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**A SCOPING STUDY TO PROVIDE AN ASSESSMENT OF  
SME POLICY PRIORITY AREAS FOR PAPUA NEW GUINEA**



**NRI**  
**The National Research Institute**

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Discussion Paper No. 146**



**A Scoping Study to Provide an Assessment of  
SME Policy Priority Areas for Papua New Guinea**

**by**

**Vinod Mishra and Russell Smyth**

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**ABSTRACT**

This paper reports the results of a scoping study designed to inform the National Research Institute (NRI) of policy priority areas for small and medium enterprises (SMEs) in Papua New Guinea (PNG). We first provide an overview of SMEs and SME policy in PNG. We then proceed to consider the challenges facing SMEs, and offer some solutions to addressing these challenges, in a number of key areas. We conclude with a number of suggestions for future research on SMEs in PNG.

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**Vinod Mishra and Russell Smyth**

## ACRONYMS

ADB:	Asian Development Bank
ANZ:	Australia and New Zealand Banking Group
DID:	Difference-in-Differences
DFAT:	Australian Department of Foreign Affairs and Trade
DSP:	Papua New Guinea Development Strategic Plan
EIU:	Economist Intelligence Unit
ESCAP:	United Nations Economic and Social Commission for Asia and the Pacific
FIAS:	Foreign Investment Climate Advisory Service
HRM:	Human Resource Management
ICCC:	Independent Consumer and Competition Commission
ICT:	Information Communication Technology
IFC:	International Finance Corporation
ILG:	Incorporated Land Group
INA:	Institute of National Affairs
IPA:	Investment Promotion Authority
ISA:	Informal Sector Development and Control Act (PNG)
LPS:	Local Production System
M4D:	Mobile phones for development
MFI:	Microfinance institution
NDB:	National Development Bank
NRI:	National Research Institute
NSRSD:	National Strategy for Responsible Sustainable Development
NYDA:	National Youth Development Authority
OECD:	Organization for Economic Cooperation and Development
PACER:	Pacific Agreement on Closer Economic Relations
PAMEP:	Papua New Guinea Asian Development Bank Microfinance and Employment Project
PGK:	Papua New Guinea Kina
PICTA:	Pacific Island Countries Trade Agreement
PNG:	Papua New Guinea
R&D:	Research and Development
SABL:	Special Agricultural and Business Leases
SME:	Small and Medium Enterprise
UNDP:	United Nations Development Programme



## **1. BACKGROUND TO THE STUDY**

The purpose of this scoping study is to assist the National Research Institute (NRI) in the development of a research project to contribute to small and medium enterprise (SME) policy dialogue and development in Papua New Guinea (PNG) over the next five years. We were asked to (desk-) review material that has accumulated on SMEs in PNG over the last one to two decades. In order to clarify ambiguous issues in the secondary literature, and, in some instances, seek additional information where there was a lack of information in the secondary literature on specific issues, we were asked to supplement the desk-review of secondary sources through consultation with key SME stakeholders. A list of stakeholders with whom we consulted is provided in Appendix 1. We refer to information gleaned from the stakeholders where appropriate throughout the study.

The government of PNG recognises the strategic importance of SMEs, but, at the same time, acknowledges that the development of SMEs in PNG has been impeded by a number of obstacles. According to the PNG Development Strategic Plan (DSP) 2010–2030:

SMEs play a significant role in the development of many economies, especially the rapidly growing Asian economies. However, the development of SMEs in PNG has not been robust due to many policy and institutional issues, as well as environmental and structural impediments that need to be overcome. They include issues such as policy incoherence, overlapping of rules and complexity of administrative procedures, lack of capacity development and training, lack of access to appropriate technology, lack of access to relevant markets, lack of access to information, including knowledge of potential business opportunities, and perhaps, above all, lack of access to credit. (Department of National Planning and Monitoring, 2010:100).

These concerns were echoed in PNG Vision 2050, in which it was acknowledged that the development of SMEs in PNG is being hindered by “an unfriendly investment climate” (Department of National Planning and Monitoring, 2010a). According to the World Bank (2014), as of June 2014, PNG ranked 133 from 189 countries in terms of ease of doing business, similar to Kiribati (134) and the Marshall Islands (139), but lagging Samoa (67), Tonga (69) and Fiji (81). Based on a 2012 survey of 130 firms, of which half were SMEs, by the Institute of National Affairs (INA), the major obstacles confronting business in PNG were law and order, corruption, poor transport infrastructure, deficiencies in utilities infrastructure and skill shortages (ADB, 2014). The accompanying report concluded: “The business environment has improved since 2002, but doing business in PNG remains extremely challenging” (ADB, 2014:1).

While the development of SMEs forms an important component of the PNG government’s strategic objectives, the existing SME policy document of 1998 is too old. The SME policy is currently under review and a draft new policy, along with the master plan to implement it, is currently under discussion. It is against this backdrop that the NRI seeks an assessment of the main challenges facing SMEs and an assessment of SME policy priority areas, linked to the identification of research areas to inform policy choices and contribute to the debate. Although our main focus is on SMEs in PNG, we also review, and draw on, trends and directions in SME policies in other countries and, in particular, other Pacific Island nations. The rationale for such an approach is to put the PNG SME environment into comparative

perspective and to draw on the experience of other countries in informing the selection, and focus, of SME policy priority areas in PNG.

The structure of the study is as follows: The next two sections provide a statistical overview of SMEs in PNG and existing policies towards SMEs in PNG. The bulk of the study then focuses on several topics that the NRI has identified as potential areas of evidence-based policy research to inform the government and which we were asked to cover as part of the terms of reference. For most part, these areas correspond to the policy and institutional issues hindering SME development identified in the passage from the PNG DSP 2010–2030 cited above. Specifically, we consider challenges for SMEs in the following areas:

- access to finance, financial literacy and financial inclusion;
- access to technology, technological transfer and industry linkages;
- human resource management (HRM) and training issues;
- Information Communication Technology (ICT) issues;
- regulation issues and administrative burden on SMEs;
- access to, and availability of, commercial land;
- access to local and regional markets;
- access to international markets;
- utilities infrastructure;
- law and order issues;
- indigenous SMEs; and
- involvement of women, youth and disadvantaged groups.

We conclude by discussing some ideas for future research on SMEs in PNG.

## 2. OVERVIEW OF SMEs IN PNG

Definitions of SMEs vary from country to country and are based on a range of criteria, including borrowing, number of employees and turnover. The most common criteria used to define SMEs is by, number of employees. The standard approach is to define microenterprises as having between one and five employees and SMEs as having between 6 and 250 employees (see Gonzalez, *et al.*, 2014). In this section, in providing a descriptive overview of SMEs in PNG we draw heavily on a survey of 1,117 formal SMEs and 521 informal SMEs in urban and rural areas across the 22 provinces in PNG conducted between October and December 2013 by Tebbutt Research (2014). Tebbutt Research (2014) defined an SME as a business that is formally registered, has between three and 150 paid employees, has maximum borrowings of PGK1.5 million and annual turnover between PGK100,000 and PGK15 million. All four conditions must be satisfied for a business to be an SME.

Based on this definition, Tebbutt Research (2014) estimates that there are between 28,323 and 32,692 formal SMEs in PNG (this excludes enterprises in the informal sector, i.e. businesses that are not formally registered with the Investment Promotion Authority (IPA)).<sup>1</sup> These numbers are low by international standards and the government wants to see them increase (Department of National Planning and Monitoring, 2010). SMEs tend to be concentrated in primary industries (mainly agriculture, fisheries, livestock, and palm oil

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<sup>1</sup> In the remainder of this paper, we follow the approach in Tebbutt Research (2014) and use 28,323 as the total number of SMEs. When referring to percentage of SMEs, we are referring to percentage of 28,323.

plantations), general retail, hospitality and tourism, supply chain management and transport.<sup>2</sup> Tebbutt Research (2014) estimate that about one half of formal SMEs are engaged in retail trade (35 per cent) or hospitality and tourism (14 per cent). Compared with SMEs in the formal sector, SMEs in the informal sector are more likely to be engaged in retail trade and farming (see Table 1).

**Table 1: Location of SMEs in PNG by Sector (Percentage)**

<b>Sector</b>	<b>Formal SME</b>	<b>Informal SME</b>
Retail trade	35	49
Hospitality and tourism	14	13
Motor vehicle related retail	9	10
Transportation	8	7
Construction	7	3
Wholesale trade	4	1
Professional services	3	–
Farming	3	9
Manufacturing	3	2
Other	14	6
	100	100

**Source:** Based on Tebbutt Research (2014:46, 165).

**Table 2: Key Measures of SMEs in PNG**

<b>Measure</b>	<b>Formal SME</b>	<b>Informal SME</b>
Median number of staff	15.4	4.4
Median number of unpaid staff	1.2	1.4
Percentage with any unpaid staff	31	57
Percentage indigenous-owned SMEs	80	98
Percentage with majority female ownership	9	16
Percentage with at least one female owner	35	30
Percentage with one owner	64	76
Average years of operation	8	5
3 or less years of operation (%)	28	47
Highest education of respondent in Tebbutt Research (2014) surveys (%)		
• University	32	3
• Trade	18	8
• Primary school	12	40
• No formal education	2	11

**Source:** Based on Tebbutt Research (2014:163)

<sup>2</sup> Meeting with Richard Yakam, Department of Trade, Commerce and Industry, Port Moresby, 30 June 2015; Meeting with Des Yaninen, National Development Bank, Port Moresby, 30 June 2015.

Based on the Tebbutt Research (2014) estimates, formal SMEs have a collective turnover of PGK20.8 billion and provide employment for 434,634 paid staff and 33,868 unpaid staff.<sup>3</sup> Table 2 summarises some key measures for SMEs in the formal and informal sectors in PNG. SMEs in the formal sector have more staff, on average, while a higher proportion of SMEs in the informal sector employ unpaid staff. SMEs in the informal sector are more likely to be indigenous-owned and to have only one owner compared with SMEs in the formal sector. SMEs in the formal sector are more likely to have been operating longer, while the percentage of SMEs in the informal sector operating for three years or less is higher. The education of respondents in the Tebbutt Research (2014) surveys among SMEs in the formal sector was higher than those among respondents in the informal sector.

### **3. OVERVIEW OF POLICIES TOWARDS SMEs IN PNG**

As noted earlier, a draft PNG SME policy and the master plan to implement it are currently under discussion. Since these documents have not been released for public consumption, nothing much can be said about them. Therefore, in this section, reference is made to other publicly available documents with SME policy pronouncements. For example, the PNG DSP 2010–2030 has the goal: “Develop and promote SMEs in PNG” (Department of National Planning and Monitoring 2010:100). It also contains three sub-goals for developing key strategic areas with respect to SMEs. These are a “four-fold increase at least” in the number of SMEs and employment in SMEs<sup>4</sup> and “a significant number” of PNG SMEs with overseas operations, all by 2030 (Department of National Planning and Monitoring, 2010:100).

In order to realise these objectives, the PNG DSP 2010–2030 specifies a number of strategies, albeit at a high level. These strategies are to expand microfinance and facilitate SME access to credit; reduce red tape and lower the cost of running a business; establish a specific SME training institute; facilitate technological transfer required by SMEs through promoting research and development (R&D); assist SMEs to increase market access and assist SMEs to enter export markets (Department of National Planning and Monitoring, 2010). The PNG DSP 2010–2030 also has a number of other objectives, and strategies for realising those objectives, in areas of concern to SMEs. Examples include objectives to improve infrastructure and law and order. Similar strategies are proposed for PNG by the overseas lending agencies, such as the ADB (2012).

The objectives outlined in the PNG DSP 2010–2030 should be read subject to the National Strategy for Responsible Sustainable Development (NSRSD) for PNG (Department of National Planning and Monitoring, 2014), which is the renewed government plan. The NSRSD for PNG makes brief reference to SME policy, albeit at a high level of abstraction. It suggests that inclusive green social enterprises or community based organisations, most of which are SMEs, have a role to play in promoting inclusive green growth through realising “triple bottom line” economic, social and environmental returns.<sup>5</sup> It further suggests that

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<sup>3</sup> Unpaid staff mainly refers to family members working in the firm or farm.

<sup>4</sup> There are some different views on the target that the PNG Government has for the number of SMEs. As an upper bound, a recent news story reporting on the official launch of a retail business incubation program attended by Prime Minister, Peter O’Neill and government ministers, suggests that PNG is seeking to increase the number of SMEs “to 450,000 to 500,000 over the coming years” (Business Advantage PNG, 2015).

<sup>5</sup> Green growth is growth that emphasises environmentally sustainable economic progress to foster low-carbon, socially inclusive development — see <https://sustainabledevelopment.un.org/index.php?menu=1447> (last accessed August 17, 2015).

SMEs should be given incentives to participate in inclusive green growth. Initiatives may include “appropriate tax regimes and incentives, business support programmes that are tailored to the needs of the sector and access to public sector technological expertise and R&D” (Department of National Planning and Monitoring, 2014:44).<sup>6</sup>

To this point, the PNG government has implemented a series of measures designed to promote SMEs and realise the objective of four-fold growth by 2030. These measures include “tax breaks, state buying commitments, the provision of subsidised finance and proposals to restrict foreign investment, which is, controversially, seen as crowding out local businesses” (Ellis & Darko, 2013:16).<sup>7</sup> The strategies outlined in the PNG DSP 2010-2030 for promoting SMEs have been facilitated by a series of externally funded projects. These projects include initiatives to increase SME access to credit, such as the ADB-run PNG microfinance expansion project (Ellis & Darko, 2013) and the World Bank (2015) PNG SME access to finance project. The latter extends to improving financial skills in SMEs. The National Development Bank (NDB) is also actively promoting the Stret Pasin Stoa SME business incubation program, designed to encourage indigenous SME couples to become shop owners. The program has stringent criteria that applicants must satisfy. In March 2015, it was announced that there were 5,000 applications to the Stret Pasin Stoa SME business incubation program; of which, only 10 were successful (Office of the Prime Minister, 2015).

The PNG DSP 2010–2030 also outlines broader initiatives in areas such as improving law and order and transport infrastructure that are of direct relevance to SMEs. These initiatives are being supported in projects, for example, sponsored by AusAID and the International Finance Corporation (see Ellis & Darko, 2013, for an overview).

## **4. CHALLENGES FACING SMEs IN PNG**

### **4.1. Access to finance, financial literacy and financial inclusion**

The best snapshot of the state of play with respect to access to finance among SMEs in PNG is provided by the survey of SMEs conducted by Tebbutt Research (2014). Among the top 10 obstacles to expansion, as reported by respondents, access to finance/loans/capital was ranked second (major obstacle for 37 per cent) and difficulty dealing with banks was ranked fifth (major obstacle for 34 per cent). In the survey, just under one in five firms (19 per cent) had loans. However, the amount of the loan was small — the average loan size was PGK21,900. More than 80 per cent of loans were from formal lenders (84 per cent) and two-thirds of loans (67 per cent) were repayable within 12 months. Respondents to the survey clearly felt capital constrained. Just 40 per cent reported that they could get enough credit when they needed it and 59 per cent considered that getting access to credit and loans was difficult. Almost one quarter of firms surveyed (24 per cent) had been refused a loan at some point. Tebbutt Research (2014) identified that SMEs generally had low levels of trust in banks and this was a barrier to borrowing from banks. Almost one half of respondents to the survey (48 per cent) reported that they trust PNG banks only a little bit or do not trust PNG banks at all to act in their customers best interests.

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<sup>6</sup> There is no research yet on the impact of such initiatives on SMEs. This is a topic that we suggest below, which could be usefully addressed in future research.

<sup>7</sup> There are no studies, of which we are aware, that have evaluated the success/failure of these initiatives in promoting SMEs. Below, we suggest this as a topic for future research.

For SMEs with access to finance, the major problems are high interest rates, fees and dealing with the paperwork required by the financial institution. In the survey by Tebbutt Research (2014), over a half of respondents (56 per cent) rated PNG banks as ‘poor’ in terms of charging reasonable fees for bank services and the same percentage (56 per cent) rated PNG banks as ‘poor’ in terms of providing reasonable interest rates. Chand (2015) also found that in PNG, when access to finance is easy, high interest rates are a barrier to business lending. These concerns for businesses in PNG are reinforced by surveys of SMEs in other Pacific Island countries. For example, Sharma and Gounder (2011) surveyed SMEs in Fiji and found that the major concerns of SMEs were high interest rates and bank fees.

In PNG, interest rates were relatively low up to 2004, but higher inflation rates were the catalyst for a tightening of monetary policy in 2008. Monetary policy has fluctuated since then, but has been around the 7–8 per cent mark (Barker, 2014). Chand (2015) notes that the margin between the average interest rate charged on loans and that offered on deposits in Papua New Guinea for the decade to 2014 has been much higher than comparable countries. The large margin reflects a combination of factors including the cost of providing finance, inclusive of risk, the market power of the banks, the depth of the lending market, the regulatory burden on the banks and the required rate of return of investors (Chand, 2015).

There are several large-scale studies on financing constraints of SMEs around the world; however, these exclude the Pacific Island countries. For example, one of the largest multi-country studies on SME access to finance is Beck, *et al.* (2006), which covers 80 developed and developing countries, but does not include the Pacific Island countries. There is, however, some literature on financing constraints facing SMEs in the Pacific Island countries. Sharma and Gounder (2011) discuss obstacles to bank financing of micro and small enterprises in Fiji on the supply side and, hence focus on obstacles from the lenders’ perspective. Naidu and Chand (2012) present a comparative study of the financial problems faced by SMEs in the manufacturing sector in Fiji and Tonga. Several of the issues raised in these studies are also relevant to PNG. Spohn (2010) contains an in-depth discussion of the development of microfinance in PNG, and some of the obstacles, much of which impacts on SMEs. Some reports covering a broader set of impediments to development in PNG prepared by international lending agencies contain extensive discussion of issues around access to finance and financial literacy in SMEs (see for example, ADB, 2012).

Around the world, compared to large firms, SMEs face higher financing constraints (Beck & Demircuc-Kunt, 2006; Khanna & Palepu, 1997). Liang, *et al.* (2014:2) suggest that SMEs “around the world face ‘institutional voids’ of credit”. AusAID’s *Pacific 2020* report suggests that “credit [in the Pacific Islands] is difficult or impossible to obtain for all but the largest businesses” (AusAID, 2006). Tebbutt Research (2014) identified access to finance as one of the biggest constraints on SMEs in PNG. SMEs in PNG also have low levels of access to foreign capital (ADB, 2012; Schaper, 2002). According to the World Bank (2014), PNG ranks 165 of 189 countries in terms of ease of getting credit, which is the worst of the Pacific Island countries. The ADB (2012) notes that access to international financial markets in PNG is limited to large firms in the mining subsector and other large investors.

Despite the growth in the provision of credit to SMEs in PNG in recent times, the level of credit available to the private sector in the country is still low (ADB, 2012). Between 2005 and 2009 credit to the private sector in PNG increased from 14 per cent of GDP in 2005 to 32.1 per cent of GDP in 2009, but is still one of the lowest among the Southeast Asian and Pacific Island countries (ADB, 2012). A lack of access to capital is a major impediment to

growth of SMEs (Sharma & Gounder, 2011). It also affects other aspects of doing business, such as basic marketing, particularly in the informal sector. Wambrauw (2013) presents detailed case studies of traders in the informal sector in Manokwari-West Papua Province, Indonesia. She found (at pp.25–26): “In many cases they do not even have a float when doing daily marketing, so do not have change for buyers. Some [female traders] stop selling in the market when they run out of financial capital, and they start again if they can get money from their husband or family, or a loan”. Many of the constraints faced by these traders in the informal sector in West Papua are likely to apply in PNG, although more evidence is needed.<sup>8</sup>

There is a well-developed literature for countries other than PNG on why financial institutions may be less willing to lend to SMEs than large firms. Factors include the large transaction costs involved with soft information gathering and relationship building with SMEs, diseconomies of scale and lower profit opportunities for banks lending to SMEs (see for example, Beck, *et al.* 2008). One of the main difficulties in accessing finance for SMEs in the Pacific Islands is that projects do not have sufficient collateral or capital contribution (Sharma & Gounder, 2011, 2011a). For instance, in Fiji, banks often use the notion that SMEs have a “lack of bankable projects” to justify lending less to SMEs (Sharma & Gounder, 2011a). In PNG, of the barriers to bank borrowing, “collateral requirements too high” was the equal third biggest barrier reported by respondents to the Tebbutt Research (2014) survey (22 per cent reported it to be one of the top two reasons). In PNG one of the main difficulties SMEs face in providing security for a loan is that land titles, which would be an obvious source of security, are often held traditionally. Because many land titles are held traditionally, transferring the title of these lands in the event of default would be problematic for the banks (Chand, *et al.*, 2014; Tebbutt Research, 2014). This effectively prevents the use of land as collateral (Spohn, 2010). Chand, *et al.* (2014) propose ten recommendations for making land under customary title in PNG more bankable, including establishing a review committee, conducting workshops, collecting data on the prices at which properties are exchanged, formalising the property price and rental rate and benchmarking the time and cost of registering property.

In the informal sector, the lack of collateral is an even greater problem for SMEs in accessing loans. Many SMEs in the informal sector in PNG do not have the start-up capital to seek loans (Tebbutt Research, 2014). The lack of collateral in the informal sector is reinforced by other barriers. Wambrauw (2013) found that in West Papua, in addition to lacking collateral, the traders found it hard to access finance because of their non-permanent selling location and casual marketing activities. Similar issues arise among SMEs in the informal sector in PNG. Kavan (2013) found that in Port Moresby and Lae, traders in the informal sector found it difficult to access formal finance because they lacked a formal business plan and did not trade in the same location.

Financial literacy among the key participants in SMEs in PNG is often low. In interviews conducted by Tebbutt Research (2014), one of the main obstacles to borrowing SMEs faced was the lack of knowledge of financial reporting. In the informal sector in PNG, financial literacy is particularly low (Spohn, 2010; Wambrauw, 2013), reflecting lower levels of human capital more generally (Tebbutt Research, 2014).

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<sup>8</sup> We suggest this below, as a topic for further research.

Microfinance represents small loans, typically to low-income entrepreneurs to support business expansion and growth (Yunus, 2007). Microfinance is growing in popularity as a mechanism to foster “inclusive growth” through extending finance to impoverished populations in the informal sector who cannot access formal finance (Liang, *et al.*, 2014). Microfinance institutions (MFI) have evolved in PNG as an alternative source of finance for SMEs. Spohn (2010) traces the history of MFIs in PNG. The first MFI initiatives in PNG date from the 1980s. Most of the initiatives throughout the 1980s and 1990s ended in failure. As Spohn (2010:123) puts it, “the microfinance landscape in PNG ... is characterized by a series of failed attempts to deliver financial services to the low-income population of PNG”. However, there have been some positive developments with MFIs in PNG since the 2000s. The major boost for microfinance in PNG came from the establishment of the PNG ADB Microfinance and Employment Project (PAMEP) in 2001, which ran from 2001 to 2010. The PNG Microfinance Project, supported by the ADB and the governments of Australia and PNG in 2010, succeeded the PAMEP. MiBank was established under an ADB pilot program in 2005 and is now the largest microfinance bank in the South Pacific (ADB, 2015). MiBank launched MiCash in 2011, which was the first bank-led deployment of mobile money in the Pacific. It is a bank account that can be accessed via a mobile phone and has become popular with women in particular (ADB, 2015).

There are, however, a number of limitations on microfinance initiatives in PNG. MFIs have dual objectives of outreach and sustainability. Spohn (2010) argues that while MFIs in PNG have been relatively successful in terms of outreach, most have not been sustainable. Spohn (2010) suggests that group lending strategies, underpinning microfinance, has been undermined by the *wantok* system. As Spohn (2010:222), put it: the “notion of ‘debt’ or ‘indebtedness’ between *wantoks* is understood, but repayment does not follow clear terms and there is no enforcement. .... Institutions offering credit and expecting repayment may encounter misunderstanding or resistance to terms widely understood and complied with in other settings”. Overall, the ADB (2012) notes that MFIs in PNG have not performed well in terms of sustainability and this has led them to increase interest rates to recoup costs. Interest rates charged by MFIs in PNG have generally been higher than banks (ADB, 2012). This reflects the fact that MFIs in PNG have not performed well and have had to charge higher interest rates to recoup their costs (ADB, 2012). This has restricted the extent to which SMEs have been able to access capital from this source.

Next, we outline some of the ideas in the literature for improving SME access to finance. However, as Shinozaki (2014:628) notes: “There is no ‘one size fits all’ financing solution, given the diversified nature of SMEs”.

A starting point is further general strengthening the financial sector. The PNG DSP 2010–2030 has, as one of its objectives, to “strengthen financial markets and banking services in PNG” (Department of National Planning and Monitoring, 2010:33). The ADB (2012) notes that the efficiency of PNG’s domestic financial intermediation compares unfavourably with other countries in the Asia-Pacific and this contributes to higher cost of capital for SMEs. A general strengthening of the financial sector will assist to address this. Based on the findings from the SME survey by Tebbutt Research (2014), improving trust in banks has to be an important element of strengthening of the financial sector.

Based on findings for countries other than PNG, adverse selection and moral hazard in credit markets restrain SME borrowing (Beck & Demirguc-Kunt, 2006). The establishment of credit lines to finance specific projects and credit guarantees assist to overcome adverse

selection and moral hazard problems that constrain SME borrowing (Gonzalez, *et al.*, 2014; Sharma & Gounder, 2011; Shinozaki, 2014). One of the four components of the World Bank's (2015) SME access to finance project in PNG entails developing a risk-sharing facility that will partially guarantee a portfolio of new loans from commercial banks to SMEs up to \$US116 million (Ellis & Darko, 2013; World Bank, 2015). This will assist SMEs to overcome problems associated with provision of collateral.

The PNG DSP 2010–2030 has, as one of its strategies for expanding SMEs, expanding MFIs to all districts of PNG (Department of National Planning and Monitoring, 2010). Various initiatives under the ADB PNG Microfinance Expansion Project appear to provide the best way to realise this objective, including the innovative use of mobile phones to facilitate banking (ADB, 2015). Watson (2015) finds that in PNG, mobile phones have assisted in meeting socioeconomic objectives, particularly in rural areas. One of the criticisms of MFIs in PNG is that they are largely informal and the sector is not sufficiently regulated. One of the principal objectives of the ADB PNG Microfinance Expansion Project is to develop appropriate regulation for, and supervision of, MFIs through the Bank of PNG (Ellis & Darko, 2013).

To the extent that formal SMEs are less credit constrained than informal SMEs, research for countries other than PNG suggests that easing credit constraints on SMEs can be realised through simplifying procedures for formalisation (Gonzalez, *et al.*, 2014). Improving financial literacy, and providing the key SME stakeholders with the capacity to understand forms, is also needed. One of the key recommendations of Tebbutt Research (2014) for PNG was the simplification of loan application procedures and greater education of SME stakeholders about financial reporting. The ADB Microfinance Expansion Project is supporting a large-scale financial literacy program, targeting 130,000 people in PNG; of which, at least 40 per cent will be women (ADB, 2015). One of the four components of the World Bank (2015) SME access to finance project in PNG involves capacity building for SMEs. A sub-component of capacity building will be improving financial skills in SMEs.

The broader literature on financing SMEs also contains a number of suggestions for improving SME access to finance that are potentially relevant to PNG (Gonzalez, *et al.*, 2014; Sharma & Gounder, 2011; Shinozaki, 2014). Banks may be unwilling to finance small borrowers on an individual basis because of the high transaction costs, but may be more willing to provide loans for a cluster that assembles small borrowers. Hence, it reduces the cost of gathering soft information via relationship lending (Shinozaki, 2014). Another suggestion is the use of crowd funding, through which individuals lend to each other, or to SMEs, through lending websites. Crowd funding has become a popular source of funding in China, Germany, the UK and US. One problem, though, identified by the OECD, is that there is a no “money back guarantee” so a proper regulatory framework is needed for consumer protection (Shinozaki, 2014). Another potential problem is that interest rates are often high. In the United States, the interest rate charged on crowd funding is often about two and a half times higher than that on a loan from a bank (Blasingame, 2014).

#### **4.2. Access to technology, technological transfer and industry linkages**

It is generally accepted that the lack of access to appropriate technology is a barrier to SME expansion in PNG (ADB, 2012; Department of National Planning and Monitoring, 2010, 2010a; Ellis & Darko, 2013). The PNG DSP 2010–2030 acknowledges that a lack of investment in science and technology is holding PNG back and sets a target to at least double both public and private sector investment in science and technology by 2030 (Department of

National Planning and Monitoring, 2010). Specifically, with respect to SMEs, the PNG DSP 2010–2030 states that facilitating the transfer, adoption and development of relevant technologies needed by SMEs through R&D and promoting partnerships with foreign businesses is one of the key strategies for promoting SMEs (Department of National Planning and Monitoring, 2010).

Industry linkages among SMEs, even formal SMEs, are relatively weak in PNG. In the SME survey conducted by Tebbutt Research (2014), less than 40 per cent (38 per cent) of SMEs had any form of membership of an industry association. While just over one quarter (26 per cent) of SMEs were members of a local chamber of commerce, only 11 per cent were members of the Business council and just 8 per cent belonged to an industry association. As one might expect, linkages were worse in rural areas than urban areas. In rural PNG the overall figure that 38 per cent of SMEs have some form of membership of an industry association falls to 30 per cent of SMEs. The relatively low rates of membership of industry associations not only impede networking among SMEs, but also impede other initiatives to assist SMEs. For example, programs designed to improve financial literacy are sometimes run through industry associations, such as local chambers of commerce.

In the stakeholder meetings, it was suggested that a major reason why the SME sector in PNG is so small is the lack of forward/backward linkages with big businesses. In most countries, the SME sector evolves around big businesses. However, in PNG, the linkage between big businesses and local SMEs is very minimal or weak. For instance, it was pointed out that the big hotels in Port Moresby, for example, source their fresh produce from suppliers in Australia, rather than from small businesses in PNG.<sup>9</sup> The lack of consistency in supply of vegetables is probably one of the reasons why hotels in PNG look overseas to source them. However, more generally, the reason(s) why there is a lack of linkages between big businesses and SMEs in PNG is not well-documented in the literature.<sup>10</sup>

Ellis and Darko (2013) suggest that one way to promote industry linkages and technological transfer among SMEs in PNG is to promote supplier linkages to extractive industries. ANZ (2013) argues that PNG is well placed because of its geographical closeness to Asia to fully benefit from the mining boom. If mining companies in PNG were able to benefit from the mining boom in Asia *and* SMEs were linked more with the large mining firms, this would facilitate broader-based growth. However, even if PNG could link in to the Asian mining boom, as Ellis and Darko (2013) acknowledge, this strategy has other limitations. One obvious limitation is that it is geographically constrained to locations in which large businesses/extractive industries have invested. Another limitation is that, as Ellis and Darko (2013) suggest, SME policy in PNG is being driven by nationalistic sentiment that is not attractive to foreign investors. In February 2015, it was reported that the Minister for Trade, Commerce and Industry, Richard Maru, was planning to table a master plan to force the foreign owners of SMEs to sell them to locals and leave the country. This caused much confusion among foreign investors (Radio Australia, 2015). This uncertainty hinders the efforts of SMEs to take advantage of technological transfer through partnerships with foreign firms.

There are other forms of intervention the government could use to facilitate developing industry linkages. One approach, popular in Africa, is the use of matching grants whereby the

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<sup>9</sup> Meeting with Yurendra Basnett, Asian Development Bank, Port Moresby, 2 July 2015.

<sup>10</sup> This is an issue we suggest below, which could be addressed in future research.

government reimburses 50 per cent of the costs SMEs incur with training, marketing and/or attending trade fairs. The rationale for such matching grants is that these investments generate positive externalities (Gonzalez, *et al.*, 2014; McKenzie, 2011). There is some evidence that matching grants stimulate innovation in private firms, but private investment in innovation tends not to extend beyond the duration of the matching grant (see for example, Chudnovsky, *et al.*, 2006). Another approach is funding for improving processes that capture the externalities from innovation. Funding to support innovation could include programs to support investment in R&D and innovation transfer (Gonzalez, *et al.*, 2014). Related policies may include subsidised credit for innovation and use of tax credits to encourage investment in innovation. Alvarenga, *et al.* (2012) finds that in Brazil, subsidised credit has some positive effect on stimulating innovation, particularly among small firms. Czarnitzki, *et al.* (2011) find that in Canada tax credits are effective in stimulating investment in private R&D.<sup>11</sup>

### **4.3. HRM and training issues**

Across many countries, it is generally accepted that the level, and quality, of HRM in SMEs is low. HRM in SMEs has been likened to a “bleak house environment” (Dundon & Wilkinson, 2003). Compared to large firms, across many countries, SMEs are less likely to have sophisticated practices for recruitment, to provide workplace training, to conduct performance appraisals or to develop equal opportunity policies (see Bacon & Hoque, 2005 and references cited therein). The prevailing view is that in SMEs, HRM issues are primarily addressed through informal practices (Bacon & Hoque, 2005).

The PNG DSP 2010–2030 recognises that the quality of HRM in SMEs in PNG is generally low and proposes a number of strategies to assist to address this issue. These strategies include increasing engagement of SMEs with HRM training, for example, through the National Training Council and aligning training standards to a national qualification under the PNG qualification framework (Department of National Planning and Monitoring, 2010).

Internationally, one of the biggest obstacles to SME growth is the lack of skilled workers (Bacon & Hoque, 2005). PNG also suffers from an acute shortage of skilled labour, reflecting low levels of human capital compared with other countries in the region (ADB, 2012; Ellis & Darko, 2013; ICCC, 2009; Schaper, 2002). The INA survey of firms in PNG identified skill shortages as one of the main obstacles that firms face (ADB, 2014). These findings were reinforced by the Tebbutt Research (2014) survey that focused exclusively on SMEs. Adult and youth literacy in PNG is one of the lowest in the region (ADB, 2012). Youth literacy is less than two-thirds and absenteeism and attrition rates at primary and secondary school are high (ADB, 2012; Department of National Planning and Monitoring, 2010). Compounding the lack of skilled labour in PNG is the relatively high rates of population growth — currently 3.1 per cent per annum (Barker, 2014) — meaning the economy is not growing fast enough to absorb job seekers (Barker, 2014; Schaper, 2002). Wage levels in Port Moresby, at least, are high, relative to those in Asia, which increases labour costs for SMEs and makes it more difficult to attract skilled labour (Barker, 2014; Schaper, 2002).

Several studies have noted that the labour market in PNG is characterised by intermittent peaks in demand, in which shortfalls are met through overseas staffing (ADB, 2012; Barker, 2014; Ellis & Darko, 2013). The interviews conducted by Tebbutt Research (2014) found that

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<sup>11</sup> There is no evidence on the effects of subsidised credit or tax credits on SMEs in PNG. This is a topic we suggest below, which could be the subject of future research.

SMEs suffered similar intermittent peaks in demand. That report noted that major projects undertaken by SMEs went through cycles creating inflated demand for certain skills at different points. During these peak times SMEs employed skilled labour on high remuneration, but once the peak passed staffing costs continued to be high, despite there being a fall-off in the need for high skilled labour. This puts extra strain on the cash flow of SMEs. The exact reason why SMEs retain these staff is not clear, although presumably it is not possible for SMEs to retain skilled staff on a casual basis.

At a big picture level, education reform is needed to improve the human capital base of PNG. The PNG DSP 2010–2030 (see Department of National Planning and Monitoring, 2010:54–63) and ADB (2012:101–103) contain a number of strategies to deal with this broader issue. This is essentially, though, a medium term solution and will not improve the human capital base available to SMEs in the short-term. A more immediate solution is investment in the training of in-demand skills of the extant workforce to smooth out the peaks in labour demand cycles (Ellis & Darko, 2013; Tebbutt Research, 2014). This approach is also a core element of international aid programs. For example, one of the aims of NZ Aid is “a better trained workforce more aligned to market needs” (Ellis & Darko, 2013:10). The PNG DSP 2010–2030 acknowledges this need, stating that training institutions need to be flexible enough to “accommodate changes in demand for skilled human resources in various industries or sub-sectors” (Department of National Planning and Monitoring 2010:64). Tebbutt Research (2014) also recommends supporting SMEs to offer competitive wages to attract skilled labour, for example, through offering SMEs payroll tax concessions.

More generally, there is much recognition of the need and support, for in-house SME training and management programs to improve vocational training and improve basic managerial skills in PNG (see for example, Ellis & Darko, 2013; Tebbutt Research, 2014). Training to assist managers/owners could include training in filing taxes and GST reporting, managing cash flows and general financial planning (Tebbutt Research, 2014). In the stakeholder consultation, one suggestion that was floated was for aspiring entrepreneurs and managers in SMEs to receive mentoring from experienced/retired business people from Australia or New Zealand. The proposal was to fly in interested business people from Australia and New Zealand to PNG to facilitate two- to three-day mentoring sessions with budding entrepreneurs and managers in SMEs.<sup>12</sup> Based on the experience of other countries, as with approaches to supporting investment in innovation, the government could consider a number of ways to subsidise, or partially offset, the cost to SMEs of improving training, including matching grants (Gonzalez, *et al.*, 2014).

#### **4.4. ICT Issues**

APEC has made the “digital divide” the main focus of efforts to improve information access. The rationale for so doing is that the rapid growth of the internet has made it easier for SMEs to compete in international markets (JEC, 2003). It is increasingly being recognised that the internet is not just a means for SMEs to market their goods and services, but is also an important source of information (JEC, 2003). Based on three “mobile phone for development” (M4D) pilot projects, Watson (2015) found that the strategic use of mobile phones in PNG can aid service delivery and socioeconomic objectives in rural areas. While not specifically for SMEs, the success of the M4D pilot projects suggests that mobile phones can support SMEs in realising their objectives, especially in the informal sector. The ICT sector, however, in most of the Pacific Island countries is immature and underdeveloped

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<sup>12</sup> Meeting with Richard Yakam, Department of Trade, Commerce and Industry, Port Moresby, 30 June 2015.

(Cullen & Hassall, 2013). This is not only an issue for business, but affects broader objectives related to raising living standards (Cullen & Hassall, 2013).

Access to ICTs among SMEs in PNG varies according to the form of ICT and locale. Again, the SME survey conducted by Tebbutt Research (2014) is the main source of information. In the Tebbutt Research (2014) survey, mobile phone use was almost universal at 97 per cent. Almost two-thirds of SMEs had a computer (63 per cent) and slightly less than half (44 per cent) had internet access. However, there was considerable variation between urban and rural areas and between the Highlands and Islands regions. Generally, access to ICT was much lower in the Highlands and rural PNG. For instance, just 24 per cent of SMEs had internet access and just 9 per cent of SMEs had a website in the Highlands region. It is worth remembering that these figures are for SMEs in the formal sector. While there are no figures on it, access to ICT among SMEs in the informal sector is likely to be much lower. In the stakeholder consultation, it was suggested that ICT infrastructure in PNG is very poor and most businesses operating outside Port Moresby and Lae have hardly any access to ICT.<sup>13</sup>

In the INA PNG 2012 survey, ICT infrastructure was regarded as having improved relative to 2006 (ADB, 2014). One reason for this was the opening up of the mobile phone market to investment and increased competition in that market leading to better services (ADB, 2014; Watson, 2015). However, provision of ICT services is still regarded as a major problem for SMEs in PNG, due mainly to limited competition, and high unit costs, on core internet services (Barker, 2014). Barker (2014) points to a chicken and egg problem. As he points out (at p.6): “Unit prices need to fall substantially to enable major increased ICT usage, yet major increased usage (and competition) seem to be a prerequisite by ISPs for reducing prices”.

Another major problem for SMEs across most of the Pacific Islands is that international connectivity is slow (Cullen & Hassall, 2013). PNG is one of only four Pacific Island countries (along with Fiji, Guam and New Caledonia) to have submarine fibre cable access for telephone and the internet (Jorari, *et al.*, 2009). Nevertheless, in the stakeholder meetings, almost all the people we interviewed referred to the high cost, and unreliability, of the internet, where available.

While the Tebbutt Research (2014) survey found that just over one fifth of SMEs (22 per cent) had an internet site, in the stakeholder meetings it was suggested that online retailing is almost not existent. Only 0.5 per cent of the population has access to internet banking and credit/debit cards. Because of the traditional land ownership structure, in which a person does not own land with a defined and secure title, there is no land title for collateral or a permanent address for issuing a person with a credit/debit card.<sup>14</sup> Most SME owners lack training in ICT to promote their business on the internet.<sup>15</sup>

The PNG DSP 2010–2030 has as one of its goals: “A modern and affordable ICT that reaches all parts of the country” (Department of National Planning and Monitoring 2010:75). The 2030 targets for the PNG DSP 2010–2030 include to increase mobile phone access (800 mobile subscribers per 1000 people) and increase internet access (70 per cent of people to use the internet) (Department of National Planning and Monitoring, 2010). While these are broader development objectives, there will be spill over effects for SMEs from greater and

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<sup>13</sup> Meeting with Des Yaninen, National Development Bank, Port Moresby, 30 June 2015.

<sup>14</sup> Meeting with Des Yaninen, National Development Bank, Port Moresby, 30 June 2015.

<sup>15</sup> Meeting with Joycelyn Pipike, PNG Tourism Promotion Authority, and Joybertina Piasinu, Office of Tourism, Arts and Culture, Port Moresby, 2 July 2015.

broader ICT coverage. This should see greater SME use of the internet (and greater use of websites to market products), and open up new markets for SMEs as potential customers access information over the internet over the next two decades.

#### **4.5. Regulation issues and administrative burden on SMEs**

The World Bank (2014) provides details on a number of indicators of ease of doing business in PNG and compares these with other countries. According to the World Bank (2014), as of June 2014, to start a business in PNG there are six procedures, it takes 53 days and costs 19.3 per cent of the country's income per capita. Globally, this puts PNG 130 of 189 countries and is the second worst of the Pacific Island countries, beating only Fiji. To get a construction permit in PNG there are 17 procedures, it takes 217 days on average and costs 2.1 per cent of warehouse value. This puts PNG 141 of 189 countries and is the worst of the Pacific Island countries. To have the electricity connected in PNG there are four procedures, it takes 66 days and costs 54.1 per cent of income per capita. In terms of ease of having the electricity connected, PNG ranks 26 of 189 countries, which is the second best of the Pacific Island countries.

Based on the 2012 INA survey of firms in PNG, 85 per cent of respondents were concerned about the stability of rules, regulations and policies and 80 per cent of respondents were concerned about retrospective changes to rules and regulations (ADB, 2014). Of firms that decided not to proceed with an investment, 44 per cent cited long processing time, 20 per cent said regulations were too complex and haphazard, and 18 per cent referred to excessive compliance fees (ADB, 2014). These figures suggest that the regulatory environment is having an adverse effect on investment. The Heritage Foundation (2015) ranked PNG 140 of 179 countries in terms of business freedom and described the regulatory environment as "poor".

Based on the above, PNG has one of the highest levels of 'red tape' in the world (Sanday, 2012). The above figures are for all firms, not just SMEs. However, if anything, the administrative burden on SMEs is higher than on large firms, reflecting diseconomies of scope and lower levels of financial literacy in SMEs (JEC, 2003). The available international evidence suggests that high costs to entry hamper the creation of firms (in the formal sector) and stymie entrepreneurship (see for example, Klapper, *et al.*, 2006). As a consequence, in PNG the formal sector is small (see for example, Ellis & Darko, 2013). According to the National Informal Economic Policy 2011–2015, 92 per cent of the population do not have access to formal institutions (Department for Community Development, 2011). More than 80 per cent of the workforce is in the informal sector (Spohn, 2010). However, it is generally recognised in PNG that for SMEs, bureaucratic requirements (paper work and red tape) are the major barriers to entering the formal sector (Kavan, 2013; Sanday, 2012). This pushes SMEs into the informal sector (Kavan, 2013). For SMEs in the informal sector, the lack of knowledge about how to formalise is a concern. FIAS (2008) found that over one-third of informal business owners — 38 per cent of women and 35 per cent of men — in PNG said that they knew nothing at all about how to formalise. Tebbutt Research (2014) found that many SMEs in the informal sector would like to formalise, but just 18 per cent were very familiar with the steps needed to formalise.

Excessive levels of red tape have fuelled bureaucratic corruption in PNG. In the 2012 INA survey of firms in PNG, 57 per cent of respondents reported that they had been 'fairly', 'highly' or 'very highly' affected by instances of government corruption (ADB, 2014). Almost one third (30 per cent) of respondents stated it was 'mostly' or 'always' common for

companies in their sector to make irregular payments (ADB, 2014). In the Tebbutt Research (2014) survey of SMEs, respondents stated that government corruption was the third highest obstacle for SME business operations and growth. According to the Tebbutt Research (2014:155): “Corruption was described as being pervasive in PNG. .... The common concern regarding corruption was favouritism and nepotism when it comes to family members and *wantoks*, especially the favouring of *wantoks* in the allocation of projects”. PNG has traditionally fared worse than other countries in the region, based on indicators such as the Transparency International’s Corruption Perception Index (ADB, 2012). PNG placed 145 of 174 countries on the 2014 Corruption Perception Index (Transparency International, 2014) and the perception of SMEs (and the general public) is that the incidence of corruption is increasing (ADB, 2012; 2014).

Given that the formal sector is small, a relevant issue concerns the extent to which regulations promote SME development in the informal sector. Kavan (2013) notes that prior to the enactment of the *Informal Sector Development and Control Act* (ISA) in 2004, informal sector activities were restricted by laws and regulations imposed by local authorities. Sikipris and Rao (2006) reviewed the role of regulation in the informal sector in Port Moresby, prior to the introduction of the ISA, and concluded that they impeded entrepreneurship. The objective of the ISA was to regulate the informal sector and protect the interests of those who operate in it. Among other things, the ISA gave legal rights to informal sector vendors. However, in practice, Kavan (2013) concludes it is not properly enforced. Police harassment of individuals undertaking informal business activities is common and there is a high level of petty corruption. Overall, it has had a negative effect on enterprises.

In terms of addressing these issues, a multipronged strategy is needed. One set of policies is needed to promote the informal sector (Kavan, 2013). The PNG DSP 2010–2030 has, as one of its strategies, promote and facilitate the informal sector (Department of National Planning and Monitoring, 2010). Assisting SMEs in the informal sector to realise their potential is also a key recommendation of the Tebbutt Research (2014). A second set of policies is needed around simplification of, and increasing awareness about, formalisation procedures. The PNG DSP 2010–2030 acknowledges the need to reduce red tape (Department of National Planning and Monitoring, 2010). There are international aid programs designed to assist in this area. For example, the International Finance Corporation (IFC) has been working with the PNG government to simplify licencing and registration procedures as well as tax requirements to make it easier for SMEs to comply with requirements (Ellis & Darko, 2013). Several studies for other countries suggest that simplified entry regulations and regulatory reforms increase the number of registered firms and stimulate private investment (see for example, Bruhn, 2011; Cavalcanti, *et al.*, 2008; Yakovlev & Zhuravskaya, 2008). The ICCC (2009) found that many new entrants into the wholesale and retail sector were not complying with the formal start up requirements, given the cost and time involved. It advocated simplification of the regulations as a vehicle to increase compliance.

Another set of policies is needed to address corruption. The PNG government has committed to establishing an anti-corruption commission (ADB, 2012; Barker, 2014). However, as Barker (2014) notes, much more needs to be done. As he puts it (at p.41): “The authorities must seriously address the ongoing corruption and underlying motivating causes for corruption within political and public service ranks”. The ADB (2012) contains a long list of suggestions for addressing corruption in PNG. These include adequate staffing of community and public watchdogs, protection for whistle blowers, development of appropriate penalties

for businesses and officials engaged in corrupt behaviour, reducing the use of sole-discretion in decision-making and, where possible, avoiding the use of exclusive service providers.

One recent initiative to address corruption is “Phones Against Corruption”, which was launched in July 2014 as a joint project between the PNG Department of Finance, and UNDP. The main objective of the “Phones Against Corruption” initiative has been to develop and put in place a tool enabling citizens to report on cases of corruption by sending SMS messages to the Department of Finance’s Internal Audit and Compliance Division, which analyses the information for further investigation. To send an SMS, the sender simply states the ‘where’, ‘when’ and ‘what’ of the corruption case being reported. In the first 12 months of this initiative, a total of 13,229 text messages have been sent, including 948 alleged instances of corruption. Among these, five per cent of the cases have been found to represent serious allegations requiring further investigation (UNDP, 2015).

PNG’s tax policy is undergoing a comprehensive review; so any proposals that the Taxation Review Committee might present, if accepted/adopted by the Government might be expected to have an impact on SMEs. In July 2015, the Taxation Review Committee released an issues paper focusing on taxation of businesses with less than K250,000 sales. The Taxation Review Committee (2015) recommends simplification of the taxation of small businesses and, at the same time, broadening the taxation base to include enterprises in the informal sector. The Committee acknowledged that simplifying the tax rules alone is unlikely to be enough to get SMEs to formalise their activities. It also recommends reducing the paperwork needed to register, improving the access of small businesses in the informal sector to formal financial institutions and increased use of third party reporting and matching.

#### **4.6. Access to, and availability of, commercial land**

Respondents to the SME survey by Tebbutt Research (Tebbutt Research, 2014:177) stated that “difficulty leasing or buying land” was the number one obstacle facing SMEs in PNG (it was listed as the major obstacle by 38 per cent of respondents). The INA survey of firms in PNG found that difficulty in accessing land, and the high price of commercial land, had become a more pressing constraint for business between 2002 and 2012. The proportion of firms reporting that difficulty in accessing land had significantly hindered their expansion increased from 38 per cent in the 2002 survey to 58 per cent in the 2012 survey (ADB, 2014). Almost all of the stakeholders we interviewed stated that access to, and availability, of commercial land was one of the major obstacles hindering promotion of SMEs and PNG’s economic development.

The main problem for SMEs in this area has been the lack of land with secure titles. Traditionally, 97 per cent of land in PNG has been under customary land title. The other 3 per cent of alienated land is mostly owned by the state (ADB, 2012; Chand, *et al.*, 2014; Filer, 2011; ICCC, 2009; Yala, 2006; Yala & Duncan, 2006). The difficulty of acquiring title to, or use of, customary land for business activities is regarded as a major obstacle to private investment (ADB, 2012, ICCC, 2009; Sanday, 2012; Yala, 2006; Yala & Duncan, 2006). Group tenure also restricts the use of land as collateral, which restricts SMEs access to credit (see for example, ADB, 2012). This issue was discussed in more detail above in the section on difficulties with accessing finance.

Larmour’s (2003) description paints the picture of land reform in PNG as a failed policy initiative. However, to change this long-held view, a series of attempts have been made to increase land registration, introduce lease-back arrangements and land tenure conversions (ADB, 2012; Filer, 2011; Holden, *et al.*, 2003; Yala, 2006). The rationale for such initiatives

has been to formalise the rule of law, improve security of property rights, increase the availability of land for collateral for loans and increase investor confidence (ADB, 2012; Yala, 2006). Filer (2011) states that between January 2003 and January 2011, almost 5 million hectares of customary land, representing 11 per cent of PNG's total land area, had passed to national and foreign corporate entities via the lease-leaseback scheme. Informed by the National Land Development Task Force report on how to access land for development purposes (National Land Development Task Force, 2007), the PNG DSP 2010–2030 has, as one of its goals, increasing land use within the formal administration system to over 20 per cent of PNG's landmass by 2030 via the Voluntary Customary Land Registration System which constitutes the *Land Groups Incorporation Amendment Act 1975* Landowner Group (ILG) and the *Land Registration Amendment Act (1981)* Process. The PNG DSP 2010–2030 has the objective that by 2030 at least 60 per cent of landowner groups will be registered as ILGs (Department of National Planning and Monitoring, 2010).

One problem is poor administration of the formal land system that creates uncertainty and bottlenecks (Fairhead, *et al.*, 2010; Sanday, 2012). For example, Fairhead, *et al.* (2010) describes land administration in PNG as “inefficient and dysfunctional” (p.3). Reflecting the more general situation with respect to excessive red tape, regulations around registering property are often excessive, opaque and take a long time (Sanday, 2012). According to the World Bank (2014), registering property in PNG involves four procedures, takes 72 days and costs 5.1 per cent of the property value, which places PNG 85<sup>th</sup> of 189 countries. Customary land titles also contribute to insecure property rights with several instances in which traditional landowners have evicted tenants, irrespective of the tenant's legal rights (Filer, 2011; ICCC, 2009; Sanday, 2012). Insecure property rights increases the return on investment that landlords require to compensate them for the higher risks associated with making sunk investments, pushing up rents (ICCC, 2009). Higher rents are also being driven by restrictions on the availability of commercial land, which allow landlords to charge more. Misuse of Special Agricultural and Business Leases (SABLs), which has been facilitated by poor governance, chaotic land administration and corruption has fuelled speculative land grabs further pushing up land prices (Barker, 2014; Filer, 2011).

The ADB (2012) offer several suggestions for land reform in PNG, which, if implemented, would make it easier for SMEs to access commercial land at reasonable cost. These include investing in improvements to the administration of lands and reforming SABLs, including taking a more inclusive approach to the concerns of customary landowners. These issues are recognised, at least at a broad level of generality in the PNG DSP 2010–2030. Significant progress has however been undertaken through the National Land Development Program, since 2012 on a system dealing with customary land tenure. The first set of leases under the Voluntary Customary Land Tenure Reform Laws has been granted in Alotau, Milne Bay Province (Aldrich, 2014). Monitoring the collateral use of these land titles by SMEs is potentially an interesting future research project.

#### **4.7. Access to local and regional markets**

A problem for SMEs in Pacific Island states, such as PNG, is that markets are thin and lack institutional capacity (Vella, 2007). In more remote areas of PNG, markets are characterised by a series of localised village economies (Spohn, 2010). The ICCC (2009) notes that this presents its own problems. As the ICCC (2009:27) put it, “the structure of the economy of the more remote environments of PNG ... places considerable limits on the prices which can be charged due to the degree these local economies are unable to access capital, or simply cash with respect to trade”.

A further consideration is physically accessing PNG's localised markets. PNG's transport infrastructure was ranked 135 of 155 countries in a World Bank (2010) study. Several studies have noted that the mountainous nature of the PNG countryside impedes transportation, making the movement of goods logistically difficult and expensive (ADB, 2012; ICCC, 2009; Schaper, 2002). The ICCC (2009) points out that there is no road between the two main ports of Port Moresby and Lae, meaning that products can only be transported by air, which is very costly, or by sea which, although effective, is slow.<sup>16</sup> In 1996 almost one in five people in PNG lived at least two hours from the nearest road (Gibson & Rozelle, 2003). The ADB (2012) notes that accessibility has improved since the mid-1990s, but there is still an acute shortage of roads. The quality of roads is often low. The ADB (2012) notes that in 2010 only 3.5 per cent of PNG roads were paved, which is the lowest in the region. The PNG DSP 2010–2030 acknowledges that less than 30 per cent of roads are in good condition (Department of National Planning and Monitoring, 2010). The roads in the Highlands Region are poorer than the rest of PNG (ADB, 2012). Congestion and inefficiency in Port Moresby and Lae also add to the lag time for delivering products to regional markets, increasing the costs incurred by SMEs (ICCC, 2009).

The high transport costs involved in servicing regional markets imply that the returns required by SMEs servicing geographical locales outside the major urban centres would need to be higher. Higher transport costs, combined with lack of competitive pressure in remote areas, contributes to price differentials between rural and urban areas (ICCC, 2009). High transportation costs also restrict the ability of budding entrepreneurs in rural areas, particularly in the informal sector, accessing urban markets. Wambrauw (2013) found that in most cases in West Papua, informal traders living in remote areas only have a relatively small quantity to sell, which may only be enough to cover the transportation costs. As a result, they depend on middlemen and traders who come to their villages to purchase their products, even at low value. While this is likely to be the case in PNG as well, there are no specific studies addressing this issue similar to that of Wambrauw (2013) for PNG.<sup>17</sup>

A problem for SMEs accessing local and regional markets is the lack of adequate transport infrastructure. This is an often voiced complaint among SMEs and enterprises more generally in PNG. In the Report on the PNG Wholesale and Retail Industry Review, the ICCC (2009:55) notes: "Stakeholders voiced significant concerns over the quality of roads in PNG which prevented products from being distributed to remote rural areas in a cost effective manner". For respondents to the INA survey of firms in PNG, the poor conditions of roads and bridges was the most pressing government service concern for business in 2012, with no perceived improvement in quality since the 2007 survey (ADB, 2014).

An obvious way to assist SMEs to access markets is to improve transport networks. This is a key recommendation in ADB (2012) and Tebbutt Research (2014) and "establishing a transport network that links all of PNG" is a goal in the PNG DSP 2010–2030 (Department of National Planning and Monitoring 2010:65). Both ADB (2012:99–100) and the PNG DSP 2010–2030 (Department of National Planning and Monitoring 2010:65–68) contain a series of detailed strategies for improving transport networks.

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<sup>16</sup> The downside of sea transport from Lae to Port Moresby is that besides costs, there is an issue with perishable goods, such as vegetables. They can become rotten, or get damaged, due to the long and slow journey.

<sup>17</sup> We suggest below that this issue could be addressed in future research.

In terms of assisting SMEs to access markets, the PNG DSP 2010–2030 proposes to “encourage the development of designated facilities for SMEs to sell and market their products to the public and to tourists in various cities and towns of PNG” (Department of National Planning and Monitoring, 2010:101). Based on international experience, another way to assist SMEs, particularly those outside the urban centres, is through interventions that support local production systems (LPS) (Gonzalez, *et al.*, 2014; Schmitz, 1995). The basic idea is to assist firms in an LPS/region to act collectively in terms of activities such as joint purchases, training and marketing. By doing so, they can benefit from agglomeration externalities and coordination. Yet, another way to assist SMEs access markets may be through public intervention to correct market failure. This would entail the provision of training and courses designed to reduce information asymmetries and help SMEs overcome obstacles reaching preferred target markets (see for example, Gonzalez, *et al.*, 2014; World Bank, 2010a).

#### **4.8. Access to international markets**

Singh, *et al.* (2010) found that an increasing number of SMEs in Fiji and Samoa have become internationally oriented in their trading activities. However, the SME survey by Tebbutt Research (2014) indicates that relatively few SMEs in PNG are international oriented. Among respondents to that survey, just 6 per cent of SMEs exported goods and services and 29 per cent of SMEs imported goods and services. The average percentage of turnover generated from exports was 2.03 per cent and the average percentage of turnover spent on imports was 12.02 per cent. This is probably because PNG’s domestic market is much larger than that of smaller Pacific Island countries, and possibly offers sufficient domestic opportunities for many SMEs. Hence, there is less need to internationalise.

There are no studies on the challenges impeding internationalisation of SMEs in PNG. However, Singh, *et al.* (2010) contains a detailed study of issues faced by SMEs in the internationalisation process in Fiji and Samoa. There are other studies of the challenges facing SMEs during the internationalisation process in Asia that are potentially relevant to the PNG experience (see for example, Hashim, 2015). Based on the study by Singh, *et al.* (2010), it appears that many of the more general challenges impeding SMEs also hinder internationalisation. Among these, the most prominent are capital shortages/access to bank loans, transportation problems, lack of government support/lack of support from government agencies and lack of human capital. For example, Singh, *et al.* (2010) point out that in Fiji and Samoa, most of the land — around 80 per cent — is also communal owned and this makes it difficult for SMEs to access loans for international expansion.

In Fiji and Samoa, international expansion is also impeded by skill shortages (Singh, *et al.*, 2010), similar to those that are evident in PNG. These impediments are compounded by problems unique to internationalisation, such as language difficulties and issues surrounding cultural awareness. Lack of experience in international markets is also an impediment to international expansion. SMEs often find it difficult to get a ‘foothold’ in international markets due to lack of market and product knowledge (Hashim, 2015). SMEs are not as well equipped as large firms to accommodate the myriad challenges that emerge in the internationalisation process leading to higher rates of failure (OECD, 2004).

The PNG DSP 2010–2030 has, as one of its strategies, “develop plans and policies that encourage SMEs to focus on export markets” (Department of National Planning and Monitoring, 2010:101). There is much potential in PNG for capacity building around export-

oriented trade policies. PNG is a member of the Pacific Island Countries Trade Agreement (PICTA), the Pacific Agreement on Closer Economic Relations (PACER), Asia-Pacific Economic Cooperation (APEC) as well as being a member of the World Trade Organisation. In addition to being the largest recipient of Australian aid in the Pacific, PNG has also been the biggest recipient of European Union aid in the Pacific. The European Union is planning to expand the provision of trade-related assistance as a means to promote export-led growth, including capacity building around trade policy formulation and trade facilitation support (Ellis & Darko, 2013).

Given that Singh, *et al.* (2010) find that many of the issues impeding domestic expansion of SMEs, also impede SMEs entering international markets in Fiji and Samoa, they recommend addressing those “core” problems (such as access to credit and skill shortages). Other issues impeding internationalisation in PNG relate to quantity (supply-side constraints, for example, consistency or lack in supply) and quality (for example, meeting minimum international standards for exports, including quarantine inspections for plant and animal pests and diseases). A number of suggestions have been made in the literature to assist SMEs to better navigate international markets. One approach is public intervention through training programs to reduce information asymmetries and assist SMEs to overcome obstacles faced in international markets (see for example, Gonzalez, *et al.*, 2014; World Bank, 2010a). Another approach is matching grants to offset some of the costs of international expansion (Gonzalez, *et al.*, 2014; McKenzie, 2011).

#### **4.9. Utilities Infrastructure**

In addition to poor transportation infrastructure, poor utilities infrastructure is also an obstacle for SMEs in PNG. The major utilities infrastructure impediments centre on electricity and telecommunications (ADB, 2012). Respondents to the Tebbutt Research (2014) survey of SMEs in PNG indicated that “poor telecommunications, and network dropouts, can leave businesses out of contact with customers and suppliers” (p.151) and “power dropouts can halt production and require investment in backup power sources, such as diesel generators” (p.151). Respondents to the Tebbutt Research (2014) survey also reported that the water supply is often not consistent (p.151). These sentiments were shared by enterprises which made submissions to the ICCC PNG Wholesale and Retail Industry Review. Summarising the submissions it received, the ICCC (2009:57) reports:

Problems with electricity services in particular have led to damage to manufacturing equipment, and increased the costs of domestic manufacturing businesses. Businesses feel that they pay high costs for the use of these utilities and do not receive appropriate service returns. One particular concern is the electricity utility service delivery which has poor reliability with frequent outages, both planned and unplanned. This has necessitated whole and retail businesses to invest in self-generation backup”.

A United Nations report ranked PNG last among 40 Asia-Pacific countries in terms of a composite infrastructure index (ESCAP, 2010). The ADB (2012) notes that while telecommunications infrastructure in PNG is improving, it still lags other major Asia-Pacific countries. Meanwhile, the ADB (2012:35) describes “lack of access to affordable and reliable electricity” as “a critical constraint, noting that among Asia-Pacific economies PNG has the lowest access to electricity. As the ADB (2012) discusses, inadequate infrastructure constrains private investment, increases the costs of doing business and impedes economic growth.

The PNG DSP 2010–2030 has goals related to improved electricity, telecommunications and water infrastructure and a series of general strategies to realise these goals. The PNG DSP 2010–2030 advocates the use of public private partnerships in which public investment is made in partnership with communities, the private sector, aid donors, churches and NGOs. The ADB (2012) also contains a number of concrete suggestions for improving electricity, telecommunications and water infrastructure. These centre on two areas of action. One is raising public awareness of core public sector functions. The other is restoring, and reinforcing, the oversight role of official and unofficial watchdogs.

In the short to medium term, the ADB (2012) suggests attempts to improve performance should focus on improving governance arrangements, increased marketisation and, where possible, privatisation. Specifically, the ADB advocates provision of adequate budget allocations to essential public goods and services, giving state-owned enterprises (SOEs) responsible for these services a commercial orientation (improved governance arrangements, performance incentives and hard budget constraints), delivering community service obligations on a full-cost recovery basis, replacing state ownership with a robust regulatory framework and increased use of public private partnerships. In the medium to long-term, the ADB (2012) proposes the introduction of freedom of information legislation, strengthening the parliamentary committee structure, reviewing public sector terms and conditions and undertaking an independent review of the public sector. While these goals are designed with broader objectives in mind, realising them would also assist SMEs.

#### **4.10. Law and order**

Law and order is a major problem in PNG. PNG has one of the highest crime rates in the world (ADB, 2012; Foreign Policy, 2008). In the mid-2000s, Port Moresby was in the top five cities in the world for murder rates per capita (Foreign Policy, 2008). The INA survey of firms in PNG found that law and order was the number one concern of business in 2012 (ADB, 2014). Approximately 80 per cent of respondents to that survey reported that law and order problems had influenced their investment decisions (ADB, 2014). The five crimes that were reported to most often affect business, in order, were break-ins, petty theft by employees, property theft, vandalism and vehicle theft. The ICCC (2009) also reported that a major factor impeding the performance of firms in the wholesale and retail sector was the high levels of theft and other types of property crime. The SME survey conducted by Tebbutt Research (2014) also found (at p.155): “Many businesses had been directly and indirectly effected by crime” and “SME owners wanted more done by the government to maintain law and order so that this strain can be lifted”.

There are several costs to SMEs from weak law and order. Insurance premiums are higher and it is more difficult to recruit specialist international staff (ADB, 2014). Port Moresby is continually ranked as one of the world’s least liveable cities. In the most recent survey produced by the Economist Intelligence Unit (EIU) in August 2015, Port Moresby ranked 138 out of 140 cities in terms of a liveability index (EIU, 2015), at least in part on the back of poor law and order. The cost of maintaining security to protect property and staff becomes a significant cost of doing business. The ICCC (2009) reported that in the wholesale and retail sector, security costs incurred in protecting merchandise are approximately 1 per cent of annual sales and that sometimes as many as 30–35 security guards are needed to secure a single store. Shrinkage of stock, due to theft, is also a substantial cost for businesses in wholesale and retail. The ICCC (2009) estimates that annual shrinkage, due to theft, is approximately 1.5 per cent of turnover. Crime can also make it difficult to access markets.

For example, the ICCC (2009) found that losses incurred due to hold-ups on the Highlands Highway were a significant concern for business. Finally, poor law and order creates fear of crime. The fear of crime has an important effect on economic behavior, including where one lives, where one sends one's children to school and how one interacts with the local community that extends beyond whether one has actually been the victim of crime or not (Moore & Shepherd, 2006). Fear of crime can be as bad as crime itself because it undermines investor confidence and impedes investment. As a consequence, in the United Kingdom, reduction in fear of crime has become an important policy priority in itself (Brand & Price, 2000). Pulling this together, an AusAID estimate, reported in ADB (2012:43) suggests that the cost of poor law and order to business in PNG represents as much as 9 per cent of sales.

A consistent conclusion from surveys of businesses, including SMEs, is that improving law and order should be a priority (ADB, 2014; Tebbutt Research, 2014). The PNG DSP 2010–2030 has as a goal, improving law and order. The ADB (2012) contains a number of suggestions for doing this.

#### **4.11. Indigenous SMEs**

There is no universally accepted definition of an indigenous SME in PNG, but, in most cases, it is taken to mean those SMEs that are owned by the native inhabitants. Tebbutt Research (2014) provides a breakdown of the ethnicity/nationality of the largest owner of SMEs by sector. Overall, 80 per cent of SMEs are owned by indigenous Papua New Guineans. Indigenous ownership is particularly high in farming (98 per cent) and transport (97 per cent) and exceeds 80 per cent in commercial fishing, hospitality, professional services and retail. Indigenous Papua New Guineans are less well represented in manufacturing (64 per cent) and wholesale trade (65 per cent). While the indigenous population own most of the SMEs, foreigners or large multinationals own most of the big businesses.<sup>18</sup>

The more general issues confronting SMEs discussed above are applicable to indigenous owned SMEs, which should not be surprising given that indigenous owned SMEs make up 80 per cent of all SMEs by ownership. Some of the issues apply *a fortiori* to indigenous SMEs, including low levels of human capital, lack of training in HRM, access to finance, difficulties in acquiring technologies and difficulties accessing international markets. When PNG became independent in 1975, knowledge of business amongst indigenous Papua New Guineans was low. Most of the businesses were owned by Australians, many of whom left PNG when the PNG government did not allow them the option of maintaining dual citizenship.<sup>19</sup> Thus, business knowledge among indigenous Papua New Guineans was coming off a low base. It is particularly difficult for indigenous owned firms to access finance, given the land title system. There is a high concentration of indigenous owned SMEs in the informal sector, in which human capital and financial literacy is particularly low. Indigenous firms may not have the same contacts in international markets and face higher language or cultural barriers in internationalising, compared with firms owned by other ethnicities/nationalities. For example, it is likely that ethnic Chinese-owned SMEs would have distinct advantages over indigenous-owned SMEs in PNG in exporting to Mandarin-speaking markets in Southeast Asia. In the stakeholder meetings it was suggested that

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<sup>18</sup> Meeting with Des Yaninen, National Development Bank, Port Moresby, 30 June 2015. This observation is consistent with the fact that PNG does not recognise dual citizenship for individuals aged 18 years or above — see [http://www.multiplecitizenship.com/wscl/ws\\_PAPUA\\_NEW\\_GUINEA.html](http://www.multiplecitizenship.com/wscl/ws_PAPUA_NEW_GUINEA.html) (last accessed August 13, 2015).

<sup>19</sup> *Ibid.*

multinationals are particularly reluctant to transfer technology to indigenous-owned SMEs. This reflects a perception that indigenous SMEs are characterised by low levels of human capital and that the natives cannot easily be trained to work with technically demanding machinery.<sup>20</sup>

Various initiatives have been introduced to assist indigenous SMEs. Under the Investment Promotion Act, the PNG Government has identified and, by law, reserved certain small-scale business activities for 100% citizen-owned enterprises or 51% citizen-owned and controlled joint ventures (Investment Promotion Authority, 2014). Also, as discussed earlier, through the Stret Pasin Stoa SME business incubation program, the NDB is seeking to fill the skill gap and reduce the financing constraint on indigenous SMEs by assisting indigenous Papua New Guineans to become entrepreneurs and start their own business. The NDB has also been active in the organisation of business summits to assist indigenous entrepreneurs, such as the 2011 Indigenous Business Summit and the 2013 Madang Summit.<sup>21</sup>

#### **4.12. Involvement of women, youth and disadvantaged groups**

##### ***Involvement of women***

Women constitute about 30 per cent of employers in APEC economies for which data are available (JEC, 2003). Data on women-owned SMEs in APEC is patchy, but it appears that women-owned SMEs are growing faster than male-owned SMEs (JEC, 2003). Women owned firms are more likely to be micro firms employing less than five people and, in many cases, do not employ anyone.

The main evidence on female involvement in SMEs in PNG comes from the survey of SMEs by Tebbutt Research (2014). Men dominate SME ownership in PNG. Among SMEs in the formal sector, two-thirds (67 per cent) are wholly male owned, while just 8 per cent are wholly female owned. There are 26 per cent of SMEs in which females have at least 50 per cent ownership and 9 per cent of SMEs in which there is majority female ownership. There are 30 per cent of SMEs in which females have any ownership, be it majority or minority ownership. The percentage of SMEs with at least 50 per cent female ownership is pretty consistent across urban, rural and remote areas, but the percentage of SMEs with majority female ownership is higher in urban areas.

Women wholly or majority-owned SMEs are concentrated in commercial fishing, manufacturing and hospitality and are under-represented in construction, retail, wholesale and ICT. The management ranks in SMEs are also dominated by men, with 68 per cent of SMEs being wholly/majority male managed. In the informal sector, there is higher female representation, but male ownership still prevails. In the informal sector, 35 per cent of SMEs have at least one female owner, compared to 30 per cent in the formal sector, and majority female ownership of SMEs in the informal sector is 16 per cent, compared with 9 per cent in the formal SME sector (Tebbutt Research, 2014).

The under-representation of women in ownership/management ranks in SMEs has been explained in terms of a lack of opportunities for women more generally in the development process, often pushing women into the informal sector (Drucza & Hutchens, 2008; Wambrauw, 2013; Wang, 2014). As Drucza and Hutchens (2008:3) put it, “PNG women

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<sup>20</sup> Ibid.

<sup>21</sup> Ibid.

operate in ‘a man’s world’ which makes it hard for them to do business. Successful women entrepreneurs tend to be landowners, educated, have supportive husbands and family (or female friends) and have a strong character.”

Women involved in SMEs face many of the same difficulties as men; however the problems are often magnified or more intense for women. Women are disadvantaged in terms of human capital (ADB, 2012; Drucza & Hutchens, 2008; Wambrauw, 2013). Fifty per cent of adult women in PNG are illiterate (ADB, 2012). Just 37 per cent of university graduates in PNG are female (Department of National Planning and Monitoring, 2010). Lower levels of human capital translate into greater difficulties in addressing activities associated with operating a business, including more difficulty understanding government regulations (Drucza & Hutchens, 2008; Wambrauw, 2013) and reduced capacity to market products (Wambrauw, 2013). Problems with understanding government regulations are particularly acute for women in the informal sector, where human capital levels are lower, when grappling with the regulations around formalisation (Ahmad, 2011; Drucza & Hutchens, 2008).

While access to finance is a problem for all SMEs, there are gender inequities in access to finance (ADB, 2012; Drucza & Hutchens, 2008). Women in PNG have lower levels of financial literacy than men, on average, making it more difficult for women to understand the financial reporting requirements of banks and resist pressure from *wantoks* (Drucza & Hutchens, 2008). Women tend to face greater pressure from *wantoks* for money, making it difficult for them to save or meet loan repayments (Drucza & Hutchens, 2008). Women face increased difficulties with providing land as collateral for loans (ADB, 2012). Drucza & Hutchens (2008) note that often customary land tenure in PNG passes under patrilineal ownership, such that, while it is not universal, widows can be alienated from their deceased husband’s land by his *wantoks* and left with no land as security. There are exceptions to this: PNG is not entirely patrilineal. There are many areas, which are matrilineal, where women have “power” in terms of land ownership. In matrilineal societies, women have the advantage to engage in business having the right to the land, but other constraints may outweigh this advantage, hence the lack of involvement by women.

Wang (2014) presents a detailed study of the problems facing women working in the informal sector in PNG. Wang (2014) notes that the fact women are disproportionately represented in the informal sector often makes it difficult for them to meet financial institutions’ lending criteria (see also Drucza & Hutchens, 2008; Wambrauw, 2013). Being concentrated in the informal sector also presents other problems for women, such as being more reliant on transport infrastructure to sell their products (Anderson, 2008) and facing higher levels of theft (Drucza & Hutchens, 2008; Wang, 2014).

Much research suggests that informal networks are vital to SME success (see for example, Ambler & Witzel, 2004). Women lack fully developed informal networks and social ties (Allison & Wei, 2013). Particularly, in a predominantly patriarchal society, such as PNG, the gendered division of labour means that women have less time to devote to building networks (Drucza & Hutchens, 2008; Tebbutt Research, 2014). There are also strong cultural norms in PNG that make it more difficult for women to become involved in business in the first place. For example, it was noted by one female entrepreneur interviewed by Tebbutt Research (2014:156) that “she was fortunate that her husband supported [her] as without his approval to start her business it would not have been culturally acceptable for her to proceed”.

At a general level, the PNG DSP 2010–2030 expresses a commitment to improving gender equality. This entails, among other things, improving the female to male enrolment rate that will result in higher levels of human capital among women. Programs have been introduced to increase female participation in the economy, including entrepreneurial skills development and training in basic skills such as cooking, handcrafts and sewing (Drucza & Hutchens, 2008; Wambrauw, 2013). Further opportunities are needed for gender sensitive business incubators and training. Many women in PNG lack confidence and are socially conditioned not to attract attention to themselves. Hence, such training opportunities need to be culturally sensitive as well (Drucza & Hutchens, 2008).

There have been some attempts to develop women’s business forums to address lack of opportunities to network and these have proved successful (Drucza & Hutchens, 2008). Members of parliament have PGK1 million in funds at their discretion that they can spend on providing aid to female entrepreneurs to develop their own business. Provincial administrators also have funds at their disposal to assist female-led businesses.<sup>22</sup> With financial support from Australia, Women in Business Initiative was also launched in 2013, with the objective of improving opportunities for women to move into senior management positions, better equip workplaces to deal with the consequences of family and sexual violence and establishing a mentoring program that connects Australian business women with their counterparts in PNG (Blacklock, 2013).

Studies suggest that women are more likely to obtain capital through microfinance, while men obtain capital through formal lenders (FAIS, 2008). The ADB (2015) is focusing on improved female access to microfinance and programs to improve financial literacy among women in PNG. In 2014, the PNG Women’s Micro Bank, which is the first female only micro bank in the Pacific, and only the sixth in the world, was established.

### ***Involvement of youth***

Data on youth involvement in SMEs is not available.<sup>23</sup> There are a number of programs that seek to promote youth involvement in SMEs. The National Youth Development Authority (NYDA) provides business training for young people — aimed primarily at people aged 25 years or less.<sup>24</sup> The NYDA also partnered with the SME Corporation (previously known as the Small Business Development Corporation) to pilot the “Entrepreneurship Development Program”. This program, which was offered between 2008 and 2012 in selected schools, consisted of 9 modules incorporated into the years 9–12 curriculum, which educated students on various aspects of running a small business. The SME Corporation is now exploring the possibility of offering such a program at the national level.<sup>25</sup> The SME Corporation also runs other programs to encourage youth involvement in business, such as “Know your Business.”<sup>26</sup> Beyond these general programs to assist youth involvement in small business, there are programs in particular sectors. For example, to promote youth involvement in

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<sup>22</sup> Meeting with Petrus Ralda, SME Corporation, Port Moresby, 30 June 2015.

<sup>23</sup> This assumes youth to be aged 25 years or less, consistent with the definition used by the National Youth Development Authority in PNG. Meeting with Dorcas J. Mileng, National Youth Development Authority, Port Moresby, 2 July 2015.

<sup>24</sup> Ibid.

<sup>25</sup> Meeting with Petrus Ralda, SME Corporation, Port Moresby, 30 June 2015.

<sup>26</sup> Ibid.

agricultural related SMEs there are four agricultural colleges that train young people in agribusiness.<sup>27</sup>

### ***Involvement of disadvantaged groups***

In the stakeholder consultation, no clear definition emerged of what constitutes a disadvantaged group in the PNG context. One of the stakeholders suggested that the disadvantaged groups were women, people with disabilities and communities living in remote areas with little, or no, access to transport or communication infrastructure.<sup>28</sup> Other stakeholders also couched disadvantage in terms of locational disadvantage.<sup>29</sup>

Issues surrounding the involvement of women in SMEs are discussed above. In terms of location, in the stakeholders meetings it was suggested that people in some regions (for example, Highlands) are culturally more business-minded, which is why Highlanders own more than 60 per cent of SMEs.<sup>30</sup> Clearly, given the geographical make up of PNG, some communities are disadvantaged in starting, and running, SMEs in terms of transportation, utilities and access to ICTs. These issues are discussed in detail above.

Locational disadvantage can also be viewed in terms of operating in thin markets. For example, in the stakeholder meeting focused on SMEs in the tourism sector, it was noted that disadvantaged groups were almost all the tourism business that are operating outside the tourism hotspots. Provinces such as Milne Bay, New Ireland and Eastern Highlands, as well as the city of Port Moresby, are relatively more exposed to tourism than others. Provinces such as Manus, West Sepik, Western Highlands and West New Britain are among the regions least exposed to tourism.<sup>31</sup> The more general issues related to thin markets are addressed above in the context of regional markets.<sup>32</sup>

## **5. SUGGESTIONS FOR FUTURE RESEARCH**

In lieu of a conclusion we outline some of the key areas that we believe could fruitfully be the subject of further research. One of the main obstacles to compiling this report has been the lack of data on many aspects of SMEs. As a starting point, perhaps the most pressing need is to establish a comprehensive baseline study, to determine the actual number and extent of SMEs and their composition. Tebbutt Research (2014) gave estimates that highlight the need for more detailed survey across the country. From the stakeholder meetings, we know the World Bank is collecting some data, but more data is needed.<sup>33</sup>

At the same time, there is a need for much more detailed data on particular types of SMEs such as SMEs in the informal sector and indigenous SMEs. Based on feedback on an earlier version of this study, it is quite possible that the Tebbutt Research (2014) survey

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<sup>27</sup> Meeting with Brian Wapi, Department of Agriculture and Livestock, Port Moresby, 30 June 2015.

<sup>28</sup> Meeting with Richard Yakam, Department of Trade, Commerce and Industry, Port Moresby, 30 June 2015.

<sup>29</sup> Meeting with Des Yaninen, National Development Bank, Port Moresby, 30 June 2015.

<sup>30</sup> Ibid.

<sup>31</sup> Meeting with Joycelyn Pipike, PNG Tourism Promotion Authority, and Joybertina Piasinu, Office of Tourism Arts and Culture, Port Moresby, 2 July 2015.

<sup>32</sup> One can also think of locational advantage in terms of the urban-rural divide. Areas closer to urban centres have an advantage in terms of access to market than those away from urban areas.

<sup>33</sup> Meeting with Richard Yakam, Department of Trade, Commerce and Industry, Port Moresby, 30 June 2015.

underestimates the true number of non-indigenous SMEs. A stocktake of non-indigenous SMEs is needed to clarify exactly how many of them there are and the issues they face. Similarly, the Tebbutt Research (2014) study was only based on a relatively small number of SMEs in the informal sector. A broader-based survey of SMEs in the informal sector is needed to provide a more comprehensive picture.

Research on SMEs in PNG would also benefit immensely from the collection of a longitudinal dataset on a representative sample of SMEs. This would provide a snapshot over time of SME activity, but also provide a rich source of data for conducting many of the suggestions for econometric studies below. It is important that some time be put into the design of such a longitudinal survey to ensure that it collects information on the full range of variables that are likely to be needed. If it was possible to collect matched employer-employee data, even for a sub-sample of firms surveyed, this would facilitate further research on specific questions that we outline below. In the stakeholder meeting with the World Bank and International Finance Corporation, the potential of getting the unit record data (in anonymous form) from Tebbutt Research (2014) or similar surveys was discussed. Even without collecting more data, more could be made of existing surveys such as this.

Another more general suggestion for future research relates to the government's SME policies and initiatives to assist SMEs. There is virtually no empirical evidence at all on the efficacy of the government's SME policy. Similarly, there are no studies that have evaluated the success or failure of government initiatives in promoting SMEs, making this an important topic for future research. The PNG government appears to be focusing its development endeavours within the NSRSD (Department of National Planning and Monitoring, 2014). An important topic for study is the effect of green growth policies articulated in the NSRSD on SMEs. How effective are the initiatives? How are SMEs responding to such initiatives?

More generally, most of the topics discussed in this paper could benefit from further empirical studies. There are very few econometric studies on SMEs in PNG or on broader issues of importance to SMEs, such as the costs of crime or road transportation. With respect to the latter, Gibson and Rozelle (2003) is an exception, but the findings are now out-dated. Even on topics for which there are studies for other Pacific Island countries, such as the barriers impeding internationalisation (see for example, Singh, *et al.* 2010), there are no studies for PNG. Next we make specific suggestions under the same subheadings as Section 4.

### **5.1. Access to finance, financial literacy and financial inclusion**

One of the issues identified by Tebbutt Research (2014) is that SMEs in PNG have low levels of trust in the banks. Future research is needed to identify the reasons for low levels of trust in banks in PNG. Such research should examine why SMEs do not trust banks, how that lack of trust is impacting on their businesses and how trust in banks can be improved. Another useful area to explore would be the determinants of SME satisfaction with their banking relationships. The approach employed in studies such as Madill, *et al.* (2002), which is a study of SME satisfaction with their banks in Canada, could be used. On the other hand, it is also possible that banks do not trust SMEs — in which case a study of the supply side constraints would be informative.

There is evidence from West Papua that lack of access to finance among informal traders is an impediment to business (Wambrauw, 2013). While one may infer that this is also the case

in PNG there are a lack of studies. Future research could use PNG as a case study to replicate Wambrauw's (2013) study for PNG or undertake comparative research on access to finance, and how that is affecting their business, in West Papua and PNG.

There is a perception that microfinance has failed to deliver to low-income households in PNG (Spohn, 2010). But there is a lack of studies of the effectiveness of microfinance using rigorous methods. The efficacy of microfinance in PNG could be analysed using randomised control trials or longitudinal data. Topics that could usefully be explored are whether microfinance facilitates new business opportunities or is spent on consumption; does microfinance increase overall borrowing or just crowd out other informal lending sources and does it facilitate female entrepreneurship? There is a vast literature on microfinance for other countries addressing issues such as these (see for example, Islam, *et al.* 2015).

PNG's newly created female only micro bank provides a good opportunity to explore the role of microfinance in facilitating female entrepreneurship and the effectiveness of the bank in promoting female entrepreneurship. Because it is the first female only micro bank in the Pacific and one of the first in the world, a study of how effective it is, is likely to have broader interest in the development community beyond PNG. A study could evaluate its progress since inception; or compare the success of members and non-members of the bank using quantitative techniques such as Difference-in-Differences estimation (DID).

One of the major elements of the World Bank's SME access to finance project in PNG is a risk-sharing facility that will partially guarantee a portfolio of loans to SMEs (see Ellis & Darko, 2013; World Bank, 2015). The objective is to assist SMEs to overcome problems associated with provision of collateral. Future research could examine how successful the risk-sharing facility has been in improving access of SMEs to loans.

Future research could examine the financing constraints on SMEs in PNG more generally. Beginning with Fazzari, *et al.* (1988), there are a number of studies that estimate financing constraints on firms (Beck & Demirguc-Kunt, 2006; Beck, *et al.*, 2006, 2008; Blundell, *et al.*, 1996; Bond & van Reenan, 1999, could serve as reference points).

Finally, it was suggested earlier in this study that crowd funding may provide an alternative source of capital for SMEs. Future research could examine the potential for crowd funding as a viable alternative for SMEs in PNG in more detail.

## **5.2. Access to technology, technological transfer and industry linkages**

Our study has identified that there is very little information on the role of technological transfer in SMEs in PNG. This is an important gap in the literature that could be addressed in future research.

The literature identifies that there is a lack of linkages between big businesses and SMEs in PNG. The reasons why there is a lack of linkages between big business and SMEs in PNG, however, is not clearly spelt out in the literature. This is another important topic for future research.

Various initiatives, such as the use of subsidised credit or tax credits on facilitating technological transfer and promoting industry linkages between SMEs and big business have

been examined in other countries (see for example, Alvarenga, *et al.*, 2012). Future research is needed to examine policies, such as these, to promote industry linkages in PNG.

### **5.3. HRM and training issues**

There are several fruitful topics for investigation related to HRM and training issues in PNG SMEs. One could examine variation in the adoption of HRM practices in PNG SMEs using survey data (Bacon & Hoque, 2005; Wiesner & Innes, 2010) or in-depth case studies (Duberley & Walley, 1995). One could examine the determinants of work related training in PNG SMEs. There are a number of such studies for other countries that could serve as a guide (see for example, Jones, 2005; Reid & Harris, 2002).

Ideally, such studies should use matched employer and employee data (see Mishra & Smyth, 2015). Related to this, studies could examine the potential for high-performance work practices in PNG SMEs (Drummond & Stone, 2007) and variation in take-up rates (see Qiao *et al.*, 2015). Studies could also explore the link between variation in HRM practices and firm performance in PNG SMEs (Storey, 2004).

### **5.4. ICT Issues**

ICT is another topic on which there is virtually no research in PNG pertaining to SMEs. The obvious starting point is a study dedicated to examining the adoption of ICT in SMEs. Such a study could examine take up rates of ICT in SMEs and what explains variations in ICT use across SMEs in PNG. Harindranath, *et al.* (2008), which is a study of adoption of ICT in SMEs in the United Kingdom, provides a useful point of reference.

### **5.5. Regulation issues and administrative burden on SMEs**

Future research could examine barriers to entry and the cost of regulation, for SMEs in PNG. One topic could be to examine econometrically, the characteristics of those SMEs that register for the formal sector compared with the characteristics of SMEs in the informal sector. There are several such studies for other countries that could serve as reference points (see Klapper, *et al.*, 2006; Bruhn, 2011; Cavalcanti, *et al.*, 2008; Yakovlev & Zhuravskaya, 2008). This would shed additional insights into the entry barriers confronting SMEs. Another topic on which there is no research is the reasons why SMEs would like to formalise in PNG. We know from previous research that SMEs in the informal sector are subject to corruption and police harassment in PNG (Kavan, 2013). Future research is needed on the effect of corruption and police harassment in the informal sector on the performance of SMEs. As noted earlier, the PNG tax policy is undergoing a comprehensive review. A question that will need to be addressed is the effect of any tax policy change on SME businesses and how much of a hindrance are the tax policies, regulations and rates to SME businesses and their future investment decisions.

### **5.6. Access to, and availability of, commercial land**

The land tenure system, including its effect on ability of budding entrepreneurs to borrow, is one topic on which there is a number of studies for PNG (see for example, Chand, *et al.*, 2014; Filer, 2011; Yala, 2006; Yala & Duncan, 2006). There are, however, no studies specifically examining how access to commercial land affects the performance of SMEs in PNG. This is a topic that could be addressed in future research.

### **5.7. Access to local and regional markets**

There is virtually no information for PNG on how local and regional markets operate, particularly in the informal sector and in remote areas. Wambrauw (2013) found that in most cases in West Papua, informal traders living in remote areas only have a relatively small quantity to sell, which may only be enough to cover the transportation costs. As a result, they depend on middlemen and traders who come to their villages to purchase their products, even at low value. While this is likely to be the case in PNG as well, we do not know. Future research is needed to address this issue, similar to that of Wambrauw (2013), for PNG.

This study has identified that one critical challenge for PNG suppliers, especially those supplying agricultural goods, is the requirement to meet specific quality standards as per international practice. Even if PNG suppliers manage to meet quality standards, another issue is ensuring consistency of supply over time. How successful PNG suppliers are in meeting these challenges needs to be researched within the SME agenda. Such research should also aim to make recommendations to assist SMEs in PNG to better address these challenges.

### **5.8. Access to international markets**

An important area of further study could be to examine the barriers to exporting and internationalisation that SMEs in PNG face. A starting point could be a more descriptive stocktake of the impediments to exporting/internationalisation (see for example, Hashim, 2015).

This could be followed by a study of the characteristics of those PNG SMEs that export and those that do not (Bernard & Jensen, 2004; Hollenstein, 2005; Singh, *et al.*, 2010). This could provide insights into “why some firms export” (Bernard & Jensen, 2004). The results could be compared to the findings in Singh, *et al.* (2010) for Fiji and Samoa.

Future research needs to address how do issues impeding internationalisation in PNG such as quantity (supply-side constraints: for example, consistency or lack in supply) and quality (for example, meeting minimum international standards for exports) constraints play out? How effective are policies to address these constraints *or* how effective would policies to address these constraints be in the PNG context? We have discussed policies such as training programs to reduce information asymmetries and assist SMEs to overcome obstacles faced in international markets. Research is needed to evaluate how these policies could be implemented to reduce impediments to exporting in the PNG case.

### **5.9 Utilities infrastructure**

Improved performance of SOEs responsible for providing crucial services is important to assist SME development. However, there is very little hard empirical evidence on the performance of SOEs in PNG, although the general consensus is that they are underperforming (see for example, ADB, 2012). Also, there was a lot of concern voiced in stakeholder meetings that poor performance of SOEs is undermining the performance of SMEs. However, this is largely anecdotal. Future research could therefore examine the performance of utilities infrastructure on SME performance. There is also a need for further studies to assist our understanding of the benefits of effective access to infrastructure, building on Gibson & Rozelle (2003). This could include more detailed studies of transportation costs (Lall, *et al.*, 2009).

### **5.10 Law and order**

There is a need for studies of the costs of crime in PNG. Such studies should ideally use a willingness to pay (WTP) methodology. There are many examples using the WTP method to get estimates of the cost of crime in other countries (Cohen, 2009). While these issues transcend SMEs, the findings would help inform SME policy priorities.

### **5.11. Indigenous SMEs**

This study has identified that indigenous SMEs in PNG are often disadvantaged vis-à-vis non-indigenous SMEs; for example, with respect to human capital levels, access to finance, technological transfer and internationalisation. These conclusions, though, are mainly based on anecdotal evidence and casual observation. As a starting point, future research is needed to document the level of disadvantage incurred by indigenous SMEs. Other research could examine how different characteristics of indigenous and non-indigenous SMEs (for example, with respect to access to finance and human capital levels), affect financial performance.

This study has referred to various initiatives to promote indigenous SMEs, such as the NDB Stret Pasin Stoa SME business incubation program. Future research is needed to evaluate the efficacy of such programs with a view to refining them where needed.

### **5.12 Involvement of women, youth and disadvantaged groups**

One important issue considered in this study is barriers to women entering the SME sector. There are a lack of studies for PNG. There are useful studies of the barriers confronting female entrepreneurs in other countries (see for example, Allison & Wei, 2013), the methods employed in which could be used in a study for PNG.

Another suggestion for future research in this area is to explore the success of the Women in Business initiative. Future research could evaluate its progress since inception; or compare progress of Women in Business members and non-members using DID. A similar suggestion is made above to examine the effectiveness of PNG's first female only micro bank.

There is no information at all on the role of youth or disadvantaged groups, such as the disabled, in SMEs in PNG. There is not even any data on the involvement of these groups in SMEs in PNG. Future research is desperately needed to document the involvement of both groups, the barriers both groups face to getting involved in SMEs and make recommendations about policies needed to promote involvement of both groups. Such research could also examine the potential benefit to individuals from both groups from becoming more involved in SMEs and the potential benefits to SMEs themselves.

### **5.13 Suggestions by stakeholders**

These suggestions for future research encompass the suggestions made by stakeholders. There were no common themes among the stakeholders in terms of one area being more in need of future research than another. Most of the stakeholders focused on a set of challenges SMEs in PNG face and the above suggestions for future research take account of these. One suggestion for future research not mentioned thus far is the factors that determine the survival of businesses in the SME sector. The representative from the NDB thought this would be a useful study and there is no similar study to this point for PNG.<sup>34</sup>

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<sup>34</sup> Des Yaninen, National Development Bank, Port Moresby, 30 June 2015.

#### **5.14. Priority areas for future research**

In this section we have made a number of suggestions for possible future research relating to SMEs in PNG. We suggest that the starting point for future research, and the study that should be prioritised, is the collection of more comprehensive data on SMEs, building on the groundwork done by Tebbutt Research (2014). Related to this, as a next first step, serious consideration should be given to the collection of a longitudinal dataset on SMEs. We suggest further data collection is an absolute priority for two reasons. One is that accessing primary data on SMEs is a major problem in PNG. It was suggested in the stakeholder meetings that lack of data regarding SMEs is a major obstacle to the government formulating policies around SMEs.<sup>35</sup> The other is that with more comprehensive data, a number of the other suggestions for future research can be tackled.

Beyond the collection of more comprehensive data, some of the areas touched on in this study are in need of study more than others. In particular, there are a few issues relating to SMEs on which there is very little, or no, empirical evidence at all. Most pressing is the role of ICT and technological transfer in SMEs and the involvement of youth and disadvantaged groups. Our coverage of the latter, in particular, in this study is very patchy, simply because there is virtually no information at all, even from relevant stakeholders.

Next in the “to do” list may be studies providing program evaluation. Examples are the Women in Business initiative, the first female only micro bank and policies to promote indigenous SMEs. These programs provide an opportunity to evaluate key initiatives in PNG and provide feedback on the effectiveness of key policies. Each of these programs also relates to key outcomes for important groups in PNG society and groups which the government is encouraging to become more involved in SMEs.

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<sup>35</sup> Meeting with Richard Yakam, Department of Trade, Commerce and Industry, Port Moresby, 30 June 2015.

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**APPENDIX: LIST OF STAKEHOLDERS CONSULTED**

**List of stakeholders with whom we consulted, Port Moresby, June 30-July 2, 2015**

<b>Date</b>	<b>Name</b>	<b>Organisation</b>	
30 June 2015	Richard Yakam	Department of Trade commerce and Industry	
30 June 2015	Des Yaninen	National Development Bank	
30 June 2015	Petrus Ralda	Small Business Development Corporation / SME Corporation	
30 June 2015	Brian Wapi	Department of Agriculture and Livestock	
30 June 2015	Stefanie Stallmeister	The World Bank Group	Group meeting
30 June 2015	Jonathan Kirkby	International Finance Corporation	
01 July 2015	Charles Yala	Director, NRI	
02 July 2015	Joycelyn Pipike	PNG Tourism Promotion Authority	Group Meeting
02 July 2015	Joybertina Piasinu	Office of Tourism Arts and Culture	
02 July 2015	Eslon Wafihwaieh	Department of Fisheries	Group Meeting
02 July 2015	Geoff Puri	Department of Fisheries	
02 July 2015	Yurendra Basnett	Asian Development Bank	
02 July 2015	Dylan Roux	Australian High Commission	Group Meeting
02 July 2015	Simon Roz	Australian High Commission	
02 July 2015	Dorcas J. Mileng	National Youth Development Authority	

