - o use relatives/family members' accounts.

In terms of single reasons for not saving, the most common reason mentioned by 16 vendors is insufficient earnings. The earned income is not sufficient to live on and vendors are often left with nothing to save so they do not have a bank account. This was followed by vendors who stated that banks have too many requirements to meet, which prevents them from opening accounts. This is more perceived than reality as commercial banks have relaxed many of these requirements in recent years and it also reflects the lack of information made available to the public and vendors in particular. There is also lack of understanding of the process of opening bank accounts which, is particularly an issue for those with limited levels of education and literacy.

Account maintenance fees and transaction costs charged by banks is viewed as 'theft', meaning vendors have a certain level of distrust of banks and prefer to keep their savings at home. In the words of one Gordons market vendor: *'Ol benk sa stilim moni blo miplea'*, translated as *'The banks steal our money'*. Perhaps, financial institutions could assist informal entrepreneurs to open basic accounts that do not attract account keeping fees and transaction costs. Even when a bank has this type of product, front-line workers do not always assist customers to open the type of account that best suits their specific situation.

The perception that bank accounts are for people earning a regular wage hinders some informal income earners from opening and operating accounts. Another sentiment expressed by vendors, also in combination with other explanations, is that it takes so long to wait in queues to do banking (i.e., to open new accounts, make deposits, or withdrawals). This makes it inconvenient and hinders people from opening and operating bank accounts. A few vendors also stated that their savings are kept in accounts of other family members and they do not perceive any necessity to have to have own account.

Table 3. Vendor-reported reasons for not having a bank account

Reasons for not having a bank account[a]	Female	Male	Total
Not enough money.	14	2	16
Too many bank requirements.	6	2	8
Don't understand the process of opening a bank account.	5	1	6
Too many bank charges/don't trust banks.	2	0	2
Other reasons combined with above.	54	10	64

[a]*Respondents could provide multiple responses*

Amount and source of start-up capital

It does not require much start-up capital to enter a market vending enterprise. The average start-up capital was K281.50 for women and K302.35 for male vendors in the planned markets. In the unplanned markets, the average start-up capital was lower: K159.00 for women and K206.55 for male vendors, with a mode of K200. The main reason for the lower average for unplanned markets is likely because vendors in unplanned markets sell smaller quantities of produce over a longer period of time because their customer base is a lot smaller compared to vendors of planned markets.

With regard to the sources of start-up capital, vendor responses showed that the majority of vendors (n = 180; 88.0%) did not get any assistance from formal financial institutions. Instead they used personal funds to start their market enterprises. Only 11 vendors (5.4%) vendors borrowed funds and the remaining 14 vendors (6.6%) did not specify the source of funding.

Of the 11 vendors who borrowed start-up funds, the majority (7 vendors) borrowed from family and relatives. Lending from formal sources were accessed by only four respondents: two borrowed from commercial banks, one borrowed from another financial institution, and one obtained funding from donor aid. The fact that only four respondents of the entire random sample of 205 vendors obtained loans from formal sources means that 98.0 percent (201/205) of the informal markets vendors have not received any funding from a formal financial institution.

The borrowed amounts were minimal; with an average of K88.75. The highest value of borrowed funds was K200 and the lowest amount was K20. This again shows that the amount of funding required to set up and operate informal market activities is quite minimal.

Difficulty of repaying borrowed funds

Seven of the 11 of the borrower vendors did not have any problems repaying borrowed funds. Refer to Table 4 below. The main reason for experiencing difficulties was that earnings were not sufficient to repay the loan. However, at the time of data collection for this study all vendors had repaid borrowed funds except for one male vendor who still had an outstanding loan.

Table 4: Difficulty of repaying borrowed funds (n = 11)

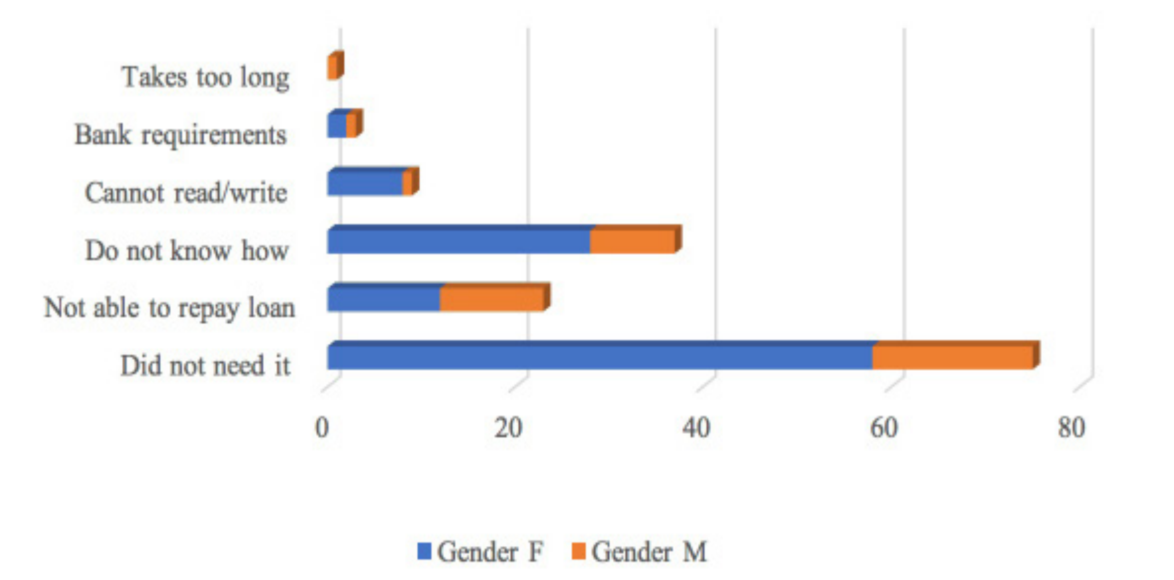
Difficulty with repaying loan	Planned markets		Unplanned markets		Total
	Female	Male	Female	Male	
Yes	3	0	0	1	4
No	4	3	0	0	7
Total	7	3	0	1	11

Reasons for not borrowing

As informal market vendors operate small enterprises that require small amounts of cash, 36.6 percent of respondents (n = 75) stated that they did not need extra funds and did not borrow. As Figure C illustrates, 11.2 percent of vendors (n = 23) explained that they were apprehensive about seeking a loan because they feared they may not be able to repay it. Market incomes vary from day to day and week to week; therefore, vendors were reluctant to make financial commitments that would possibly get them into debt if they became unable to repay the loan.

Low levels of education and literacy also affect the ability of respondents to understand the process of opening and operating bank accounts as well as their confidence to approach financial institutions for loans. This was acknowledged by 22.0 percent (n = 37) of respondents who expressed that not knowing how to read and write or where and how to apply for loans constrains them from exploring possible sources of funding. Further to this, some vendors believe that only people with a wage income can obtain loans. Informal entrepreneurs with such characteristics would need assistance in terms of education and literacy skills, as well as financial literacy education to understand how to access information, fill out loan application forms, access loans, and continue to use financial services. Another factor that excludes vendors from accessing formal financial services is being unable to meet lending criteria of financial institutions.

Figure C: Main reasons for not borrowing



Interested in borrowing funds

Vendors were asked whether they would be interested in borrowing funds from financial institutions to expand their informal businesses. The responses (Table 5) show that just 72 vendors (35.1%) would like to borrow. In contrast, 128 vendors (62.4%) were not interested in borrowing. As noted earlier, some of those who are unwilling to borrow are not aware of where and how they can apply for and access small loans on flexible terms. For the most part, they are fearful of the potential repercussions if they cannot repay any borrowed funds.

Table 5: Interested in borrowing funds

Interested in borrowing funds	Gender				Total	
	Female		Male			
	N	%	N	%	N	%
Yes	51	24.9	21	10.2	72	35.1
No	99	48.3	29	14.1	128	62.4
Missing	5	2.4	0	0	5	2.4
Total	155	75.6	50	24.4	205	100

Access to business support and financial literacy training

The majority of vendors (n = 171; 83.4%) have not received any form of support or training with their market enterprises. As Table 6 indicates, 23 vendors (11.2%)received some support with training, and this comprised 19 women (82.6%) and four men (17.4%).

Table 6: Access to business support and financial literacy training (n = 205)

Received any business support or financial literacy training	Gender		Total
	Female	Male	
Yes	19	4	23 (11.2%)
No	130	41	171 (83.4%)
Missing	6	5	11 (5.4%)
Total	155	50	205 (100%)

In terms of the type of support and training given, just eight of the 19 women indicated they had received a combination of training, which included financial literacy, sales skills, and business management skills. Support with opening bank accounts, business management skills, financial literacy, and sales skills training was obtained by two women respectively. Of the four men who received assistance, three attended financial literacy training and one obtained sales skills. The vendors who ticked the 'other' category referred to specific training that was not focused directly on marketing activities: for example, training in cultivating vegetables or making herbal soap.

Source of financial literacy and business skills training

Much of the training for vendors who operate in the informal economy involves learning basic hands-on skills. Financial literacy and business skills training services are provided by the PNG Government, private sector providers, donor partners, and non-government organisations (NGOs). More respondents (n = 12) obtained training from NGOs and the private sector than from government providers, which were accessed only by five respondents. Refer to Table 7 below. NGOs include churches, voluntary groups, and interest groups. Training from 'other' sources covers mainly informal learning of skills through observation of activities undertaken by others. One woman benefitted from donor-provided training.

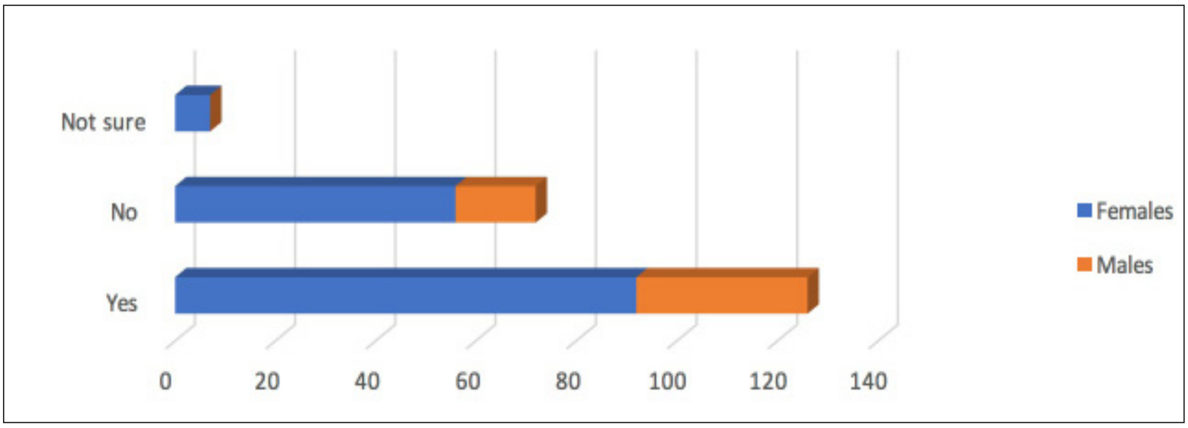
Table 7: Training provider or facilitator

Training provider	Gender		Total
	Female	Male	
PNG Government	4	1	5
Donor partners	1	0	1
NGOs	4	2	6
Private sector	5	1	6
Other	4	0	4
Combination	1	0	0
Total	19	4	23

Interest in formalising market vending enterprises

There is a lot of interest in upscaling and formalising market vending enterprises. A total of 126 vendors (61.5%) indicated they would like to formalise their market enterprise. See Figure D below. A total of 72 vendors (35.1%), were not interested in formalising their income generation activities. The remaining 7 vendors (3.4%) were not sure. The main reason given by vendors who would like to formalise is to be successful and achieve the status of a registered SME. Formalisation is perceived to be beneficial in terms of access to loans from formal financial institutions, financial skills training, improved opportunities for expansion, and sustainability of the business with increased incomes. The willingness to do the right thing by paying tax or complying with regulations was the least common reason given for wanting to formalise market enterprises.

Figure D: Interested in formalising market enterprise (n = 205)

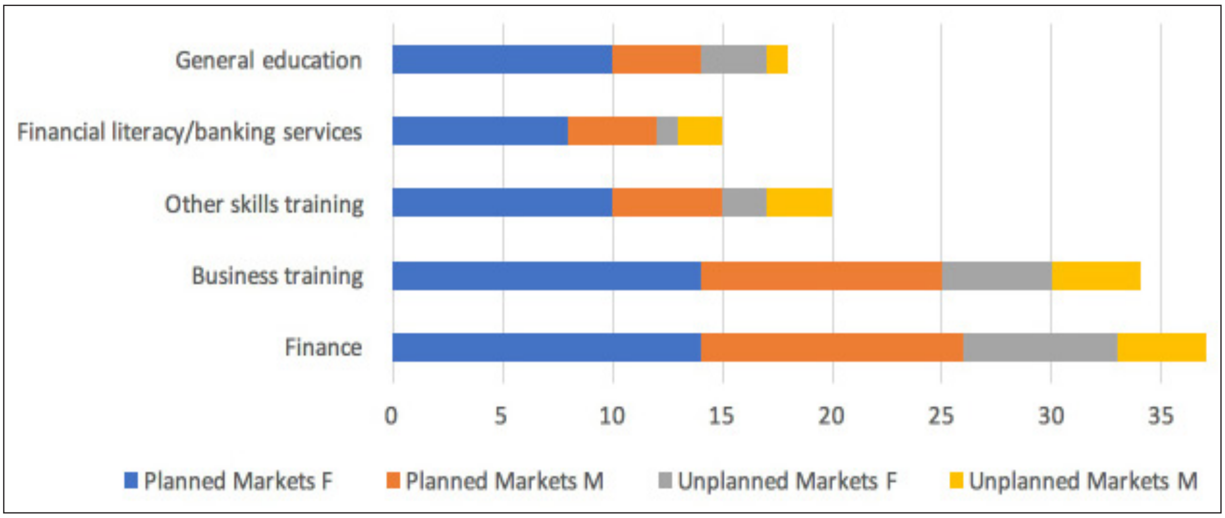


The above results reveal a conflicting situation. Almost 63 percent of the respondents were unwilling to borrow funds, as noted in Table 6; however, finance is singled out as the most important area of need for assistance, with almost 62 percent (n = 126) of the vendors expressing a desire to formalise their market enterprises. The unwillingness to obtain loans appears to be largely due to the lack of education and awareness about where to source funding, who to see, and the process of applying for small loans at flexible rates. The lack of information and understanding makes many vendors apprehensive and fearful of borrowing.

Finance, education and skills training needs to facilitate financial inclusion

Several key areas of need for intervention were flagged by vendors and these are directly targeted at addressing the challenges that limit the operation of their economic activities. Figure E below shows five of the biggest areas of need for intervention as identified by respondents in relation to financial inclusion, education, and training that facilitate the process of financial inclusion. Central among these is the need for extra funds to enable entrepreneurs to expand their operations. This is followed by the need for business and other skills training, which is closely related to the need for financial literacy and access to banking services. General education and ability to speak, read, and write comfortably are also vital as most vendors are either illiterate or possess very minimal literacy and numeracy skills, which limit their ability to effectively conduct businesses.

Figure E: Finance, education and skills training for vendors (multiple responses)



The next section discusses the findings of the study and concludes with policy implications.

Discussion

There is an argument that the formal and the informal co-exist, that it is not one or the other, that people move between use of formal and informal financial services and the two systems complement each other depending on questions of affordability, accessibility and eligibility (deKoker & Jentzsch, 2011). While this argument may hold for regular wage income earners, those who operate in the informal economy — as in the case of market vendors — do not have the luxury of choice. They depend on informal sources of finance, saving and borrowing.

A total of 150 market vendors (73.0%) in this study are financially excluded. A closer look at active users revealed that bank accounts are used mainly for deposits and withdrawals. As Agarwal (2007) noted, ownership of a bank account is only the first step towards financial inclusion. Access to a bank account does not automatically lead to financial inclusion; account holders need to effectively use financial services to realise the full benefits of financial inclusion. Ownership of a bank account enables the holder to save, withdraw, make transfers, and to access loans and insurance products. In this study, many account holders had not accessed additional financial services, for payments, remittances, loans, or insurance products and services. This finding is not unique and has also been highlighted by studies of the informal economy in other countries (Chakrabarty, 2012; PFIP, 2016; Bhuvana & Vasantha, 2016). This finding has important implications for financial inclusion initiatives in PNG. It is not sufficient to just facilitate the process of enabling market vendors or other informal economy entrepreneurs to open bank accounts. These efforts need to be complimented by creative initiatives and incentives to encourage people on low and irregular incomes to use banking services for purposes in addition to saving (e.g., remittance, loans, or taking out insurance products).

The evidence from this study reveals both demand and supply barriers to financial inclusion. Demand obstacles include: low literacy levels, lack of knowledge and understanding of financial products and services, irregular income/not having enough money; frequent small transactions, and lack of trust in banking institutions. Supply barriers include: bank charges/ costs associated with banking, and lack of identification documents. Many of these issues were noted by previous research examining financial inclusion around the world (Demirguc-Kunt et al., 2015; Chakrabarty, 2012; Ardic et al., 2011; AFI, 2010), financial inclusion work within the Pacific region (Sibley, 2007 PFIP, 2016; Banthia et al., 2013), and financial work in PNG (BPNG, 2017; Eves et al., 2017; Bank of PNG, INA and World Bank, 2015; IMF, 2015; Sibley, 2013).

While two-thirds of vendors save part of their earnings regularly, most savings are kept in cash at home or in places other than a bank account. This finding is consistent with findings of Chattopadhyay's (2011) study of financial inclusion in West Bengal, India, and Care International's work in more than 22 African countries, which showed that most of the financially excluded keep savings at home (Hendricks, 2011).

One of the main reasons for not saving is not having enough money as earnings are used to sustain livelihoods, fulfil socio-cultural obligations and any left-over is reinvested into operation of the informal businesses. Consistent with official Census data collected by the National Statistical Office (National Statistical Office, 2011), the paper by Kopel et al. (2017a) revealed that market vendor household sizes are huge — an average of nine persons per household. Large household sizes coupled with the high cost of living in Port Moresby understandably depletes earnings. This finding is consistent with evidence of previous studies by the World Bank (2014) and the Pacific Financial Inclusion Programme (2016) which have also shown that insufficient income is a common barrier to financial inclusion.

The explanations given by market vendors for not owning bank accounts mirror barriers to financial inclusion in cross country studies conducted by the World Bank's 2014 Financial Development Report (World Bank, 2014). These relate to lack of finance, high cost of opening and maintaining accounts, poor access to banks, and lack of identification documents (Bhuvana & Vasantha, 2016; IMF, 2015). The same sentiment was shared by several other studies: Chattopadhyay (2011) in West Bengal, India, a survey of financial inclusion in developing countries by the AFI (2010), and the benchmarking survey of financial inclusion in Fiji, Samoa, and Solomon Islands (PFIP, 2016).

Further, the language barrier posed by not being able to read, write, and communicate well in English is a disabling factor, but this has not been mentioned among the major barriers to financial inclusion in the World Bank and the PFIP studies, among others.

In this study, 131 out of 155 women (84.5%) and 32 out of 50 men (64.0%) have not reached beyond primary level education, so the language barrier makes it hard for them to understand the process of opening and operating bank accounts. Banks are impersonal and alienating spaces for individuals who are educationally disadvantaged and this hinders these individuals from opening and operating bank accounts. Interventions in adult education and financial literacy training, and assistance with not only opening but also incentivising regular use of bank accounts for saving small amounts would assist market vendors.

Recent interventions using mobile technology address some of the language, distance, and brick and mortar barriers to access. These interventions have been gaining momentum in Africa (World Bank, 2014) and have also been introduced to Pacific countries in the last few years (PFIP, 2016). Real potential for extending financial inclusion for the majority of informal entrepreneurs appears to lie in this area and in PNG microfinance institutions such as MiBank and Peoples' Micro Bank. Recently, the Women's Micro Bank opened up new opportunities for low-income and informal workers to access financial services using mobile technology.

Having easy access to savings on demand is a major priority for vendors and this prevents them from saving with financial institutions. Saving with financial institutions is considered to be inconvenient; it takes travel time and transport costs to get to the bank and wait in long queues for hours before getting served. It also costs money in charges, and requires time and effort to conduct numerous transactions to save smaller amounts gradually over extended periods of time. The same process is repeated for withdrawal of savings and this discourages vendors from opening and making regular use of bank accounts.

While the PFIP benchmarking financial inclusion study (2016) also revealed travel time and cost as barriers to financial inclusion, the additional concern for the market vendors in this study was waiting times at the banks. Another explanation that has been noted as common in the region is keeping savings in family members' accounts: the PFIP study showed that 23 percent of respondents in Fiji, 12 percent in Samoa, and 8 percent in the Solomon Islands have their savings kept in another family member's account.

Commercial bank loans were not accessed by most informal entrepreneurs. An overwhelming majority of vendors (98.0%), including those with bank accounts used informal sources of funds for start-ups and 88.0 percent used personal funds. Amounts of start-up capital required were quite small so many did not need to borrow but those who borrowed mainly borrowed from informal sources; operating totally outside the formal economy. This supports the findings from Wang's (2014) study, which found that start-up investments were much smaller for market traders in the NCD. The specific focus of MFIs is on serving the low end of the market, so as MFIs become more prominent in the country, they could play a big part in lending micro credit to market vendors and the wider informal economy.

While accumulation of savings and expansion of informal businesses may not be the main priority for 33.0 percent (n = 68) of the market vendors, it provides an essential source of livelihood. The majority (96%) of market vendors spend their earnings on meeting livelihood needs, which is consistent with findings of other local studies (Kopel et al., 2017a). This also backs up evidence from Rooney's recent work (2017) in Port Moresby, which showed that income from small market stalls finances household expenses in the non-pay week. Market selling is an essential livelihood activity that needs to be supported through the provision of enabling infrastructure and services.

A striking finding of this study is that two-thirds of the vendors were unwilling to borrow even though access to finance was identified as the most important area of need for assistance; with almost 62 percent of all vendors expressing a desire to formalise their market enterprises. Additional funds would be required for expansion of enterprises but the unwillingness to borrow from formal lending institutions means that they will continue to depend using informal sources of finance. The unwillingness to obtain loans maybe largely due to lack of education and awareness about where to source funding and not knowing or understanding the process of how to apply for small loans at flexible rates. Lack of information and understanding makes many vendors apprehensive and fear the consequences of what could possibly happen if they were not able to repay the loan.

This finding has implications for the objective of SME Policy (Department of Trade Commerce and Industry, 2016a) to get 500,000 SMEs registered by 2050. Market vendors can not improve and expand their businesses without financial inclusion; without access to micro credit. This point is supported in Park and Mercado's contribution to the ADB Economics Working Paper Series (2015), which suggested that financial inclusion can enable entrepreneurs on low and irregular income to access micro credit; which can enable them to set up and expand economic activities and smoothen their consumption in times of short term adversity and shocks. More needs to be done in terms of facilitating the process of vendors to open accounts and make regular savings to build a credit history which would enable them to access small loans over time.

Conclusion and potential strategy to promote financial inclusion strategy

This study explored the financial inclusion of informal economy entrepreneurs operating in open markets. Data were generated from a survey of 205 vendors of planned and unplanned informal markets in Port Moresby. The study findings showed financial exclusion is high among market vendors. A number of common barriers contribute to the low levels of financial inclusion. Efforts to improve financial inclusion among market vendors and other informal economy workers will need to focus on addressing both demand side challenges and supply side issues. The majority of vendors do not have a bank account with a formal financial institution, and most of the vendors who do have a bank account do not use their account. Active account users have used their accounts for savings only and have not accessed additional services such as remittances, loans, and insurance products from financial institutions.

The majority of vendors used personal funds to start their enterprises and a minority borrowed from family and relatives. Formal sources provided funding for a tiny proportion of vendors. Two-thirds of the vendors are receptive to the idea of formalising their activities with the knowledge that formalisation provides an entry point to accessing benefits in terms of loans and expansion of economic enterprises. However, there is an unwillingness to borrow and apprehension about borrowing from formal sources to finance informal businesses among market vendors: two-thirds of the respondents were not willing to borrow money from banks. It is important that all concerned parties make a concerted effort to address the high levels of financial exclusion and to enable market vendors and other informal businesses to have financial inclusion.

Potential strategies to promote financial inclusion

Some potential strategies that could be used to promote financial inclusion in PNG are provided in the following:

1. Provide incentives for informal entrepreneurs to actively use bank accounts

Finance institutions could offer basic accounts that do not attract any fees for account keeping or transactions costs. Any additional types of accounts should be based on income and choice. This will break down barriers, reduce negative perceptions of financial institutions and improve customer trust. Also, regular savers could be rewarded with benefits of awarding minimum interest on savings.

2. Improve availability of information about products and services offered by MFIs to those working in the informal economy

There are several MFIs operating in PNG and all have established branches in Port Moresby. A few of these; especially MiBank and Women's Micro Bank have started taking banking to the people by going into communities and signing up customers engaged in informal and agricultural economic activities. For instance, Women's Micro Bank has already set up Money Access Points in Morata settlement (in Port Moresby), and in various other parts of the country. Such interventions offer a great opportunity for market vendors to access financial services, but the information is not widely available. There needs to be a concerted effort to make information available to the public, perhaps BPNG as the regulator can facilitate this process.

3. Provide financial literacy and competency training to market vendors

The majority of vendors have very limited or no basic education; therefore, a targeted effort to train market vendors in financial competency and literacy would facilitate vendor's access to financial services. Provision of adult education opportunities for basic literacy and numeracy skills would also benefit vendors, particularly women.

4. Establish collaborative partnership between government, private sector, and development partners to increase financial inclusion

Sustained collaborative partnership arrangements between government, private sector and donor partners would go a long way to improve access to financial services for market vendors and those on a low income. Such arrangements have already started where the UN Women works with NCDC Market Services Division to bring MFIs such as MiBank into helping market vendors open bank accounts. UN Women has also sponsored SME training for female market vendors at Gordons and now Boroko markets. This work needs to be supported and up scaled to other markets in NCD and major centres around PNG.

5. Provide improved opportunities for vendors to save small amounts

Potential savings are depleted on meeting survival needs and fulfilling customary obligations. Given the current trend of spending; incomes would need to increase significantly for vendors to pay for the cost of everyday needs and save what is left for the future. The reality is that incomes are not likely to increase significantly so vendors would need to learn how to budget their limited earnings and save part of the takings so that it becomes a normal part of planning for spending and not as an afterthought.

It would be convenient for MFIs to set up mobile banking agents in or closer to markets so that vendors can do their banking without having to leave the market vicinity for extended periods of time. Perhaps the abandoned initiative of UN Women and the NCDC Gender Desk in partnership with MiBank and Digicel to provide mobile banking kiosks within Gerehu Market in the NCD could be revived and established in other markets.

6. Search for innovative ways to fund informal enterprises

The existing model of business of financial institutions discriminates against informal businesses. Innovative methods of providing funding by MFIs would need to be developed that work in favour of informal businesses. For example, developing partnerships with business houses which can provide materials and equipment to assist with setting up the business and vendors can repay the cost of these items over time. A good example of this is the National Fisheries Authority's work with freshwater fish farmers at Sogeri where fish fingerlings, fish meal feed and nets are provided by the National Fisheries Authority. When farmers sell their harvest, the National Fisheries Authority gets its share and vendors retain money that is left from the earnings.

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Appendix

Extract of questions relating to financial inclusion from

Understanding the dynamics of the informal economy: the case study of markets in NCD
Port Moresby
December 2016

Survey Questionnaire Instructions

1. Give a copy of the Participant Information Statement to the Interviewee
2. Explain the contents of the above
3. Interviewer and Interviewee Sign off the Consent Form
4. Ensure all interviewee responses are recorded on the Response Record Sheet
5. Ensure all location details, including the Household ID number, GPS locations, and Photo ID are recorded

Survey Questionnaire

A. Income and expenses	
Question	*Response*
1. Highest level of education completed: (a) University = 1 (b) College (technical or vocational) = 2 (c) High school = 3 (d) Primary school = 4 (e) Not completed primary education = 5 (f) Never been to school = 6 (g) Other = 7 (specify in notebook)	
2. How much money would you spend on a sales day most of the time? *Kina value*	
3. How much money do you make on a sales day most of the time? *Kina value*	
4. What is the average weekly income from your market sales? 1 = K100 or below 6 = K501 – K1000 2 = K101 – 200 7 = K1000 + 3 = K201 – 300 8 = Unwilling to disclose 4 = K301 – 400 9 = Don't know	
5. Do you put aside (save) leftover money after expenses regularly? Yes = 1, No = 0	
6. If yes, where do you keep your savings most of the time? 1 = At home 2 = Bank 3 = Friends/Family 4 = Other (please specify in the notebook)	
7. If no savings, why? 1 = Don't make enough money 2 = Too many commitments 3 = No bank account 4 = Don't know how to save 5 = Others (please specify in notebook)	
B. Access to financial services	
Question	*Response*
8. How much did it cost to start your market/services? *Kina value*	
9. Did you borrow money or use your own money to start your market sales/services? 1 = Borrow money 2 = Used your own money	
10. If borrowed, who did you borrow money from to start your market sales/services? 1 = Commercial banks 2 = Finance companies (Eg., Kina Finance, Fincorp, Micro-Finance etc) 3 = Donor funding 4 = Informal money lenders 5 = Family/relatives/friends 6 = Other (please specify in notebook)	
11. How much did you borrow to fund your market activities? *Kina value*	

12. Did you have any difficulty repaying borrowed money? Yes = 1, No = 0	
13. If you experienced difficulties to repay, what were the challenges? 1 = Did not make enough many to repay 2 = Too many personal/customary obligations 3 = Personal expenditure too high (like house bills, school fees etcs,) 4= Other (please specify in notebook)	
14. If you did not borrow, what challenges affected your decision not to borrow money either from formal financial institutions or privately? 1 = Did not need the money 2 = Application was unsuccessful 3 = Do not know who or where to apply 4 = Cannot read or write 5 = No equity 6 = Too many bank requirements 7 = Process takes too long 8 = Other (specify in notebook)	
15. Would you want to borrow money to assist expand your market sales? If Yes = 1, No = 0	
16. Do you have a bank account? Yes = 1, No = 0	
17. If no, any reasons why you don't have a bank account? 1 = Don't have enough money 2 = Too many requirements 3 = Too many bank charges 4 = Poor customer service 5 = Don't trust bank 6 = Other (please specify in notebook)	
18. Have you received any business support and financial literacy training? Yes = 1, No = 0.	
19. If yes, what type of support or training was provided? 1 = Opening bank account 2 = Business management 3 = Financial literacy 4 = Marketing/Sales 5 = Food hygiene 6 = Other (please specify in notebook)	
20. Who provided the support or training? 1 = PNG Government 2 = Donor partners 3 = NGOs 4 = Private sector 5 = Other (Specify)	
21. What kind of assistance do you need to grow your market sales/services? 1 = Improved market facilities 2 = More finance 3 = Business training 4 = Other skills training 5 = Financial literacy and banking services 6 = General literacy and numeracy education 7 = Safety/security 8 = Legal aid, advice 10 = Market services 11 = Land 12 = More market space 13 = Other (please specify)	

22. Would you expand and formalise your market sales/services? Yes = 1, No = 0	
23. If yes, indicate reasons for wanting to expand and formalise market sales/services. 1 = Registration will enable access to loans 2 = Comply with regulations 3 = Want to achieve SME status 4 = Willing to pay tax 5 = Government help will come from registration 6 = Want to be successful 7 = Other (please specify in notebook)	
24. If No, indicate reasons for not wanting to expand and formalise market activities. 1 = Don't know how 2 = Not aware of benefits 3 = No need for loans 4 = Not qualified for loans 5 = Avoid paying taxes 6 = Don't want family to know about success 7 = Other (Please specify in notebook)	
25. In what ways can government help informal business like your market sales/services? 1 = Provide easy access to loans 2 = Financial literacy 3 = Business training 4 = Provide improved market facilities and services 5 = Market management 6 = Improve public safety 7 = Improve transportation systems 8 = Improved infrastructure 9 = Market to be recognised and formalised by authorities 10 = Other (please specify in notebook)	

Any general comments and suggestions, kindly take note in the notebook.

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