



Pacific E-commerce Initiative

National E-commerce Assessment

December 2020

Papua New Guinea

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ISBN 978-982-202-070-0


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This publication was commissioned as an independent consultancy report at the initiative of the Government of Papua New Guinea, the Pacific Islands Forum Secretariat (PIFS), and the Melanesian Spearhead Group (MSG) Secretariat. The publication is supported by the TradeCom II Programme Management Unit (TCII PMU) an OACPS managed and European Union (EU) funded Programme. While this assessment draws on the United Nations Conference on Trade and Development (UNCTAD) eTrade Readiness Assessment methodology, UNCTAD has not been involved in conducting this report.

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Foreword by Soroi Eoe, Minister for Foreign Affairs and International Trade, Papua New Guinea

We recognize the contribution that e-commerce can make towards expanding domestic commerce, diversifying our economy and promoting exports of our products. E-commerce, however, should not be thought of as a panacea to improving a country's trade capacity but rather to complement current efforts to address some of the binding constraints that countries faces with conducting trade in a modern global economy.

It is in this context that we also acknowledge the role of e-commerce in overcoming some of the adverse challenges with our country's integration into the global economy such as our distance to major markets, high trade costs and lack of economies of scale.


E-commerce is also an important source of employment it allows people and our MSMEs, who are in the most remote parts of the world to connect to markets and therefore can play an important role in PNG's economic development. Therefore, in order to maximise the potential opportunities from e-commerce, it is important to address constraints to e-commerce development in a comprehensive and coherent manner covering policy and legislation, trade facilitation and logistics, institutional and physical infrastructure; and human resource capacity issues.

I, therefore, wish to commend our development partners such as the PIFS, MSG Secretariat, European Union who have assisted with the national e-commerce assessment for PNG. This assessment provides baseline data and information that will feed into the national policy process on how we move forward with e-commerce in country, in the region and at the international level.

Last but not least, I wish to thank all agencies and persons who have contributed to the national e-commerce assessment and give assurance of my Ministry's commitment to work continue working with you and key partners who wish to implement the recommendations therein to promote e-commerce for the prosperity of the people in PNG and the rest of the region.

Soroi Eoe, MP

Minister for Foreign Affairs and International Trade



Foreword by Dame Meg Taylor, Secretary General, Pacific Islands Forum Secretariat

E-Commerce features as a key regional priority in the Pacific Aid-for-Trade Strategy 2020-2025. As part of this mandate, the Pacific Islands Forum Secretariat has taken the lead in supporting Forum Islands Countries in their efforts to take an active part in the global digital revolution.

Indeed, E-Commerce presents an unprecedented opportunity to increase trade of the FICs, narrow distances and reduce trade costs among Forum Members, and between the Blue Pacific and the rest of the world. If conditions are right, E-Commerce can provide the impetus for Members to explore new ways of doing business and trading and to increase the diversification of their economies towards emerging sectors. Importantly, strengthening E-commerce readiness has become essential particularly as the world continues to grapple with what a post-COVID economy work look like and operate as.

Major investments in fiber-optic submarine cables across the region has made the internet faster, more reliable and affordable, but the extra capacity has not yet been fully utilised.

From its beginning in 2017, the Pacific E-commerce Initiative promoted by the Secretariat has progressively strengthened, thanks to the steadfast commitment of our Members and the support of like-minded technical agencies and donor partners. The direction provided by our Members, for all Forum Island Countries to benefit from national assessments as the first step towards developing a Regional E-Commerce Strategy, has been progressed significantly.

Following UNCTAD's methodology, the report focuses on seven key areas of critical importance for cross-border and domestic E-Commerce development:

- E-Commerce policies and strategies;
- Legal and regulatory frameworks;
- ICT infrastructure and E-Commerce support services ecosystem;
- Trade facilitation and logistics ecosystem;
- Payment solutions for E-Commerce;
- Access to financing initiatives in E-Commerce; and
- E-Commerce skills development.

We trust that the report will guide the uptake of E-Commerce in Papua New Guinea in the coming years. PIFS is bound to support its Members in prioritising the digitalisation of government and businesses in their national development and seek the needed resources to fully benefit from their participation in the internet revolution.

This E-Commerce Assessment for Papua New Guinea was made possible through the financial assistance received from TradeCoM II - an OACPS Secretariat managed and European Union (EU) funded programme. I thank the OACPS Secretariat and the EU for their support.

Meg Taylor, DBE

Secretary General of the Pacific Islands Forum

Acknowledgements

The National E-Commerce Assessment for Papua New Guinea was prepared by Paul Baker and Pablo Quiles from International Economics Consulting Ltd, under the overall guidance and supervision of Her Excellency Ambassador Mere Falemaka and Dr Andrea Giacomelli from the Pacific Islands Forum Secretariat (PIFS) and Ms Sovaia Marawa from the Melanesian Spearhead Group (MSG) Secretariat.

In Papua New Guinea, the Assessment team wishes to express its sincere gratitude to the staff of the National Trade Office within the Ministry of Foreign Affairs and International Trade.

The EU provided funding for this assessment, through the OACPS Secretariat and the TradeCom II Facility. The Assessment team would like to show its appreciation of the TradeCom II PMU Staff for the continued support during the project implementation.

The Assessment benefitted from inputs by numerous institutions from both the public and private sectors. The Assessment team wishes to thank all individuals who responded to the survey questionnaires, and took part in the virtual bilateral and group consultations in March–October 2020. A list of the persons consulted is provided in Annex I.

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Abbreviations

ACP	Africa, Caribbean and the Pacific
ADB	Asian Development Bank
ANZ	Australia and New Zealand
APEC	Asia Pacific Economic Cooperation
APNG-2	Australia – Papua New Guinea
B2C	Business-to-Consumer
BPNG	Bank of Papua New Guinea
BSP	Bank South Pacific
CIC	Community ICT Centres
CSCS	Coral Sea Cable System
DB	Doing Business
DCI	Department of Commerce and Industry
DFAIT	Department of Foreign Affairs and International Trade
DoWI	Department of Works and Implementation
EFTPOS	Electronic Funds Transfer at Point of Sale
EGDI	E-Government Development Index
EU	European Union
FICs	Forum Island Countries
GB	Gigabyte
Gbps	Gigabyte per second
GNI	Gross National Income
GSMA	Global System for Mobile Association
ICT	Information and Communication Technology
IGIS	Integrated Government Information System
ITC	International Trade Centre
ITU	International Telecommunication Union
KCH	Kumul Consolidated Holdings
KTH	Kumul Telikom Holdings
LSCI	Linear Shipping Connectivity Index
LTD	Loan-to-Deposit
LTE	Long-Term Evolution
MCI	Ministry of Commerce and Industry
MSG	Melanesian Spearhead Group
MSME	Micro, Small and Medium-sized Enterprise

NBP	National Broadband Policy
NEC	National Executive Council
NES	National Export Strategy
NICT	National Information and Communication Technology
NICTA	National Information and Communication Technology Agency
NTN	National Transmission Network
NTO	National Trade Office
NTP	National Trade Policy
OECD	Organisation for Economic Co-operation and Development
PFIP	Pacific Financial Inclusion Programme
PGK	Papua New Guinean Kina
PIFS	Pacific Islands Forum Secretariat
PNG	Papua New Guinea
PNGPCL	Papua New Guinea Ports Corporation Limited
PPC-1	PIPE Pacific Cable
PPP	Public-Private Partnership
RMIT	Royal Melbourne Institute of Technology
SME	Small and Medium-sized Enterprise
SMEC	Small Medium Enterprises Corporation
TCII	TradeCom II
TFA	Trade Facilitation Agreement
TRA	Trade Related Assistance
TVET	Technical, Vocational, Education and Training
UAS	Universal Access Service
UN	United Nations
UNCDF	United Nations Capital Development Fund
UNCITRAL	United Nations Conference on International Trade Law
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UPU	United Postal Union
USD	United States Dollar
WB	World Bank
WTO	World Trade Organisation

Main Findings and Recommendations

Main Findings	Main Recommendations
E-commerce Policies and Strategies	
<p>The Government of Papua New Guinea is stepping up its efforts to create a more digitally connected and inclusive society, including through the adoption of ICT policies aiming to promote the affordability of internet across the country. The Government also recognises the importance of E-commerce as a tool for development and, as indicated in the National Trade Policy, is putting in place the institutional framework to make sure that its citizens can take advantage of all its benefits.</p>	<p>Promote the benefits of engaging in E-commerce through sensitisation and awareness-raising events. Develop an E-commerce Strategy, and a detailed implementation roadmap to guide the course of E-commerce development. Establish an E-commerce committee to promote engagement and buy-in from national stakeholders. Engage the private sector through an E-commerce committee. Improve the systematic collection of E-commerce statistics.</p>
ICT Infrastructure and E-commerce Support Services Ecosystem	
<p>The cost of internet in Papua New Guinea, one of the highest in the world outside of Sub-Saharan Africa, is hampering the further development and expansion of E-commerce, especially in rural areas. The limited network coverage, linked to the high cost of the service, explain why only one in nine persons have access to the internet. In 2019, the average cost of 5GB in a fixed-broadband subscription was nearly USD 65, representing 30.7% of the average monthly income. But progress is being made: two major infrastructural projects – the Coral Sea Cable System and the Kumul Submarine Cable – are foreseen to better link the country both internationally and domestically, reducing the cost of service by 20%.</p>	<p>Further expand the network of 3G and 4G towers, including through subsidies provided through the Universal Access Fund. Encourage telecommunications service providers to cooperate on network/infrastructure sharing in remote areas to benefit from cost-sharing, as well as improving last-mile connectivity. Introduce broadband packages and plans specifically designed for E-commerce firms and small businesses. Take stock of existing ICT-enabled services in the private sector to ensure better management, raising awareness and timely provision of technical support when needed.</p>
Trade Logistics and Trade Facilitation Ecosystem	
<p>The country's complex topography poses significant challenges in terms of logistics, including for E-commerce. With weak road network, poorly equipped ports, and deteriorating airports, the poor logistics and transport infrastructure is one of the main challenges facing the private sector. In terms of trade facilitation, the country's lengthy customs procedures are a burden for the private sector, although the trading environment has improved thanks to the adoption of ASYCUDA. The lack of an Electronic Single Window and a low de-minimis customs value hamper E-commerce.</p>	<p>Leverage the functionalities of ASYCUDA World to progress work towards a national Electronic Single Window. Continue upgrading the transportation infrastructure to enhance connectivity and lower shipping costs. Introduce a trade facilitation roadmap with innovative schemes such a higher de-minimis customs value, streamlined customs procedures, etc.</p>
Payment Solutions for E-commerce	
<p>Papua New Guinea is characterised by low levels of financial inclusion, with only 37% of the population having a bank account in 2018. The government, through the Financial Sector Development Strategy 2018-2030, is aiming to further develop the financial sector, by, amongst others, creating bond and equity markets.</p>	<p>Promote development of suitable forms of identification for citizens to be able to open bank accounts. Establish a central payment switch as foreseen in the Financial Development Strategy. Undertake capacity building and training on the use of digital payment solutions and to conduct sensitisation exercises to increase confidence</p>

<p>Mobile money and mobile financial services are an effective and efficient way to serve poor and isolated communities. Although at a nascent stage, the mobile money and mobile financial services industry in Papua New Guinea is promising. There are four providers of mobile money or financial services: BSP, ANZ, Westpac and Post PNG. However, lack of interoperability reduces the attractiveness of the mobile tools.</p>	<p>in electronic payment tools. Increase rural access points to mobile money and mobile financial services. Promote adoption of suitable forms of identification for opening a bank account.</p>
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Legal and Regulatory Framework

<p>Promoting trust in electronic channels is crucial for E-commerce to thrive. In order for this to happen, the country must ensure that the regulatory environment is up to date can foresee the different situations that its citizens might face when conducting electronic transactions. Currently, the National Information and Communication Technology (NICT) Act of 2009 is the main law applicable to E-commerce, together with the 2016 Cybercrime Code Act. The country lacks laws covering consumer protection, competition, data privacy, data protection, and electronic transactions. The Government has endorsed the Electronic Transaction Bill on May 1, 2020 and is been prepared to be tabled in Parliament in November 2020.</p>	<p>Carry out a regulatory gap analysis on E-commerce in order to assess identify the laws and regulations that need to be drafted or updated.</p> <p>Draft and adopt the necessary laws to ensure that citizens are protected online, particularly focusing on:</p> <ol style="list-style-type: none"> 1. Consumer protection law 2. Competition law 3. Data privacy law 4. Data protection law <p>Adopt the electronic transactions bill as law.</p> <p>Undertake awareness on the benefits of the Electronic Transaction Bill</p> <p>Accede to or adopt to relevant international treaties and frameworks that facilitate paperless trade across borders</p> <p>Strengthen coordination between stakeholders at the national level for e-commerce development.</p> <p>Review investment and trade policies to promote investment in ecommerce.</p>
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E-commerce Skills Development

<p>As in other FICs, access to digital skills in PNG is limited. Tertiary education is the exception, rather than the norm. Additionally, attending university does not ensure the acquisition of digital skills due to the lack of free wi-fi in campuses, lack of computer ownership, as well as digital skills of professional staff. Addressing these issues is a priority under Vision 2025, and the Medium-Term Development Plan III 2018-2022. Overall, SMEs face significant challenges in obtaining the right skills to establish and run a business. A series of initiatives have been put in place to address these skill gaps.</p>	<p>Upgrade the existing education curriculum, and engaging the private sector in its design.</p> <p>Expand innovation-focussed business incubators and accelerators.</p>
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Access to Financing Initiatives for E-commerce

<p>The process to access finance in Papua New Guinea is mainly informal, with 70% of the population borrowing money from relatives, wantoks and moneylenders. Only 5% of those interested in borrowing money resort to formal institutions. Micro-finance is also not being exploited. Business accelerators and incubators, like the Stret Pasin Young Enterprise Scheme, have been expanding across the country, enabling access to knowledge, media visibility and the opportunity to access finance, but still are limited in number.</p>	<p>Establish bank guarantee schemes focussing on innovative SMEs. Sensitise commercial banks on the characteristics of E-commerce. Promote access to financing for E-commerce via grant schemes, possibly embedded in business incubators and accelerators. Promote E-commerce opportunities in PNG with venture capitalists and angel investors. Provide training to MSMEs to develop business proposals aimed at acquiring financing and attracting investors.</p>
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Methodology

A five-phased approach was used for the national E-commerce assessment of Papua New Guinea. The methodology has been based in part on the eTrade for All methodology developed and owned by UNCTAD, as well as valuable resources and approaches from other agencies engaged in E-commerce assessments, such as the methodology of ITC, UNCDF, UNESCAP, the World Bank, and others. Nevertheless, while this Assessment draws on the methodologies of other agencies, these agencies have not been involved in conducting this report. The duration of the Assessment and each phase has been affected by the interruptions caused by COVID-19.

The phases were as follows:

✓	Phase 1 Stakeholder engagement and literature review, January – March 2020.
	This included official communications with the TradeCom II PMU, PIFS, MSG Secretariat, Papua New Guinea's National Trade Office (NTO) within the Ministry of Foreign Affairs and International Trade, and the Permanent Mission of the Pacific Islands Forum to the WTO in Geneva. Literature review and data analysis were undertaken, including by accessing up-to-date statistics provided by ITU, United Postal Union (UPU), and the World Bank, amongst others.
✓	Phase 2 Online survey customisation and dissemination and preparation of baseline indicators, February – May 2020.
	Two customised questionnaires for the most relevant public and private sector stakeholders were distributed by the NTO to stakeholders in Papua New Guinea. Due to limited responses, the results of the questionnaires were only used as a source of reference for qualitative information and not for quantitative purposes.
✓	Phase 3 Report writing of the draft national E-commerce assessment and stakeholder review, April – June 2020.
	This phase was performed remotely. A first draft assessment was provided to the NTO, PIFS and the MSG Secretariat for comments.
✓	Phase 4 Virtual consultations and completion of the Assessment, June–October 2020.
	Comments on the first draft were received and incorporated. Remote group consultation sessions for the different areas of the Assessment were undertaken on June 26, 2020. A second draft was released in September 2020.
✓	Phase 5 Finalisation and Validation of the Assessment, October–November 2020.
	Comments on the second draft were received and incorporated in November 2020. A final report of the national E-commerce assessment was delivered.

Seven policy areas used in UNCTAD's eTrade for all initiative were used as entry points for this Assessment. The seven policy areas covered in this Assessment are:

1. E-commerce policies and strategies
2. ICT infrastructure and E-commerce support services ecosystem
3. Trade facilitation and logistics ecosystem
4. Legal and regulatory frameworks
5. Payment solutions for E-commerce
6. E-commerce skills development
7. Access to financing initiatives in E-commerce

Note that the report is based in US dollars. Papua New Guinea's national currency is the Kina (PGK). For the purpose of this report: US\$ 1 = PGK 3.45 and PGK 1 = US\$ 0.29 (May 27, 2020, the exchange rate from the Bank of Papua New Guinea).

1

E-COMMERCE POLICIES AND STRATEGIES



The Government of Papua New Guinea is stepping up its efforts to create a more digitally connected and inclusive society, including through the adoption of ICT policies aiming to promote affordable internet across the country. Examples include the 2008 ICT Policy, the 2013 National Broadband Policy, the Universal Access and Service Strategic Plan 2018–2022, and the 2019 ICT Roadmap.

The Government also recognises the importance of E-commerce as a tool for development and, as indicated in the National Trade Policy, is putting in place the institutional framework to make sure that its citizens can extract all its benefits. Further progress now hinges upon the development of an E-commerce Strategy and a detailed implementation roadmap to guide the course digital trade in the country.

1.1 National policies related to ICT, e-government, and E-commerce

The Government is taking ambitious steps to become a digital nation, including through the development of relevant policies. However, the lack of a sound policy framework governing the relationship between ICT and trade hampers the country's ability to reap the full benefits of E-commerce. The key set of policies developed by Papua New Guinea in the digital arena relate more towards the general space of ICT, and therefore fail to focus on the characteristics of E-commerce.

Papua New Guinea (PNG) adopted its ICT Policy in 2008, with the aim to “bring about realistic, significant and beneficial change to the people of Papua New Guinea through efficient use of ICT with services supplied in competitive markets”. The policy's key objectives are to:

- Secure the social and economic benefits of an efficient ICT sector;
- Provide the country with an efficient ICT infrastructure as the backbone of ICT policy with the use of technology appropriate to the circumstances of PNG;
- Substantially increase access to basic telecommunications services across PNG, with services to be made available at affordable prices;
- Have a transformed and efficient Telekom PNG;
- Achieve effective and sustainable competition to deliver market discipline and economic benefits;
- Achieve improved international capacity and connectivity to help PNG truly become part of the international community; and
- Secure the benefits that can flow from increased availability and use of the internet.

Unfortunately, many of the critical reforms recommended by the 2008 ICT Policy were never implemented, as the actions plans detailing the specific implementation strategies were never developed.¹ As a result, the objectives of the policy remain substantially unmet.

The **National Broadband Policy (NBP) was approved in 2013**, providing an overarching framework to ensure that both demand and supply-side aspects of broadband infrastructure, applications, services, access and usage are optimised. One of the characteristics of the NBP is the call for the private sector to contribute to the development of the broadband infrastructure, recognising the budgetary constraints of the Government.

¹ Deloitte Touche Tohmatsu (2016). Why are Internet Prices High in Papua New Guinea? The National Research Institute Papua New Guinea, No. 148, October.

In 2017, the National Information and Communications Technology Authority (NICTA) issued the **Universal Access and Service Strategic Plan 2018-2022**. The aim of the Plan is to “support investments in the telecommunications and ICT sector in PNG, to promote universal access to and utilisation of modern, beneficial services throughout the country.” The key goals of the Strategic Plan are:

- Universal access to and coverage of broadband mobile telecommunications networks and services for all PNG citizens and communities;
- Wide access to advanced, high-quality, broadband telecommunications networks and services, and increasing utilisation of these services throughout society;
- Expansion of access to free over-the-air radio and television broadcast signals;
- Development and adoption of a broad array of useful and valuable ICT applications and content for all segments of the population;
- Increasing awareness, capacity, and contribution by all citizens in ICT-based activities, business and employment, and public services; and
- Growing contribution of advanced and innovative ICTs to support inclusive socio-economic development and opportunities.²

An **ICT Sector Roadmap** was adopted by the National Executive Council (NEC) in October 2018. The Roadmap is based on the following priority areas:

- digital infrastructure;
- digital Government;
- digital services;
- digital skills;
- digital business environment; and
- digital safety.³

The Roadmap also created (1) a Ministerial Committee on ICT, which is to be Chaired by the Minister for Communication and Information Technology; and (2) a National ICT Coordinating Committee to be chaired by the Secretary for Information and Information Technology,

From a more general perspective, the country's **Development Strategic Plan 2010-2030** aims to transform PNG into a prosperous middle-income country by 2030, and it identifies ICT as one of the key pillars to achieve that objective. Specifically, the Plan's main goal regarding ICT is to achieve “[a] *modern and affordable information and communications technology that reaches all parts of the country.*”⁴ This is expected to be achieved through the promotion of access to mobile phone and broadband internet services in a competitive market due to the increased access to international telecommunication gateways. On the other hand, the Plan does not make explicit reference to E-commerce nor to digital trade.

Similarly, the **Mid-Term Development Plan III (2018-2022)**, which builds on the Development Strategic Plan 2010-2030, and identifies priority areas for investments within the different sectors for the period 2018-2022, does not cover E-commerce, and only refers to ICT from an infrastructure perspective.⁵

1.2 National policies related to trade

E-commerce is partly covered by the recent National Trade Policy (NTP) 2017-2032. The NTP acknowledges the need to develop a sound ICT infrastructure and platforms, establish cybersecurity and ensure protection of consumer data.⁶

According to the NTP, the Government should adopt the following policy measures:

- Establish a Working Group on E-commerce to review the good practices of other countries with a view to their adoption. This is currently work in progress;

2 National ICT Authority of Papua New Guinea (2017). UAS Strategic Planning Report 2018-2022. NICTA. Available at https://uas.nicta.gov.pg/images/Reports/Report_UASStrategicPlanning2018-2022.pdf

3 DICT (2018). ICT Road Map 2018. Available at <https://dept.ict.gov.pg/ict-road-map/>

4 Government of Papua New Guinea (2010). Development Strategic Plan 2010-2030. Available at <https://www.theprif.org/sites/default/files/2020-08/PNG%20Development%20Strategic%20Plan%202010-2030.pdf>

5 Government of Papua New Guinea (2018). Mid-Term Development Plan III 2018-2022. Available at <https://png-data.sprep.org/dataset/medium-term-development-plan-iii-2018-2022-volume-1>

6 Government of Papua New Guinea (2017a). National Trade Policy 2017-2032. Department of Trade, Commerce and Industry. Available at <http://www.pngeutra2.org.pg/wp-content/uploads/2017/08/PNG-National-Trade-Policy-2017-2032.pdf>

- Draft, enact and implement legislation to regulate and safeguard E-commerce activities against internet fraudsters and transnational cybercrime;
- Provide appropriate infrastructure and ICT platforms to safeguard and promote the safety and authenticity of E-commerce;
- Adopt the United Nations Conference on International Trade Law (UNCITRAL) Model Law on Electronic Commerce to manage commercial disputes and international arbitration awards arising from E-commerce activities⁷;
- Collaborate with other APEC members, especially developed country partners, for good practices in the area of E-commerce; and
- Seek technical assistance and capacity building programmes to comply with, and fully implement good practices in the area of E-commerce.

Overall, the NTP provides a policy framework for trade agreements and trade negotiations, for the identification of sectors with comparative advantage, and for opening up market access in sectors that can have a quick impact on the economy and create jobs. The Vision of the NTP is for the country *“to become an internationally competitive export-driven economy that is built on and aided by an expanding and efficient domestic market.”*⁸

In the multilateral and regional arena, PNG is member of the WTO, and it has negotiated and ratified a number of trade agreements that enhance the country’s international market access for its products and services. These include:

- The **Melanesian Spearhead Group (MSG) Trade Agreement** which is a free trade agreement that allows trade in goods to take place freely between Fiji, Papua New Guinea, Vanuatu and Solomon Islands. In 2016, the MSG Members finalised the Melanesian Free Trade Agreement (MFTA), a comprehensive trade agreement focussing on trade in goods, trade in services, cross border investment and labour mobility that aims to achieve regional integration of MSG economies. Specifically, E-commerce is embedded in Part 7 of Chapter 6 (Trade in Services) of the MFTA whereby it is expected to address the challenges and unlock the benefits for small and medium enterprises to export goods and services covered in the Agreement;
- The **Pacific Island Countries Trade Agreement (PICTA)**, which seeks to establish a free trade area among the fourteen Forum Island Countries (FICs). Seven Countries (Cook Islands, Fiji, Niue, Samoa, Solomon Islands, Tuvalu and Vanuatu) have completed the necessary domestic requirements and have announced their readiness to trade. Four countries (Kiribati, Nauru, PNG and Tonga) have announced that they are in the process of completing their domestic requirements in order to trade under PICTA. The Federated States of Micronesia (FSM), Republic of Palau and the Republic of Marshall Islands are yet to accede to PICTA. The PICTA Trade in Services (TIS) Protocol was concluded in 2012 and ratified by four signatories (Samoa, Tuvalu, Republic of the Marshall Islands and Nauru) however, is yet to enter into force.
- The **South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA)**, which is a non-reciprocal agreement that allows PNG and other to export almost all of their products to Australia and New Zealand duty free; and
- The **Interim Economic Partnership Agreement with the EU (IEPA)**, which PNG negotiated together with a number of Pacific Island Countries. The IEPA was ratified by the EU in January 2011, and by PNG in May 2011. Fiji started applying the agreement provisionally since July 2014, pending ratification. Samoa acceded to the IEPA on 21 December 2018 and Solomon Islands on 17 May 2020 and are applying it since then. The IEPA is a development-oriented free-trade agreement that provides duty-free, quota-free access for the four IEPA Pacific countries’ merchandise exports to the EU. The IEPA with the Pacific states does not cover trade in services, e-commerce nor includes any provisions on investment. The IEPA provides for progressively greater ambition in the future. For their part, the IEPA Pacific countries are progressively reducing their tariffs on EU imports to zero⁹.

⁷ See <https://uncitral.un.org/en/texts/arbitration>.

⁸ Government of Papua New Guinea (2017a). National Trade Policy 2017-2032.

⁹ EC (2020). EU-Pacific States Economic Partnership Agreement (EPA): Creating Opportunities for EU and Pacific Businesses. European Commission. Available at https://trade.ec.europa.eu/doclib/docs/2020/october/tradoc_158988.pdf.

1.3 National coordination

It is commonly recognised that inter-agency government collaboration is essential to develop an enabling E-commerce environment. Equally important is the participation of the private sector in the formulation and roll-out of E-commerce strategies.¹⁰

A **National Working Group on Improving Business and Investment Climate (NWGIBIC)**, and a **National Committee on Trade Facilitation (NCTF)** are in place to facilitate coordination on trade-related matters. Moreover, a **Digital Foreign Direct Investment (FDI) Working Group** has recently been established to identify actions to make PNG more attractive to external funders of digital economy activities.¹¹

However, an overarching mechanism is not in place. To address this gap, the NTP recommends the establishment of a **Trade Policy Advisory Council (TPAC)**. The TPAC will act as a non-executive platform for stakeholder consultation and a reference panel on matters pertaining to trade policy formulation, implementation and monitoring. The TPAC is to be supported by ad-hoc Technical Working Groups. Beyond the policy-level, PNG has in place a comprehensive legal and institutional framework for Public-Private Partnership (PPP). PNG enacted its Public-Private Partnership (PPP) Act in 2014, which establishes the framework for the procurement and delivery of infrastructures and services through PPP arrangements. A PPP Centre, PPP Steering Group, and PPP Forum were created to facilitate the coordination and implementation of PPP projects.

1.4 Access to relevant statistics

The availability of data in PNG is limited, with the National Statistical Office not collecting ICT data. Moreover, despite the fact that the Department of Communications and Information Technology is responsible for developing operational guidelines on digitisation, data collection and procurement, the lack of adequate resources hampers the Department's ability to undertake its duties.¹²

Clear and authoritative data on the ICT sector in general and E-commerce specifically will be critical for informing policy reforms. Robust data will support the planning, monitoring, and evaluation of various ICT and E-commerce initiatives.

10 United Nations Conference on Trade and Development (2020). Rapid eTrade Readiness Assessment of Tanzania, United Nations Conference on Trade and Development, Geneva. Available at https://unctad.org/system/files/official-document/dtstict2020d2_en.pdf

11 World Economic Forum (2020b). This Pacific Island is Working Towards a Digital Revolution. World Economic Forum. Available at <https://www.weforum.org/agenda/2020/09/papua-new-guinea-digital-transformation-covid-19/>

12 Australian Strategic Policy Institute (2020). ICT for Development in the Pacific Islands. An Assessment of E-government Capabilities in Fiji, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu. Australian Strategic Policy Institute Limited 2020. Available at https://s3-ap-southeast-2.amazonaws.com/ad-aspi/2020-02/ICT%20for%20development%20in%20the%20Pacific%20islands.pdf?x_oS.r8OVVFTxxgNHI58k_VL45KC83H

2

ICT INFRASTRUCTURE AND E-COMMERCE SUPPORT SERVICES ECOSYSTEM



The cost of internet in PNG, one of the highest in the world outside of Sub-Saharan Africa, is hampering the further development and expansion of connectivity, especially in rural areas. With only 11.2% of the population having access to the internet, PNG is still in a nascent phase of the digital era. Limited accessibility, land disputes, limited demand in rural areas, and high operating costs appear to be the main issues hampering the development of a fully-fledged network across the country. In 2019, the average cost of 5GB in a fixed-broadband subscription was nearly USD 65, representing 30.7% of the average monthly income of a citizen.

Despite the above, progress is being made. Two major infrastructural projects – the Coral Sea Cable System and the Kumul Submarine Cable – are foreseen to better link the country both internationally and domestically, reducing the cost of service by 20%. Similarly, through the UAS, the National ICT Authority of Papua New Guinea (NICTA) is upgrading and expanding the mobile broadband network, helping deliver high-speed fixed broadband internet connection to selected communities and institutions, and developing a platform to promote ICT utilisation and opportunities, amongst others. The country has also started the implementation of a new e-government project, 'State in a Phone', which aims to give citizens access to an online government information portal by the end of 2020.

In order to move the country's infrastructure further, an expansion of the network of 3G and 4G towers should be undertaken. Similarly, to promote the use of internet amongst the private sector, broadband packages and plans specifically designed for innovative and small businesses should be created by service providers.

2.1 Broadband, mobile, and smartphone penetration

With only 11.2% of the population having access to the internet, PNG is still in a nascent phase of the digital era.

Starting from a tiny base, internet access in PNG is increasing at an accelerated rate – from 2% in 2010 to 11.2% in 2017.¹³ A similar increase has been witnessed in other ICT indicators. For example, the number of mobile-phone subscriptions increased from 1.9 million in 2010, 26.1% of the population, to over 4 million in 2017, 47.6% of the population. On the other hand, the number of fixed-broadband and fixed-telephone subscriptions remains low: only 0.2% of the population have a fixed-broadband subscription (18,000 people), and 1.9% have a fixed-telephone number (158,000 people).¹⁴ As of January 2020, around 8.7% of the population use Facebook – there are over 770,000 Facebook users in PNG.

Achieving a wider range of internet users would require expanding the coverage of the internet to the country's remote areas. However, several challenges remain which are addressed in the following section.

One emerging challenge that can further limit the access to the internet citizens is the need to present an identity card for registration purposes – of the 8.6 million people living in PNG, only 500,000 have a national identification document.¹⁵ Registration involves a user providing name, proof of identity – an identity document (ID) or a national ID card – and other details to the mobile phone company. The requirement applies to all pre-paid SIM cards in the country.¹⁶ All those existing SIM cards that have not been registered will be deactivated, although the timeline of such deactivation remains unclear.¹⁷

13 Data source: ITU

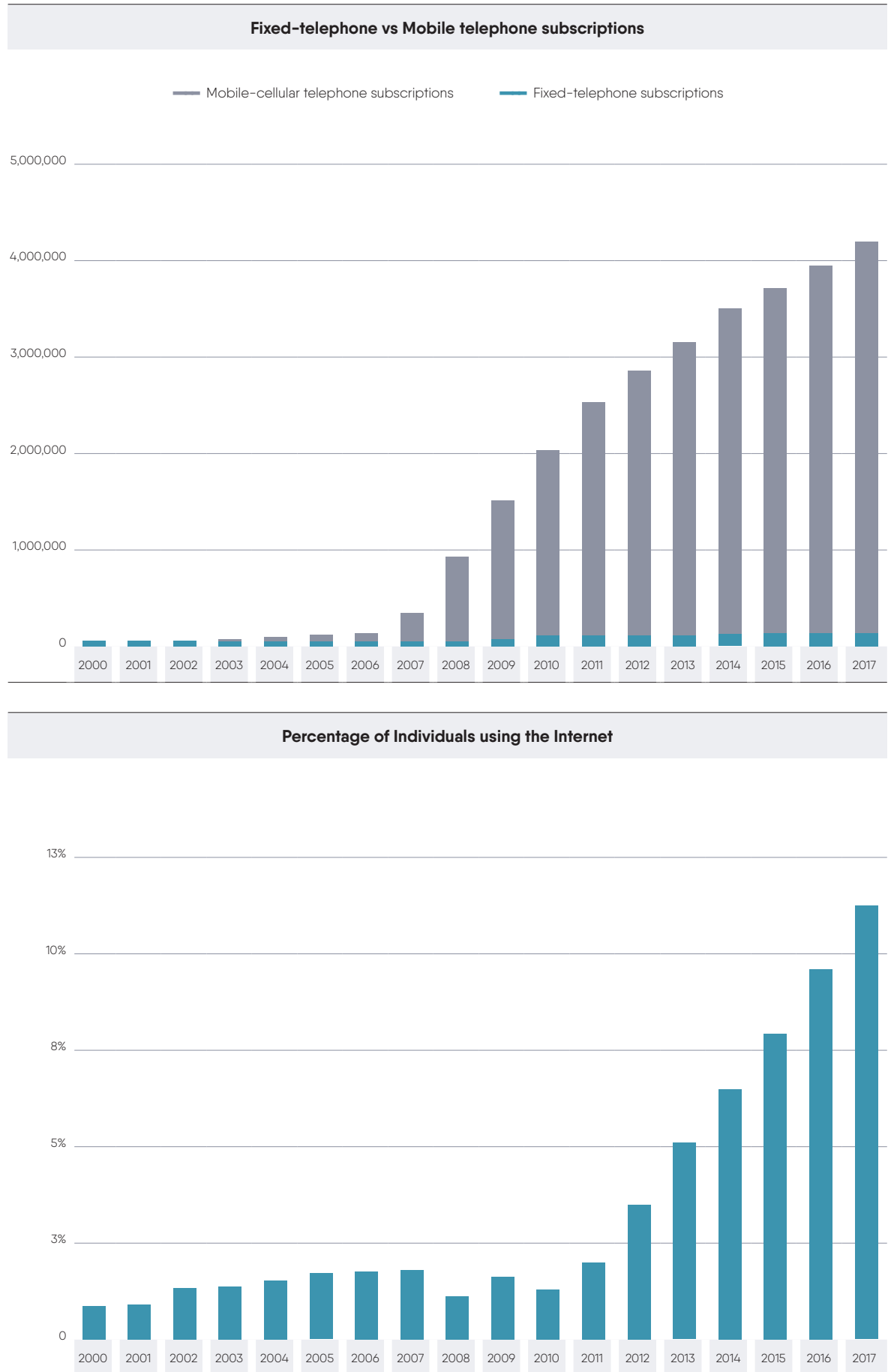
14 Data source: ITU

15 Post Courier (2018). NID Registry Project in Lae To Be Improved. Post-Courier, March 22. Available from: <https://postcourier.com.pg/nid-registry-project-lae-improved/>

16 Watson, A. (2018). Compulsory SIM Card Registration in Papua New Guinea. DevPolicyBlog. Available at <https://devpolicy.org/compulsory-sim-card-registration-in-png-20180124/>

17 Loop PNG (2020). SIM Deactivation Deadline Pushed Back. Available at <https://www.looppng.com/tech/sim-deactivation-deadline-pushed-back-91062>

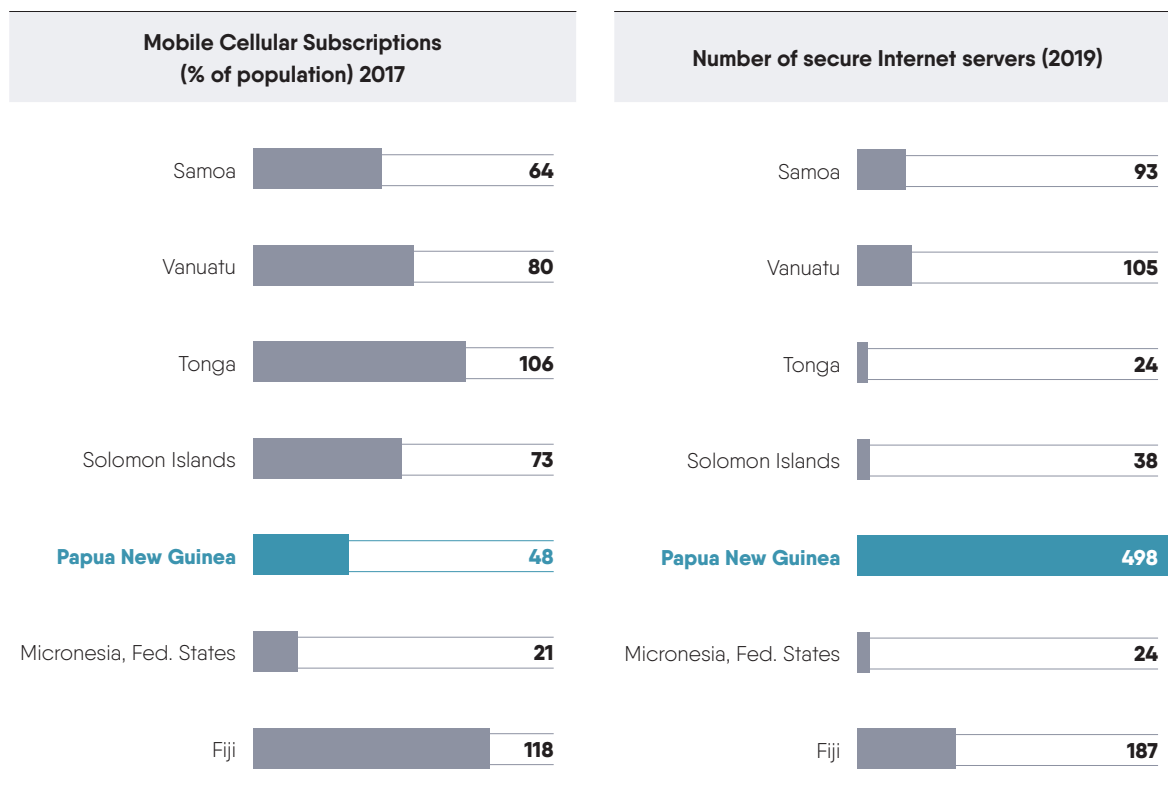
Figure 1 - ICT Indicators, 2000-2017



Source: ITU



Figure 2 – Regional Comparison of mobile cellular subscriptions and secure internet servers ¹⁸



Source: World Bank WDI

2.2 Reliability, affordability, latency, speed and coverage

The high cost of service is one of the biggest deterrents to using the internet. In 2019, the average cost of a 5GB fixed-broadband subscription was nearly USD 65, which represents 30.7% of the average monthly income of a citizen of PNG. Mobile broadband is relatively more affordable, with a monthly 1GB mobile data package costing around USD 5.4, the equivalent to 2.5% of the average monthly income.¹⁹ PNG ranks as 176th out of the 228 countries surveyed by Cable.co.uk for mobile costs, behind countries such as Vanuatu and Fiji. Similarly, PNG ranks 165th out of 184 countries surveyed by ITU in 2019 for mobile internet data service costs relative to Gross National Income (GNI) per capita, and 159th out of 173 countries for the cost of fixed broadband costs relative to GNI per capita.²⁰

The high internet costs may require the creation of subsidised SME-targeted internet packages, enabling small companies to have an internet presence, therefore boosting their income through e-commerce.

In terms of network coverage, a recent report by NICTA (2017) highlights that only 40.9% of the country's population already have access to 3G mobile broadband services, with an additional 26.6% having 2G-only access, for a total level of current access to one or the other service of about 67.5%.²¹ Most of the internet users – almost 70% – reside in the urban centres of Port Moresby and Lae.

Further expansion of the network of 3G and 4G towers should be targeted through private sector investment and support of the Universal Access Fund. Telecommunications service providers should cooperate on network/ infrastructure sharing in remote areas to benefit from cost-sharing, as well as improving last-mile connectivity. Cooperation and subsidisation appear necessary, noting the many **challenges facing the expansion of network coverage to the country's remote areas,** including:²²

18 Secure internet servers are servers using encryption technology in internet transactions. These servers help maintain privacy online, particularly in trusting websites with respect to a user's personal information. The data comes from a survey that examines the use of encrypted transactions through extensive automated exploration, checking for a valid certificate of authenticity.

19 See <https://www.cable.co.uk/mobiles/worldwide-data-pricing/#regions>

20 Data source: ITU. ITU Price Basket, see https://www.itu.int/en/ITU-D/Statistics/Documents/publications/prices2019/ITU_ICTpriceTrends_2019.pdf

21 National ICT Authority of Papua New Guinea (2017). UAS Strategic Planning Report 2018-2022. NICTA. Available at https://uas.nicta.gov.pg/images/Reports/Report_UASStrategicPlanning2018-2022.pdf

22 GSM Association (2019a). Digital Transformation: The Role of Mobile Technology in Papua New Guinea. London, United Kingdom: GSMA. Available at <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/03/Digital-Transformation-The-Role-of-Mobile-Technology-in-Papua-New-Guinea.pdf>

- **Road infrastructure.** The limited accessibility through road networks entails that mobile operators must construct a new road, or use a helicopter to deliver fuel and equipment for maintenance to some towers, thereby increasing the costs of service.
- **Land rights issues.** Land disputes are common in Papua New Guinea, particularly due to tribal issues, leading to vandalism of towers or limited access to pre-existing towers, preventing those towers from being in service.
- **Demand-side issues.** Average monthly revenue per user in rural and remote areas of the country is very low, ranging between USD 0.60–USD 0.90, with limited numbers of customers per site. Therefore, in most cases, it is not financially viable to set up telecommunications towers without external subsidies.
- **High operating costs.** In rural areas, towers must be powered by diesel or renewable energy (mainly solar), which increases deployment, maintenance and operating costs. Moreover, the country's topography inhibits transmission of internet signals, requiring reliance on mobile, submarine and satellite technology for roll-out to some regions, which further increases costs.

The limited network coverage of the system can be partly attributed to the weaknesses of the country's main internet gateways, whose capacity is currently inadequate to accommodate significant increases in domestic demand:²³

- **Capacity for Port Moresby:** in 2017, the country's capital only had 1 gigabyte per second (Gbps) of submarine international cable bandwidth, plus limited satellite capacity. However, this is not enough, with Port Moresby's demand expected to reach 10 Gbps by 2032.
- **Domestic internet backbone:** with the future national bandwidth demand expected to reach 100 Gbps, the current microwave connection between Madang and Port Moresby only supports 3 Gbps, with frequent interruptions.

Major projects are ongoing in area that will dramatically improve the current situation – see next section.

2.3 Major infrastructure projects

PNG is connected to two international gateways: the Australia – PNG 2 (APNG-2) cable, which lands in Port Moresby, and PIPE Pacific Cable (PPC-1), which lands in Madang. The APNG-2 grants 1.136 Gbps, whilst the PPC-1 provides access to 10 Gbps, of which only 2.5 Gbps are used, as the connection between Madang and Port Moresby is not made entirely of optical fibre depending, in some parts, on microwave due to the region's topography.²⁴

Two major infrastructural projects are being implemented, which will provide the necessary bandwidth by better linking the country both internationally and domestically. On the international front, the 40 Terabits per second (Tbps) Coral Sea Cable System (CSCS), funded by Australia linking Port Moresby and Sydney, will provide the required submarine cable capacity into Port Moresby. On the domestic front, the Kumul Submarine Cable will provide 8 Terabit per second (Tbps) of broadband transmission capacity into 14 of the country's major coastal centres and islands, thus improving connectivity and increasing availability across PNG. The Cable will also boost the international connectivity as it will be connected to neighbouring Indonesia. The Cable is expected to reduce the cost of service by 20%.²⁵ As highlighted by Mr Komboi, Managing Director of DataCo, "[this] will improve the whole ICT infrastructure in the country and greatly increase network coverage, capacity and the availability of internet and broadband services to end-users".²⁶

In the framework of the National Broadband Policy (NBP), the state-owned entity PNG DataCo was established in 2014 with the remit of building, operating and maintaining the National Transmission Network (NTN) – both cable and satellite infrastructure.

23 Lawrence, C. (2017). Infrastructure Challenges for Papua New Guinea. Lowy Institute, December 6. Available at <https://interactives.lowyinstitute.org/archive/png-in-2017/png-in-2017-infrastructure-challenges-for-papua-new-guineas-future.html>

24 International Telecommunication Union (2018b). Maximizing Availability of International Connectivity in the Pacific. International Telecommunication Union. Available at https://www.itu.int/dms_pub/itu-d/opp/pref/D-PREF-BB_GDI_AP-2018-PDF-E.pdf

25 See <https://www.kch.com.pg/key-impact-projects/telecommunications/>

26 Oxford Business Group (2017a). National Fibre Backbone Project Underway in PNG. Available at <https://oxfordbusinessgroup.com/analysis/digital-highway-national-fibre-backbone-project-taking-place>

2.4 ICT Services

Telecommunication Industry

TELIKOM PNG, a state-owned telecommunications company, first launched 2G services in 2003. In 2009, TELIKOM PNG's operations were sold to a local business group and relaunched as BMobile in 2009. The second operator to enter the PNG telecommunications market was DIGICEL in 2007. Breaking TELIKOM's monopoly led to a significant increase in users, with mobile cellular subscriptions increasing from 300,000 in 2007 to 874,000 in 2008. In 2014, BMobile and Vodafone teamed up to improve BMobile's network in the country.²⁷ TELIKOM PNG re-entered the mobile market in 2016.

At the end of 2016, Digicel had the country's largest share of the mobile market, with 94.2% of all subscriptions, mainly due to the wide network coverage in urban and rural areas. BMobile captured the 4.8% and TELIKOM PNG 1%.²⁸

Mobile broadband has been growing in PNG since 2011 when 3G was first introduced. However, 3G coverage is constrained by the country's complex geography. Digicel and BMobile, both provide 2G and 3G. The first to introduce 4G services in the country was Digicel in 2014. TELIKOM PNG provides both with both 3G and LTE networks.

The main fixed telephone service provider is TELIKOM PNG. Fixed telephone lines are also used as fixed-broadband lines. TELIKOM PNG offers asymmetric digital subscriber line (ADSL) with speeds of up to 24 Mbps. However, fixed lines are limited to a few urban areas, while wireless local loop using WiMAX technology is available across other regions.

Digicel has introduced fibre-optic to the buildings for businesses, whereas TELIKOM PNG offers leased line fibre-optic connections.

As reported by stakeholders, two new licenses have been provided to service suppliers, which are expected to start operating towards the end of 2020. The increase in competition is expected to reduce the cost of service and improve its quality.

The telecommunication industry is regulated by the National ICT Authority of PNG (NICTA), whose functions include, amongst others, the issuance of telecommunications licences, as well as ensuring that the provision of ICT services meet national and international standards.²⁹ NICTA also carries out enquiries into competition issues in the telecommunications sector³⁰.

Universal Access Service

The National Information and Communication Technology (NICT) Act of 2009 establishing the NICTA also established the Universal Access Service (UAS), which aims to ensure that the benefits of modern telecommunications are progressively made available on a truly national basis. The UAS and the associated Fund is managed by NICTA, through the Universal Access Fund Secretariat (UAF Secretariat). The UAF Secretariat is tasked with managing donor and government funds and industry levies to roll out ICT projects to rural areas and communities.³¹ The UAS Fund's intention is to provide a capital subsidy for infrastructure, incentivising operators to cover commercially unattractive areas by reducing the investment risks.³²

Through the UAS, NICTA is implementing the following projects:

- Upgrade and expand the mobile broadband network, which will consist of (1) upgrading the existing 2G sites, and (2) establishing new mobile broadband infrastructure and service.
- Help deliver high-speed, full-service fixed broadband internet connections to selected communities and institutions. This will be done by (1) expanding the national backbone network infrastructure, establishing local broadband access network connections, and providing public broadband communication services; (2) install broadband access connections at specified institutional locations; and (3) establish public access Community ICT Centres (CICs) within the designated community broadband project areas.

27 See: <https://www.businessadvantagepng.com/agreement-vodafone-uk-will-allow-bmobile-expand-compete-says-ramamurthy/>

28 Oxford Business Group (2017b). Economic Benefits of More Advanced Mobile Phone Technology in PNG. Available at <https://oxfordbusinessgroup.com/analysis/new-rapid-advances-mobile-phone-technology-boost-diverse-range-economic-sectors>.

29 Global Logistics Cluster (2015). Logistics Capacity Assessment. Papua New Guinea. Available at <https://dlca.logcluster.org/display/public/DLCA/Papua+New+Guinea>

30 Oxford Business Group (2016) New Operators and Reforms in Papua New Guinea Set to Transform Telecoms Sector. Available at <https://oxfordbusinessgroup.com/overview/competitive-bet-new-operators-and-government-reforms-are-set-transform-telecoms-industry>.

31 Ibid

32 World Bank (2019b). PNG: Rural Communications Project - Implementation Completion and Results Report. The World Bank Group. Available at <http://documents1.worldbank.org/curated/en/970521553284472089/pdf/Papua-New-Guinea-Rural-Communications-Project.pdf>

- Develop a platform for the future, long-term development of ICT utilisation and opportunities. This will be implemented through (1) the development of relevant electronic information content and applications of value to PNG citizens; and (2) raising digital literacy, promoting the increased utilisation of ICT by all PNG citizens.
- Extending coverage of radio and television broadcasting to all citizens and communities in PNG. This will be implemented through (1) infrastructure expansion, focused mainly on the installation of broadcast antennas on towers; and (2) the provision of assistance for low-income households with the costs of the digital broadcasting transition.³³

E-Government

From an e-government perspective, PNG was ranked 171st out of 193 countries in the UN's E-Government Development Index (EGDI).³⁴ On a 0 to 1 scale, the country's Online Service Component was 0.27, the Human Capital Component was 0.48 and the Telecommunication Infrastructure Component was 0.09, thus indicating a weak e-government capacity. PNG lags behind all the other FICs for which data is available.

Table 1 - E-Government Development Index EGDI by region: Oceania

Rank	Country	EGDI	Online Service Component	Telecomm. Infrastructure Component	Human Capital Component
2	Australia	0.9053	0.9722	0.7436	1
8	New Zealand	0.8806	0.9514	0.7455	0.945
102	Fiji	0.5348	0.4583	0.3562	0.7899
109	Tonga	0.5237	0.4722	0.2951	0.8039
111	Palau	0.5024	0.3264	0.3346	0.8462
128	Samoa	0.4236	0.3403	0.2064	0.7241
137	Vanuatu	0.399	0.4375	0.192	0.5675
144	Tuvalu	0.3779	0.2222	0.2693	0.6422
149	Marshall Islands	0.3543	0.2292	0.1037	0.7301
153	Kiribati	0.345	0.2986	0.0773	0.6591
158	Nauru	0.3324	0.1319	0.3033	0.5619
161	Micronesia	0.3155	0.1458	0.1118	0.6889
169	Solomon Islands	0.2816	0.2431	0.1285	0.4732
171	Papua New Guinea	0.2787	0.2708	0.0875	0.4778

Source: United Nations E-Government Survey 2018

To improve the current situation, in 2020 the country has launched State in a Phone, a new e-government project. The project aims to give citizens access to an online government information portal by the end of 2020.³⁵

Early e-government efforts started back in 2005 with the creation of the Integrated Government Information System (IGIS) by the Department of Communications and Information Technology, which launched website portals for certain government departments, such as the Department of Treasury, the Internal Revenue Commission, the Immigration and Citizenship Authority, the National ICT Regulatory Authority, Customs and the Parliament. With the exception of the e-Visa service provided through the website of Immigration and Citizenship Authority, government websites are limited to the provision of information.³⁶

33 National ICT Authority of Papua New Guinea (2017). UAS Strategic Planning Report 2018-2022. NICTA. Available at https://uas.nicta.gov.pg/images/Reports/Report_UASStrategicPlanning2018-2022.pdf

34 UN (2018). UN E-Government Surveys. Available at <https://publicadministration.un.org/en/Research/UN-e-Government-Surveys>

35 Business Advantage PNG (2020). Papua New Guinea Set for E-government revolution. Business Advantage PNG, February 4. Accessed on 3 December 2020. Available at <https://www.business-advantagepng.com/papua-new-guinea-set-for-e-government-revolution/>

36 Australian Strategic Policy Institute (2020). ICT for Development in the Pacific Islands. An Assessment of E-government Capabilities in Fiji, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu. Australian Strategic Policy Institute Limited 2020. Available at https://s3-ap-southeast-2.amazonaws.com/ad-aspi/2020-02/ICT%20for%20development%20in%20the%20Pacific%20islands.pdf?x_oS.r8OVVftixgNHl58k_VL45KC83H

ICT-enabled services form the private sector

Overall, E-commerce activity in PNG is limited. Most of this activity is concentrated on social media channels, such as Facebook, on which a number of Consumer-to-Consumer (C2C) or Business-to-Consumer (B2C) groups have over 80,000 members – 10% of the Facebook users in the country.

However, there are a few examples of companies and communities using E-commerce in PNG, such as Air Nuigini³⁷ and Villagehuts.com. The latter, a local adventure and backpacker tourism operator supported by Australia, works with local accommodation and tour service providers to offer a reliable and secure way of booking, noting that about 95% of home-stays and guest houses do not have their own website and lack promotional tools to market their product.³⁸ In the area of merchandise, some exporters of value added products are relatively active in the online space, for example Banz Kofi. On the domestic side, Fortuna Online is one of PNG's larger online stores, covering Port Moresby and Lae.

37 See <http://www.airnuigini.com.pg/>

38 Villagehuts (2020). About us. Accessed on 3 December 2020. Available at <http://www.villagehuts.com/aboutus>

3

TRADE LOGISTICS AND TRADE FACILITATION ECOSYSTEM



The country's complex topography poses significant challenges in terms of logistics, including for E-commerce. With weak road networks, poorly equipped ports, and deteriorating airports, the poor logistics and transport infrastructure is one of the main challenges faced by companies in the private sector. Limited budget is available for maintenance and budget management is weak.

In terms of trade facilitation, the country's lengthy customs procedures are a burden for the private sector, although the trading environment has improved following the introduction of ASYCUDA. Lack of an Electronic Single Window and a low-value de minimis customs value are still elements to be addressed.

3.1 Mode of delivery, last-mile delivery, traffic and regulations

The country's complex topography poses significant challenges in terms of logistics, including for E-commerce.

With around 6,000 islands and mountain systems reaching over 4,500 metres, providing and improving transport infrastructure is a significant challenge, especially in rural areas. With less than 70% of the rural population living within 2km of an all-season road, large segments of the population are left without access to basic services, such as social services, access to market, etc.³⁹

PNG has a total of 30,000 km of roads, but only 8,695 km are considered 'national roads' and maintained by the National Government, with the rest being the responsibility of regional and local government entities.⁴⁰ **Of the national roads, a mere 13% are in good condition.** The Central Western Highlands, Eastern Highlands, East Sepik, Madang and West New Britain provinces have the most extensive networks. Apart from the Highlands Highway linking Lae with Goroka, Kundiawa, Mount Hagen, Mendi and their hinterlands, most of the national network is discontinuous, serving the relatively well-developed areas around the main commercial centres.^{41, 42}

Table 2 - PNG's national road condition

	Good	Fair	Poor	Very Poor	Total km
Priority roads	15%	9%	9%	67%	4,296
Non-priority roads	10%	5%	33%	53%	4,399
Overall	13%	7%	21%	59%	8,695

Source: Australia Aid (2018)

39 Lawrence, C. (2017). Infrastructure Challenges for Papua New Guinea. Lowy Institute, December 6. Available at <https://interactives.lowyinstitute.org/archive/png-in-2017/png-in-2017-infrastructure-challenges-for-papua-new-guineas-future.html>

40 Australian Aid Program (2018). Road Management in Papua New Guinea: An Evaluation of a Decade of Australian Support 2007-2017. Office of Development Effectiveness, Department of Foreign Affairs and Trade, Australian Government, February. Available at <https://www.dfat.gov.au/sites/default/files/ode-evaluation-road-management-in-papua-new-guinea.pdf>

41 Global Logistics Cluster (2011). Papua New Guinea – Emergency Preparedness: Operational Logistics Contingency Plan, Part 2 – Existing Response Capacity & Overview of Logistics Situation. WFP

42 Discrepancies exist on the quality of the roads. Global Logistics Cluster (2015) estimates that 48% of the priority roads are in good condition

According to a recent evaluation, the main reason for this situation is deficiency in road management, linked in part to weak funding. As highlighted in the National Transport Strategy, the budget submissions done to the Department of Works and Implementation (DoWI) “covered only routine light maintenance to roads that were in good or fair condition, the remainder being left to deteriorate further and then become objects of large donor-funded reconstruction and rehabilitation programmes [...]. Typically, the budget submissions were for PGK 100–200 million while the appropriation was between zero and PGK 30 million.”⁴³ However, poor budget is not the only reason for this situation. The evaluation highlighted that “[expenditure] on-road management has consistently been lower than what is allocated in the budget, owing to unpredictable funding, poor budget execution, capacity constraints in both the public and private sectors, and weak budget discipline. In 2015 and 2016, expenditure on national roads only totalled around 40% of what was budgeted.”⁴⁴

With an ambitious target in mind, the Government aims to better connect the country. The National Transport Strategy aims to increase the length of the national road network to 25,000 km and to have 100% of that network in good condition by 2030.⁴⁵ The PNG Connect Infrastructure Program will go a long way towards achieving the Transport Strategy’s objectives. Launched on August 25, 2020, the PNG Connect Programme will build roads and maintain existing roads, connecting villages and promoting their economic activities. The implementation of the programme will develop 12,600 km of strategic roads at the cost of K20 billion on a rolling 20-year programme. Traditional development partners, Australia, Asian Development Bank (ADB), World Bank, European Union, European Union Investment Bank (EIB), China Exim Bank and India Exim Bank have already committed financing of K20 Billion to fund the PNG Connect Infrastructure Development Program⁴⁶

PNG has 22 declared ports and over 200 small wharves and jetties. Papua New Guinea Ports Corporation Limited (PNGPCL) is the state-owned enterprise operating 16 of the declared ports. The ports of Port Moresby and Lae are the country’s most significant. Neither port is equipped with fixed harbour cranes, although the port at Port Moresby has one mobile harbour crane and three tyre gantries, and Lae’s port has three mobile harbour cranes and seven tyre gantries. However, according to a recent review, none appear to be in working order.⁴⁷

PNG has the best Linear Shipping Connectivity Index (LSCI) in the region, with a score of 12.63 in 2019, followed by Fiji (11.20), and Solomon Islands (10.66). This good result needs to be put in the context of a region which is one of the least connected in the world, and which sees its best country only rank 105th out of 182 countries. The LSCI captures how well countries are connected to global shipping networks based on a series of indicators: number of ships, their container-carrying capacity, maximum vessel size, number of services, and number of companies that deploy container ships in a country’s ports.⁴⁸

43 Government of Papua New Guinea (2013). National Transport Strategy. Department of Transport. Available at <http://www.transport.gov.pg/downloads/category/2-transport>.

44 Australian Aid Program (2018)

45 Oxford Business Group (2019). New Legislation and Targets put Papua New Guinea’s Transport Infrastructure on the Road to Improvement. Available at <https://oxfordbusinessgroup.com/overview/room-grow-new-legislation-and-achievable-targets-ensure-transport-infrastructure-road-improvement>

46 See <https://www.pmec.gov.pg/index.php/secretariats/pm-media-statements/177-pm-marape-launches-png-connect-infrastructure-development-programme>

47 Asia Pacific Economic Cooperation (2017). Diagnostic Report on Competitiveness and Overall Market Structure of Port Industry in Papua New Guinea. Asia-Pacific Economic Cooperation. Available at https://www.apec.org/-/media/APEC/Publications/2017/3/Competitiveness-and-Overall-Market-Structure-of-Port-Industry-in-Papua-New-Guinea/217_EC_Final-Diagnostic-Report-on-Competitiveness-and-Overall-Market-Structure-of-Port-Industry-in-P.pdf

48 The Liner Shipping Connectivity Index (LSCI) captures how well countries are connected to global shipping networks. It is computed by the United Nations Conference on Trade and Development (UNCTAD) based on five components of the maritime transport sector: number of ships, their container-carrying capacity, maximum vessel size, number of services, and number of companies that deploy container ships in a country’s ports. For each component a country’s value is divided by the maximum value of each component in 2004, the five components are averaged for each country, and the average is divided by the maximum average for the year and multiplied by 100. The index generates a value of 100 for the country with the highest average index in that year. See GICA – Linear Shipping Connectivity Index, available at <https://www.gica.global/activity/liner-shipping-connectivity-index-lsci>

Table 3 - Linear Shipping Connectivity Index, 2015-19

YEAR	2015	2016	2017	2018	2019
Fiji	12.74	12.47	13.27	13.33	11.20
Kiribati	4.73	5.58	5.83	5.78	2.01
Micronesia	2.50	2.50	2.70	4.53	4.47
Nauru	2.45	2.12	1.88	2.20	2.20
Papua New Guinea	12.75	12.38	13.23	12.67	12.63
Samoa	6.45	6.95	6.66	6.83	8.07
Solomon Islands	11.15	10.75	10.73	10.54	10.66
Tonga	5.66	7.34	8.26	8.18	7.59
Tuvalu	2.96	3.17	2.03	1.98	2.01
Vanuatu	8.75	8.59	8.54	8.24	7.91

Source: UNCTAD STAT

In terms of air travel, PNG has 22 international and regional airports, which are owned and managed by the National Airports Corporation (NAC), plus hundreds of rural airstrips. The overall condition of the NAC's airports appears to have deteriorated over time, and they are beginning to pose threats to safety.⁴⁹ Additionally, international air traffic serving Port Moresby's Jackson's International Airport, the country's international gateway, is very expensive with unit costs (per passenger, per nautical mile) on flights to Australia being the most expensive in the Pacific. Moreover, Air Niugini's unit cost on Asian routes is more than 2.5 times that of inter-Asian flights.⁵⁰

The weak port infrastructure, together with costly procedures, create serious constraints to trade. In 2020 the country ranks 125th out of 190 countries on the Trading Across Border indicator of the World Bank's Doing Business. With a score of 65.8 out of 100, PNG still performs better than countries like Kiribati (135th), Palau (139th), and Samoa (154th). However, it lags behind the regional average, which has a score of 71.6, notably due to higher costs of border compliance. The 2020 improvement in the PNG's Trading Across Border indicator compared to 2019, when it ranked 140th, is due to the implementation of ASYCUDA World in the 22 declared ports.

Table 4 - Trading across borders in PNG and East Asia-Pacific 2020

Indicator		PNG	East Asia Pacific
Time to Export	Border compliance (hours)	42	58
	Documentary compliance (hours)	48	56
Cost to Export	Border compliance (USD)	700	381
	Documentary compliance (USD)	75	109
Time to Import	Border compliance (hours)	72	68
	Documentary compliance (hours)	48	54
Cost to Import	Border compliance (USD)	940	423
	Documentary compliance (USD)	85	108

Source: World Bank

49 ADB (2017). Pacific Economic Monitor. Asian Development Bank, July. Available from: <https://www.adb.org/sites/default/files/publication/337056/pem-july-2017.pdf>
50 Ibid.

A number of freight forwarders and express couriers operate in PNG to facilitate domestic and international transport, in addition to Post PNG. For small parcels, Post PNG's cost of service is lower than the express couriers, but as there is no insurance on the goods transported, and the private sector resorts to express couriers when looking for a safer and faster service. As highlighted by stakeholders, security of the cargo is a key challenge, with reported incidents where goods have been stolen. Stakeholders also raised the concern that, without government support, Post PNG would not be commercially viable. The world major express couriers, DHL and FedEx/TNT, operate in PNG. Their charges appear to be higher compared to those applied in other Forum Island Countries, thus reflecting the more acute logistical problems faced by PNG compared to its Pacific neighbours.⁵¹

3.2 Trade Facilitation

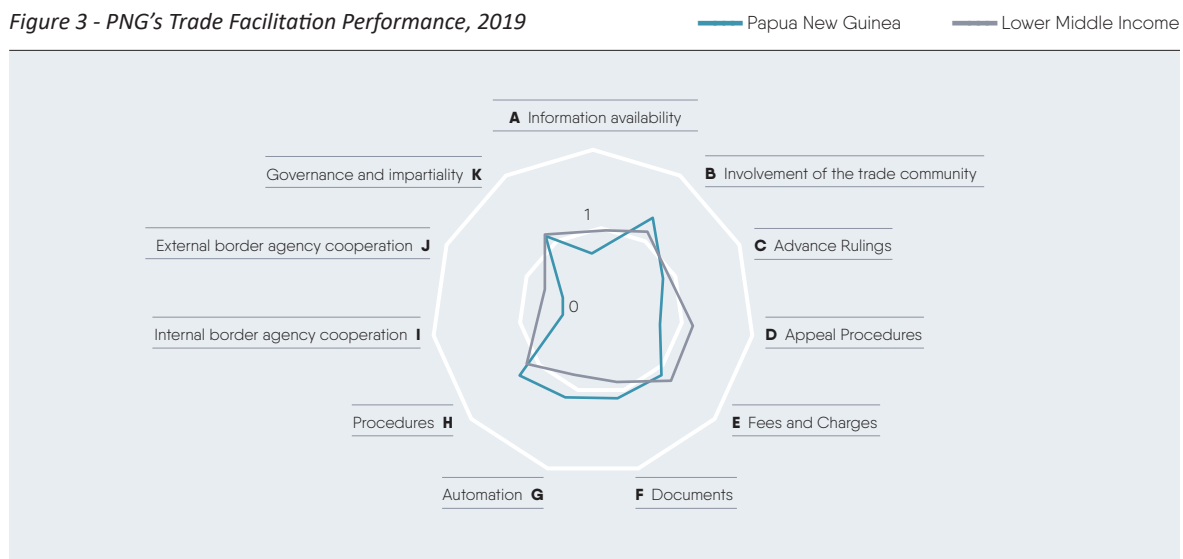
PNG ratified the WTO Trade Facilitation Agreement (TFA) in March 2018. **As of March 2020, the country has implemented around 41% of the Agreement's provisions.**⁵² One of the most relevant procedures implemented in the context of the TFA has been the pre-arrival processing of cargo manifests thereby reducing the time necessary for documentary compliance. The government has also implemented e-payment solutions.

However, challenges remain. One of the most prominent ones relates to the difficulty in establishing mechanisms for paperless exchange and processing of supporting documentation (licences, permits, and certificates) by competent authorities involved in trade.⁵³ PNG still lacks an Electronic Single Window. However, the country is working with UNCTAD to implement one by leveraging the functionalities of ASYCUDA World.

Commercial imports are cleared on the basis of a declaration, suppliers' invoices, a packing list, and a bill of lading (or air waybill). Where applicable, supporting documentation can also include an import licence and/or permit, a certificate of origin, and an SPS certificate. PNG has a *de minimis* customs value threshold of K250 value for duty, allowing those goods that fall under that value to benefit from **customs duty-free treatment, ultimately facilitating trade**. Additionally, those goods valued under K1,000 can be cleared through direct payment at a Customs counter, without lodging a declaration through a customs broker.⁵⁴

According to OECD Trade Facilitation Indicators, PNG has improved significantly in the different trade facilitation indicators between 2017–2019, particularly in the areas of simplification and harmonisation of documents, streamlining of procedures, fees and charges, and internal border agency cooperation. Overall, the country performs better than the average lower-middle-income economy in the areas of trade community involvement, advance rulings, automation, documents and procedures.

Figure 3 - PNG's Trade Facilitation Performance, 2019



Source: OECD⁵⁵

51 For example, by using the DHL cost simulator, and 20 kg package sent from Port Moresby to Brisbane, Australia, costs about 24% more than the same package sent from Suva, Fiji.

52 See WTO Trade Facilitation Database at <https://tfadatabase.org/implementation/progress-by-member>.

53 World Trade Organization (2019). Trade Policy Review: Papua New Guinea. Report by the Secretariat. World Trade Organisation, April. Available at https://www.wto.org/english/tratop_e/trp_e/s387_e.pdf.

54 World Trade Organization (2019)

55 See Compare Your Country - <https://www1.compareyourcountry.org/trade-facilitation/en/1/default/PNG/default>

4

PAYMENT SOLUTIONS FOR E-COMMERCE



PNG is characterised by low levels of financial inclusion. Despite having four banks, 77 branches, 462 ATMs, and nearly 14,000 Electronic Funds Transfer and Point of Sale (EFTPOS), only 37% of the population had a bank account in 2018 – a rate that is significantly lower than in other countries of the region. The government, through the Financial Inclusion Strategic Plan (2016–2020) is aiming to achieve two million extra accounts.

Mobile money and financial services are an effective and efficient way to deliver electronic payment solutions to poor and isolated communities. Although at a nascent stage, the mobile money and mobile financial industry in PNG is promising. There are four service providers of mobile money or financial services, namely BSP, ANZ, Westpac and Post PNG. However, the lack of interoperability reduces the attractiveness of the tools.

To promote further development of electronic payment systems, it will be important to promote the development of suitable forms of identification, establish a central payments switch as foreseen in the Financial Development Strategy, undertake sensitisation exercises to increase businesses and citizens' confidence in electronic and mobile payment tools, and increase access points to mobile money and mobile financial services, especially in rural areas.

4.1 Banking penetration

PNG's financial system is dominated by banking industry, which comprises 74.2% of the total assets, with commercial banks holding 94.25% of the total deposits.⁵⁶ With four commercial banks – Bank South Pacific (BSP), Australia and New Zealand Banking Group (ANZ), Westpac Bank, and Mibank⁵⁷ – the banking sector has a combined network of 77 branches, 462 ATMs, and nearly 14,000 Electronic Funds Transfer at Point of Sale (EFTPOS) terminals in merchant outlets.⁵⁸ BSP is the largest player, accounting for over 80% of all accounts. Non-banking financial institutions include micro-finance companies – such as PNG Microfinance Limited and People's Micro Bank – pension funds, insurance companies, and savings and loans societies.

PNG lags behind its regional peers in terms of both financial system depth and access to financial services. Overall, the depth of the financial system, proxied by private credit to GDP, remains small compared to other FICs, including as a result of the limited share of the country's population having access to it. According to the World Bank, domestic credit provided by financial sector as a percentage of GDP in 2018 was 37% in PNG, against 103% of Pacific Islands Small States.

Moreover, with only **37% of the population having access to formal financial services in 2018**, “financial exclusion remains the norm, especially for rural communities, women and among micro, small and medium enterprises”.⁵⁹

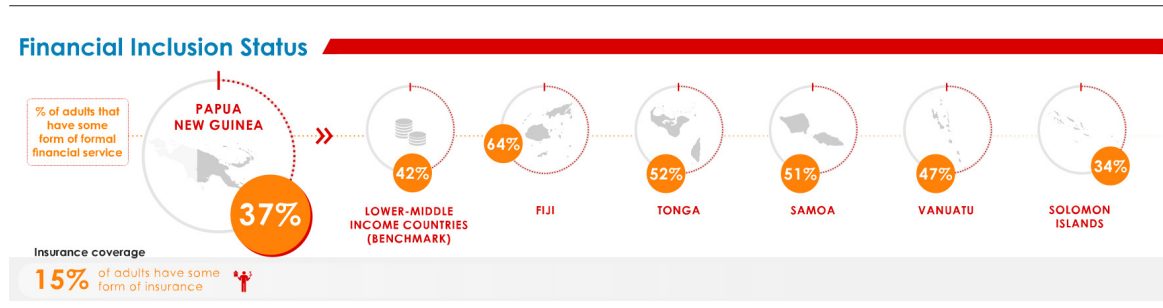
56 Bank of Papua New Guinea (2019). Annual Report and Financial Statements 31 December 2018. Bank of Papua New Guinea, Port Moresby. Available at <https://www.bankpng.gov.pg/wp-content/uploads/2019/09/BPNG-AnnReport-2018-Web.pdf>

57 Kachingwe, N. (2014). Case Study No. 9: Papua New Guinea: The Limits of the Mobile Payments Model. Universal Postal Union, January.

58 Asian Development Bank (2019a). Papua New Guinea. Pacific Finance Sector Briefs. ADB Pacific Liason and Coordination Office, October. Available at <https://www.adb.org/sites/default/files/publication/530256/pacific-finance-sector-papua-new-guinea.pdf>

59 GSM Association (2019c). Papua New Guinea – How Can Mobile Technology be Harnessed for Digital Transformation? GSM Association., March 29. Available at <https://www.gsm.com/mobilefor-development/blog/papua-new-guinea-how-can-mobile-technology-be-harnessed-for-digital-transformation/>

Figure 4 - Financial Inclusion Status in the Pacific Islands



Source: PFIIP

As highlighted by the ADB (2019), this reveals the need for a more robust infrastructure—from roads and transport services to more ATMs and mobile banking services— and for intensified financial education and literacy initiatives to deepen the coverage of financial services.⁶⁰ The need to provide a National Identity Card or alternative forms of identification as a condition to open a bank account create additional hurdles to access financial services, especially in rural areas.

Box 1 - Key challenges in PNG's Financial System

The size of PNG's finance sector remained limited due to:

- The country's geography and remoteness,
- High levels of crime, corruption, and poor security, which restricts cash movements across most of the country,
- Excessive regulation and high costs, which hinder competition, and
- Limited knowledge of financial services, which restricts business growth.

Source: ADB (2019). Papua New Guinea. Pacific Finance Sector Briefs. ADB Pacific Liason and Coordination Office, October.

In this context, the **Second National Financial Inclusion Strategic Plan (2016-2020)** was developed with the aim of achieving two million extra accounts, of which 50% should belong to women and 10% to young people. The Strategic Plan relies heavily on digital financial tools to achieve that objective, recognising that "the financial sector landscape is changing in PNG due to the proliferation of ICT, most importantly mobile phones, as well as the increasing digitisation of processes. This transformation presents opportunities for financial inclusion, as evidenced by the growth in mobile/digital financial services deployments as well as access points in recent years".⁶¹ Development of digital finance can obviously facilitate E-commerce – an activity which is mostly reliant on non-cash/digital payment methods.

The Government of PNG sees the financial sector as an enabler to achieve further levels of development, and this is captured in the country's Financial Sector Development Strategy 2018-2030. The Strategy provides the direction for the future of the sector. Some of the key points are:

- Move from a fragmented supervision model towards a centralised one, under the acquis of the Bank of PNG;
- Develop the country's bond and equity markets;
- Further develop the payment systems by, amongst others, installing a central payments switch⁶² to enable interoperability across all authorised electronic payment service providers – banks and non-banks; and
- Increase the country's financial inclusion.

Better oversight, development of a national payment switch, and increase of financial inclusion has the potential to serve the cause of E-commerce, with an immediate potential for national E-commerce and a longer-term potential for international E-commerce.

60 ADB (2019a)

61 Government of Papua New Guinea (2016). National Financial Inclusion Strategy 2016-2020. Available at <http://www.pfiip.org/wp-content/uploads/2017/01/2-PNG-NATIONAL-FINANCIAL-INCLUSION-STRATEGY-2016-2020-final.pdf>

62 A Switch is a central domestic point where all electronic payment messages are routed from one Payment Service Provider (bank or non-bank) to another

4.2 Financial regulations

The National Payments System Act (2013) is the main piece of legislation encompassing the movement of money. As explained by the Bank of PNG, “[it] involves a network of financial institutions and payment services providers (PSPs) along with the supporting technology, processes, procedures and legislation that together enable funds to be moved from payers (or senders) to payees (recipients) in whatever form or at whatever time, across the whole economy.”⁶³ However, as highlighted in the National Payments System Strategy and Action Plan 2015–2018, “no supplementary rules and regulations have been developed to enable [the Bank of PNG] to implement and enforce its policy role and responsibilities.”

4.3 Main mobile, cashless payment solutions available

Generally, mobile money services are an effective and efficient way to deliver selected financial services to poor and isolated communities. As highlighted by Grice (2015), the key benefits of mobile money are:

- Increased access to basic financial services;
- Reduced risk of money theft;
- Increased speed of payments;
- Improved convenience;
- Lower transaction costs and improved transparency and audibility; and
- Improved competition in the financial system.⁶⁴

Although at a nascent stage, the mobile money and mobile financial industry in PNG is promising. For example, in 2011 Digicel started a mobile money service. The service, Cellmoni, has been developed in partnership with the Pacific Financial Inclusion Programme.⁶⁵ “It allows people with no internet access to conduct money transfers over text messages using feature phones [...] users can top up their CellMoni account, make domestic peer-to-peer transfers and purchase electricity.”⁶⁶ As highlighted by GSMA (2019), “the operator is looking to leverage its extensive distribution network to reach the last mile and expand rural financial inclusion”.⁶⁷

Similarly, MiBank offers MiCash, a mobile financial service offering similar functionalities to Cellmoni (bill payments, airtime top-up, money transfers, deposits and withdrawals), plus the possibility to buy goods and services where MiCash is accepted. MiCash runs on Digicel’s network, and had a total number of 67,263 accounts in December 2018. MiCash services both the urban and rural population, with these accounting for 56% and 44% of the accounts, respectively.⁶⁸

BSP, ANZ, Westpac and Post PNG also offer mobile money or mobile financial services.

Table 5 - Overview of PNG’s Mobile Money Services

	Bank-led	Non-Bank-led
Providers & Products	BSP (Wantok Moni), ANZ (goMoney), Westpac and MiBank (MiCash)	Digicel (Cellmoni), Post PNG (Salim Moni Kwik)
Focus	Improving banking efficiency, including moving customers from branches to mobile money and increasing mobile money transaction volumes in order to increase economies of scale, thereby driving down costs	Domestic remittances and increasing the volume of mobile transactions
Services across carriers	View balance, transaction history, mobile top-ups, transfer funds, utility bill payments, text message (SMS) alerts and account management, cash-in and cash-out services at agents, and cash-out at Automatic Teller Machines (ATMs) and Electronic Funds Transfer at Point of Sale (EFTPOS) terminals	

Source: Grice (2015), referring to van der Vlies, M., & Watson, A. (2014).

63 See <https://www.bankpng.gov.pg/payment-system/payment-system-in-png/>

64 Grice, T. A. (2015). Mobile Transparency? Financial inclusion, mobile money and Papua New Guinea’s resources sector. The University of Queensland (CSR) and the International Mining for Development Centre (IM4DC). Available at <https://www.csr.uq.edu.au/media/docs/1227/mobile-money-financial-inclusion-and-pngs-resources-sector-june-2015.pdf>

65 International Telecommunication Union (2018a). Measuring the Information Society Report 2018 – Volume 2, ICT Country Profiles, Available at <https://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2018/MISR-2018-Vol-2-E.pdf>

66 World Economic Forum (2020a). Facilitation 2.0 Trade and Investment in the Digital Age. World Economic Forum, Insight Report.

67 GSM Association (2019d). The Mobile Economy Pacific islands 2019. GSM Association, London. Available at https://www.gsma.com/mobileeconomy/wp-content/uploads/2020/03/GSMA_MobileEconomy2020_Pacific_Islands.pdf

68 GSM Association (2019a). Digital Transformation: The Role of Mobile Technology in Papua New Guinea. London, United Kingdom: GSMA. Available at <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/03/Digital-Transformation-The-Role-of-Mobile-Technology-in-Papua-New-Guinea.pdf>

However, the lack of interoperability reduces the attractiveness of the mobile money and mobile financial services.

Interoperability for provision of mobile money services is not yet a reality, although, as highlighted by the Central Bank, “[work] is underway to introduce more mobile and digital payment options and interoperability for mobile providers who offer mobile wallets and payments.”⁶⁹ Specifically, the Bank of PNG launched a “National Switch” in the first phase of the Retail Electronic Payments System (REPS) to process domestic debit card transactions undertaken at electronic funds transfer at point of sale (EFTPOS) terminals and automated teller machines (ATMs). At the moment, the National Switch does not support electronic transactions, but the Bank of PNG plans to launch instant payment transfers through it at the end of November 2020 and to connect it with nonbank and mobile payment service providers in 2021. Once that is achieved, interoperability will be achieved.⁷⁰

In terms of payment gateways, the country has seen an improvement in recent years⁷¹, with the Bank of South Pacific and Westpac PNG implementing internet payment gateways. The Bank of South Pacific launched in 2017 an internet payment gateway that allows the online acceptance of Visa and Mastercard cards, and it is able to process currencies from PNG’s major trading partners, such as Australia, New Zealand, the United States, Japan and Singapore.⁷² Bmobile and small businesses such as Tapioca Delight have been the first players to adopt such instruments. Ticket Bilum, a service that allows you to purchase tickets to events, recently announced the integration of BSP’s internet payment gateway into its online ticketing app.⁷³

69 See <https://www.bankpng.gov.pg/payment-system/retail-electronic-payments-system-reps/>

70 World Economic Forum (2020a)

71 Post Courier (2019). No Payment Process to Enable E-commerce in PNG. Accessed on 4 December 2020. Available at <https://postcourier.com.pg/no-payment-process-enable-e-commerce-png/>

72 World Economic Forum (2020a)

73 Business Advantage PNG (2020). Cashless Conversion: Papua New Guinea Gets Ready for an Ecommerce Revolution. Business Advantage PNG. Available at <https://www.businessadvantage-png.com/cashless-conversion-papua-new-guinea-gets-ready-for-an-ecommerce-revolution/>

5

LEGAL AND REGULATORY FRAMEWORK



Promoting trust in electronic channels is crucial for E-commerce to thrive. In order to achieve this trust, the country must ensure that the regulatory framework is up to date and foresees the different situations that its citizens might face whilst conducting electronic transactions. Currently, the National Information and Communication Technology (NICT) Act of 2009 is the main law applicable to E-commerce, together with the 2016 Cybercrime Code Act. The country lacks laws covering consumer protection, competition, data privacy, data protection, and electronic transactions. Given the lack of an enabling regulatory framework, the government should make efforts towards adopting the required laws.

For E-commerce to thrive users need to be reassured that, whatever digital transaction they undertake, they will be protected – to do so a country must have an appropriate regulatory framework. E-transactions, cybercrime, privacy and data protection, consumer protection and competition laws are crucial to ensure that citizens are protected whenever undertaking electronic transactions. According to UNCTAD's Global Cyberlaw Tracker, of the aforementioned areas, **PNG has only adopted cybercrime legislation**, the Cybercrime Code Act of 2016, which partly replaces the National Information and Communications Technology Act of 2009. The Act identifies the offences and fines related to data and network security. Some of those offences, as included in the Budapest Convention on Cybercrime, are unauthorised access, data and system interference, electronic fraud, forgery, etc.⁷⁴

To date, the National Information and Communication Technology (NICT) Act of 2009 is, together with the aforementioned Cybercrime Code Act of 2016, the main law in place which relates to E-commerce. The European Union (EU), through its Trade-Related Assistance (EU-TRA2) Programme supported the drafting the Electronic Transaction Bill 2018.⁷⁵ This Bill is expected to be passed by Parliament in November 2020⁷⁶ to provide the framework to build confidence on e-commerce including, for example, by providing for authentication of electronic signatures.⁷⁷

Box 2 - Relevance of Electronic Transaction Laws for E-commerce

As highlighted by the World Economic Forum (2020), in a digital age, transactions have become more intangible, which makes it more difficult to record proof of mutual consent. E-transaction and E-signature laws solve the challenges that the lack of a physical contract / consent mechanism, setting requirements for the legal recognition of data messages, e-contracts and various authentication processes for e-signatures.

Adopting E-transaction and E-signature laws would also provide a solid foundation for all types of electronic transactions, regardless of their public, private or professional nature, advancing commercial developments in three key areas: 1) trade facilitation and "paperless trade"; 2) e-commerce and digital transactions responsive to COVID-19; and 3) business efficiency.

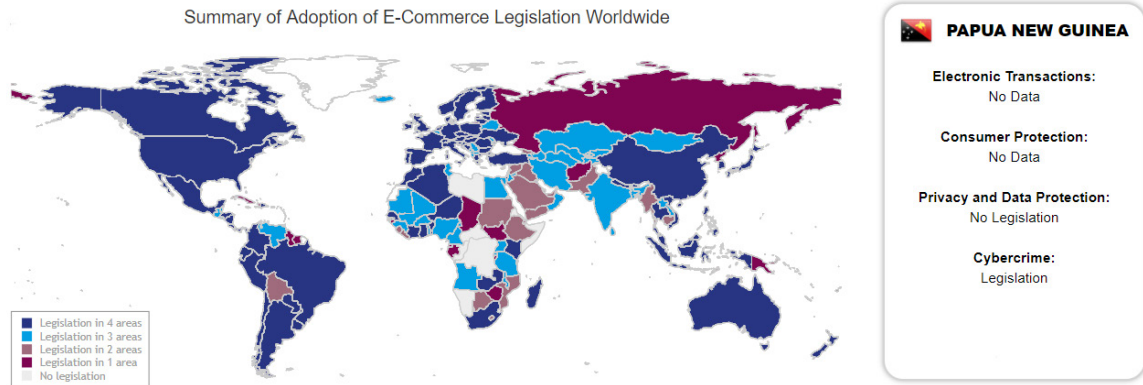
74 Galgal, K. (2017). Developing PNG's Cybercrime Policy: Local Contexts, Global Best Practice. The Interpreter, The Lowy Institute, March 16. Available at <https://www.lowyinstitute.org/the-interpreter/developing-png-s-cybercrime-policy-local-contexts-global-best-practice>

75 EU-PNG TRA Programme (2018). European Union Assists PNG in Drafting Critical Electronic Transactions Legislation. Available at <http://www.pngeutra2.org/pg/european-union-assists-png-in-drafting-critical-electronic/>

76 World Economic Forum (2020b). This Pacific Island is Working Towards a Digital Revolution. World Economic Forum. Available from: <https://www.weforum.org/agenda/2020/09/papua-new-guinea-digital-transformation-covid-19/>

77 Independent State of Papua New Guinea (2016). A Bill for an Act Entitled Electronic Transactions Act 2018. Government of Papua New Guinea. Available from: <https://www.businessadvantage-png.com/wp-content/uploads/2020/06/E-COMMERCE-BILL-JUNE-2019.pdf>

Figure 5 - UNCTAD's Global Cyberlaw Tracker: Papua New Guinea



Source: UNCTAD

As to the current framework, one of the key outcomes of the National Information and Communication Technology (NICT) Act of 2009 was the establishment of the National Information and Communications Technology Authority (NICTA), successor to the PNG Telecommunication Authority (PANGTEL). NICTA's functions were addressed in chapter 2.

6

E-COMMERCE SKILLS DEVELOPMENT



As in other FICs, access to digital skills in PNG is limited. Tertiary education is the exception, rather than the norm. Additionally, attending university does not ensure the acquisition of digital skills due to the lack of free wi-fi at campuses, lack of computer ownership and limited professional staff with digital skills. Addressing the skills gap is a priority for the Vision 2025, the Medium-Term Development Plan III 2018-2022, and the UAS Fund, which also aims to tackle the gap in digital skills through training and awareness-building programmes.

Overall, SMEs face significant difficulties and challenges in obtaining the right skills to create and run a business. A series of initiatives have been put in place to provide strategic mentoring, business skills development, etc.

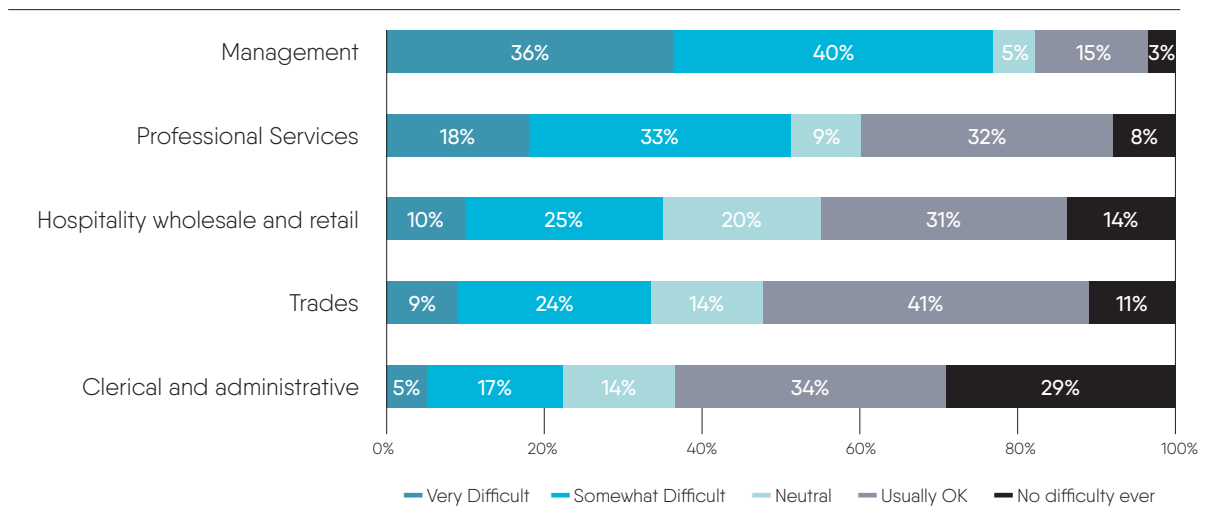
In this context, the upgrading the existing education curriculum, engaging the private sector in its design, and the expanding capacity of E-commerce businesses by increasing innovation-focused incubators and accelerators are options worth pursuing to address the observed skill gaps.

6.1 Skills gap identification

In PNG, skills gaps are very significant, and digital skills are no exception. According to a recent UNDP/Deloitte (2017) survey, over 80% of the respondents considered skills shortages to be a barrier to expanding their labour force. This was particularly relevant outside the major population centres of Port Moresby, Lae and Madang.⁷⁸

Additionally, the more specialised and highly skilled an occupation is, the more difficult it is to find that occupation in PNG. Clear skills gaps exist for managerial roles, professional workers (lawyers, accountants, etc.) as well as food professionals (such as chefs).

Figure 6 - Extent of recruitment difficulty, based on occupations



Source: UNDP/Deloitte (2017)

78 Deloitte and United Nations Development Program (2017). Fulfilling the Land of Opportunity: How to Grow Employment in Papua New Guinea. Available at https://www.undp.org/content/dam/papua_new_guinea/docs/Publications/Skills%20survey%20report%20-%20Web.pdf

The root causes of the observed skill gaps lie in the low level of basic education, which are then compounded by the deficiencies of higher education and professional training – addressed in the following section.

Primary net enrolment in PNG increased significantly during the past three decades, from 57% in 1989 to 73% in 2016 according to World Bank figures. Still, in a country which represents about 80% of the Forum Island Countries' population, almost 32% of females and 24% of males aged 6 and over have never attended school.⁷⁹

Looking at the working age segment (age 15–49) in 2018:⁸⁰

- 66% of women and 80% of men were literate, but even among those who were literate eight grade exam results reveal poor outcomes for literacy and numeracy;
- 23% of women and 13% of men had no formal education;
- 35% the population had attended but not completed some primary school; and
- 8% of women and 11% of men had completed secondary school or attained a higher level of education

This signals the persistent difficulties in delivering quality primary and secondary education, including due to lack of classrooms, qualified teachers and basic facilities.⁸¹

6.2 Availability of tertiary education, professional training

Increasing the quality and availability of Technical, Vocational, Education and Training (TVET) and tertiary education are priority objectives of the country's Vision 2050. The Medium-Term Development Plan III (2018–2022) also focusses on improving access to education and skills training.⁸²

With 27 higher education institutions and six universities, **PNG has approximately 10,000 students enrolled in tertiary education, which represents less than 1% of the estimated 600,000 young people of university age.**⁸³ These figures are far lower than for other Forum Island Countries, such as Vanuatu or Fiji – 5% and 14% in 2004, according to World Bank data.

It has been observed that the University of PNG, the University of Technology, and the Divine Word University provide IT-related courses. However, the institutions face strong challenges: some centres do not have free internet access for students, computer availability is very limited, and academic staff have no experience with the internet. These factors, linked to the fact that under 40% of the students own a computer, present a challenging picture for the promotion of digital skills.⁸⁴

As highlighted by the ADB, the percentage of population possessing vocational, technical and trade skills is very small, just slightly more than the numbers with university qualifications. Lacking more up to date data, in 2010 **the percentage of the population with a Vocational or Technical Certificate was only 1.6%.**⁸⁵ This is despite the fact that there are 11 Technical and Business Colleges, 133 Vocational Training Centres,⁸⁶ and a number of (mostly private) Registered Training Organisations.⁸⁷

As highlighted by the ADB, “the key issues concerning TVET in PNG include; (i) fragmentation, low capacity in terms of policy development, research and evaluation and strategic planning for the sector; (ii) course offerings determined by TVET funding model rather than current and emerging labour-market demand, with direct industry support currently very weak; (iii) poor leadership and management at the system and institutional level; (iv) degrading quality of student intake and lack of transparency in student selection processes; (v) lack of supply of appropriately trained teachers in public TVET system; (vi) extremely impoverished learning and living environment and physical infrastructure generally dilapidated, unmaintained and obsolete and (vii) current resource gap in TVET financing and financial management”.⁸⁸

79 National Statistical Office, Papua New Guinea (2019) Papua New Guinea Demographic and Health Survey 2016-18. Available at <https://dhsprogram.com/pubs/pdf/FR364/FR364.pdf>

80 Ibid

81 Rena, R. (2011). Challenges for Quality Primary Education in Papua New Guinea - A Case Study, Education Research International, Volume 2011

82 Government of Papua New Guinea (2018). Medium Term Development Plan III 2018-2022. Available at https://png-data.sprep.org/system/files/MTDP-III-Book-1_Final-Proof-Web-compressed.pdf

83 Sagrista, M. and Matobob, P. (2016). The Digital Divide in Papua New Guinea. Pacific Journalism Review, Vol. 22, Issue 2, pp. 20-34, December. Available at https://www.researchgate.net/publication/314131825_2_The_digital_divide_in_Papua_New_Guinea_Implications_for_journalism_education

84 Ibid

85 Asian Development Bank (2019b). PNG: Improved Technical and Vocational Education and Training for Employment – Initial Poverty and Social Analysis. Asian Development Bank. Available at <https://www.adb.org/sites/default/files/project-documents/53083/53083-001-ipsa-en.pdf>

86 See <https://www.education.gov.pg/quicklinks/tvet.html>

87 For a detailed overview of the TVET environment in PNG, see Horne, R., Ngangan, K., Tavil-Melachon, S. & Brown, J. (2015). Research into the Financing of Technical and Vocational Education and Training (TVET) in the Pacific – Papua New Guinea Country Report. Australian Government, Department of Foreign Affairs and Trade. Available at <https://www.dfat.gov.au/sites/default/files/financing-of-tvet-in-png.pdf>

88 Asian Development Bank (2019b)

Besides Universities and TVET providers, other entities administer training courses which are useful to fill the observed skills gaps. For example, ANZ runs MoneyMinded SME Business Basics Programme, a financial literacy programme for small businesses helping entrepreneurs gain a better understanding of finance and management.⁸⁹

In the area of digital skills, the UAS Strategic Plan recommends the development of a number of initiatives including:

- Training classes and workshops;
- Public relations and awareness-building programmes;
- Entrepreneurial assistance and incubation initiatives;
- ICT applications and content development programmes;
- Community-based technical support resources; and
- Public administration training and application development.

It is anticipated that projects will be implemented through different partner organisations, such as technical training organisations and consultants, university programmes, local community institutions, and government agencies.⁹⁰

One initiative aligned with the recommendations of the UAS is the rolling out of the Digital Transformation Centres (DTC) jointly run by the PNG University of Technology (PNGUoT) and the International Telecommunication Union. The first course, a 'Get Connected' Train-the-Trainers programme, focuses on basic digital competencies. The 2020 DTC training plan builds on ITU's work to support various pillars of the digital ecosystem including digital infrastructure, digital agriculture, digital government, emergency telecommunication, cybersecurity and digital skills.⁹¹

Another relevant initiative in this area is the Digital Tourism Learning Hub established by the Pacific Trade and Invest (PTI) and supporting digitisation of small tourism businesses in the Pacific, including PNG.⁹²

89 PNG Report (2018). ANZ Commitment to a Strong Future. Accessed on 4 December 2020. Available at <https://www.pngreport.com/company-profiles/partner-content/1345096/anz-commitment-to-strong-future>

90 National ICT Authority of Papua New Guinea (2017). UAS Strategic Planning Report 2018-2022. NICTA. Available at https://uas.nicta.gov.pg/images/Reports/Report_UASStrategicPlanning2018-2022.pdf

91 International Telecommunication Union (2020). Papua New Guinea Rolls Out 2020 Digital Transformation Centre Training Plan. International Telecommunication Union. Accessed on 3 December 2020. Available at <https://www.itu.int/en/myitu/News/2020/07/22/10/07/PNG-Digital-Transformation>

92 See <https://pacificlearninghub.com/>

7

ACCESS TO FINANCING INITIATIVES FOR E-COMMERCE



The process to access finance in PNG is mainly informal. With 70% of the population borrowing money, the main lenders are relatives and wantoks (41%) and moneylenders (24%), despite the high interest charged, approximately 40–50% per fortnight. Only 5% of those interested in borrowing money resort to formal institutions for loans. This situation reflects the fact that banks target their services to the middle and upper classes and corporate clients. Micro-finance is also not being exploited: with a loan-to-deposit ratio ranging between 52–58% in the period 2013–2018, there might be an excess of liquidity that has not been fully utilised for loan purposes.

Alternative mechanisms to access finance, such as business accelerators and incubators, have been expanding across the country, enabling access to sector knowledge, media visibility and the opportunity to fund-raise, but still are limited in number.

To improve access to financing SMEs should be trained to develop business proposals. The government could establish credit guarantee schemes, and promote linkages with venture capitalists and angel investors.

7.1 Financing by Banks and Microfinance Institutions

The limited access to formal finance forces PNG borrowers to resort to informal lenders. Overall, 70% of people in PNG borrow money, with the most common sources of financing being relatives and wantoks (41%), followed by moneylenders (24%). Formal institutions (banks, saving and loans societies) account for less than 5% of loans. This is despite the high cost of informal moneylenders, at approximately 40–50% per fortnight.⁹³

This situation reflects the perception that “banks are not particularly client-centric in terms of meeting the needs of low-income people and offer services that mainly serve middle and upper classes and corporate partners.”⁹⁴ For example, 100% collateral is normally required to obtain formal credit, a condition which is difficult to be met by low-income clients. Also, small and medium-sized enterprises find it challenging to access credit due to their weak business plans. Research by Oxford Business Group confirms that limited access to credit relates to the fact that many SMEs lack collateral and the perception amongst banks is that small businesses are high-risk.⁹⁵ Low access to formal finance in PNG will particularly hinder innovative ventures such as those leveraging E-commerce, whose risk will be perceived as higher than average, and whose development will require higher than average business skills from their proponents. According to Tebbutt Research (2014), the majority of PNG’s SMEs reported that improved access to finance would be the foremost way to help grow their business. In order to tackle such issues, the Government of PNG has rolled out its K200 million financial support for SMEs, especially those in the agricultural sector. Of these K200 million, K100 million will be disbursed by the Bank South Pacific, K80 million will be disbursed by the National Development Bank and K20 million will be disbursed by the Department of Commerce and Industry. Financial Partnership Agreements have been signed between the Department of Commerce and Industry and the commercial banks.

93 Government of Papua New Guinea (2016). National Financial Inclusion Strategy 2016-2020. Available at <http://www.pfip.org/wp-content/uploads/2017/01/2-PNG-NATIONAL-FINANCIAL-INCLUSION-STRATEGY-2016-2020-final.pdf>

94 Tyroler, C., Schoeffel, P. and Saho, R. (2013). Deepening Financial Inclusion for Women in the Pacific Islands - An Assessment of the Gender Issues Surrounding Women’s Ability to Access and Control Financial Resources in Papua New Guinea and Samoa. New Zealand Aid Programme Women’s World Banking, April. Available at <http://www.womensworldbanking.org/wp-content/uploads/2013/06/WWB-Pacific-Gender-Study-Research-Report-May2013-Final-A4.pdf>

95 Oxford Business Group (2015). PNG Promotes SME Development. Available at <https://oxfordbusinessgroup.com/analysis/png-promotes-sme-development>

Additionally, the government could consider establishing a credit guarantee scheme, through which the provide a partial guarantee to the official loans granted, particularly for innovative SMEs.

In 2020, PNG was ranked 48th out of 190 countries in the World Bank's Doing Business' Getting Credit indicator. With a score of 70 out of 100, the country outperforms its regional peers – for example, scores for Fiji, Samoa, and Kiribati are 25, 45, and 20 in the same year. The regional average stands at 58. It is worth highlighting that this indicator does not reflect the availability of actual credit for the population, but rather the strength of legal guarantees and institutions aimed at facilitating lending.⁹⁶

Micro-finance is not in high demand. Since its inception, the micro-finance industry has been facing the problem of disproportionately low demand for loans in comparison to savings deposits.⁹⁷ The loan-to-deposit (LTD) ratio of PNG's micro-finance industry ranged from 52–58% between 2013 and 2018. Overall, PNG remains the only country in the region with an LTD ratio of less than one, implying that there might be excessive liquidity in the country's microfinance institutions that is not fully utilised for lending purposes.⁹⁸

7.2 Business incubators, business accelerators and venture capitalists

Recognising the important role that small and medium-sized enterprises (SMEs) play in the economy, PNG adopted the SME Policy in 2016. In this, the Government highlighted the **commitment to implement initiatives “geared towards encouraging and creating an incubation space for new start-ups”**.⁹⁹

In this area, there have been a number of interesting initiatives for example:

- The National Development Bank (NDB)'s Stret Pasin Business Incubation Centres, providing space to set-up and operate MSMEs and facilitate their training and capacity building.¹⁰⁰
- The NDB's Stret Pasin Young Enterprise Scheme. The programme aims to decrease youth unemployment by providing an opportunity for keen entrepreneurs to start their own businesses. The two-year scheme offers entrepreneurial training, funding, mentoring and business support services.¹⁰¹
- The Kumul Gamechangers Initiative, which aims to build a more inclusive society by working with entrepreneurs, impact investors and inclusive businesses. The initiative, offered strategic mentoring, business skills development, access to sector knowledge, media visibility and the opportunity to fundraise.¹⁰²

PNG's development partners are also investing in this area. The World Bank, with funding from the Korea World Bank Group Partnership Facility (KWPF), will start implementing the PNG Accelerate SME Innovations and Finance Programme, which aims to assist SME incubation, start-up, and expansion, and strengthen access to finance, information, and innovation.¹⁰³

7.3 Financing by development partners

Beyond the provision of direct assistance to private businesses, development partners support the overall set of E-commerce enablers covered by this report. PNG is the biggest recipient of Overseas Development Assistance (ODA) in the Pacific Region, with receipts of around USD 500 million in 2018, or around 25% of total ODA to the Pacific region.¹⁰⁴ A good share of this aid is devoted to support E-commerce enablers, be it infrastructure, skills, or access to finance.¹⁰⁵

96 See World Bank (2020). Doing Business 2020. Economy Profile: Papua New Guinea. World Bank Group. Available at <https://www.doingbusiness.org/content/dam/doingBusiness/country/p/papua-new-guinea/PNG.pdf>.

97 Sum, D. J. (2018). Low Demand for Microcredit in Papua New Guinea. Devpolicy Blog, April 24. Available from: <https://devpolicy.org/low-demand-for-microcredit-in-papua-new-guinea-20180424/>

98 Ibid

99 Government of Papua New Guinea (2017b). SME Policy. Department of Trade, Commerce and Industry. Available at http://www.smecorp.gov.pg/images/SME_Policy/png-sme-policy_2016.pdf

100 Amini, W. K. (2018). Advancing Entrepreneurship in Papua New Guinea. Open Forum, July 17. Available at <https://www.openforum.com.au/advancing-entrepreneurship-in-papua-new-guinea/>

101 Kirk, A. & Pryke, J. (2016). Creating PNG jobs: The role of young entrepreneurs. The Interpreter, the Lowy Institute, July 15. Available at <https://www.loyyinstitute.org/the-interpreter/creating-jobs-papua-new-guinea-role-young-entrepreneurs>

102 Ibid

103 World Bank (2019a). Papua New Guinea – Country Partnership Framework. The World Bank Group. Available at <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/9866831558749746464/papua-new-guinea-country-partnership-framework-for-the-period-fy19-fy23>

104 See OECD Stats: <https://stats.oecd.org/index.aspx?lang=en>

105 See Mbise, T., Taal, S., Roberts, M., & Lammersen, F. (2018). Digital connectivity & E-commerce: Overview of Financial Flows and Examples of Aid for Trade Support. World Trade Organisation, Economic Research and Statistics Division, ERS-2018-08. available at https://www.wto.org/english/res_e/reser_e/ersd201808_e.pdf

Among regional donor programmes with a specific relevance for E-commerce, the Pacific Financial Inclusion Programme (PFIP) has supported greater financial inclusion. By June 2018, the PFIP partnerships have allowed over one million Papua New Guineans to receive digital financial services.¹⁰⁶ PNG does not benefit from the E-commerce Aid for Trade Fund supported by The Australian Aid Programme.

¹⁰⁶ See <http://www.pfip.org/our-work/performance-dashboard/countries/papua-new-guinea/>



Conclusions

The Government of PNG requested the present E-commerce Assessment, with the aim of taking stock of the country's E-commerce environment, and to identify a path to ensure that the country takes full advantage of all the opportunities that digital trade can bring.

PNG lags behind the region in ICT infrastructure, mainly due to the difficulties posed by its topography, which imply that existing effective solutions, such as the fibre optic cabling, are not available due to high cost, leading to reliance on less effective systems, such as microwave. The weak international connectivity – PNG currently only has two international cables – also limits the capacity of the country to access the internet. All these factors lead to an expensive and slow internet, resulting in a low internet penetration amongst the population – only one in nine people have internet access.

E-commerce has the potential to promote greater international trade. With a trade-to-GDP ratio of 60%, improving PNG's connections with global goods and services supply chains will be crucial to boosting the country's development, particularly moving away from its dependency on extractive industries, which account to 89% of the country's exports.¹⁰⁷

However, in order to achieve these objectives, a series of key directions must be followed.

The first one is ensuring that ICT services become affordable for the majority of the population. Internet remains a luxury that few can afford. The UAS is in a position to ensure that access and affordability are improved through subsidies. Promoting the sharing of infrastructure amongst the players might be an interesting solution to explore. Also, the forthcoming new international and domestic cables will contribute to reducing the cost of service.

The second one is encouraging the expansion of digital skills, particularly in rural and remote areas.

The third one is adopting the right regulatory framework to protect internet users. With legislation only covering cybercrime, thrust in electronic transactions remain limited – competition law, data privacy, data protection and electronic transactions are some of the key pillars upon which a safe internet relies.

E-commerce also offers an opportunity for SMEs to access markets which would otherwise require significant start-up capital to reach. Yet, access to finance is still very much needed, and this is limited in PNG. Whilst successful programmes, such as business incubators, have been launched and have achieved positive results, these have to be mainstreamed and enhanced to produce a systemic impact.

The Government should ensure that an overarching E-commerce policy and strategy is drafted, adopted and implemented. An E-commerce committee, composed of policymakers, businesses, civil society, and regulators, is needed to guide, formulate and monitor the strategy. None of them exist at the moment. While public-private sector platforms have been introduced to coordinate infrastructural works in PNG, more such PPPs are needed in key areas of importance to E-commerce.

107 Extractive Industries Transparency Initiative (2020). Papua New Guinea. Accessed on 3 December 2020. Available at <https://eiti.org/papua-new-guinea>

The Way Forward: Action Matrix

E-commerce readiness assessments and strategy formulation

Indicative action	Expected outputs	Priority Level	Potential support by
Promote the benefits of engaging in E-commerce through sensitization and awareness-raising events	Higher E-commerce adoption amongst businesses and citizens	High	PNG Digital ICT Cluster, National ICT Authority, Department of ICT, Department of Commerce and Industry, National Trade Office, Small Medium Enterprises Corporation
Develop an E-commerce Strategy, and a detailed implementation roadmap to guide the course of e-commerce development	E-commerce is recognized as a driver for economic growth. A national policy is drafted and adopted, and a plan for the development of E-commerce, reflecting the needs and opportunities of each sector, is adopted	High	PNG Digital ICT Cluster, National ICT Authority, Department of ICT, Department of Commerce and Industry, National Trade Office
Establish an E-commerce committee to promote engagement and buy-in from national stakeholders. Engage the private sector to start drafting an E-commerce strategy through the E-commerce committee	The E-commerce committee is established and embedded into the day-to-day operation of the government to promote effective communication, engagement, and ownership among the stakeholders	High	PPP Steering Group, PNG Digital ICT Cluster, National ICT Authority, Department of ICT, Department of Commerce and Industry, National Trade Office, Small Medium Enterprises Corporation
Improve the systematic collection of E-commerce statistics	Improved statistics collection effectively informing policymakers about the opportunities and challenges faced by e-commerce operators, thus improving the government responses and decision-making process	High	PNG Digital ICT Cluster, National ICT Authority, Department of ICT, National Statistics office,

ICT Infrastructure and E-commerce Support Services Ecosystem

Indicative action	Expected outputs	Priority Level	Potential support by
Further expand the network of 3G and 4G towers, including through subsidies provided through the Universal Access Fund. Encourage telecommunications service providers to cooperate on network/infrastructure sharing in remote areas to benefit from cost-sharing, as well as improving last-mile connectivity	Improved network coverage, reliability, and affordability across the country.	High	Department of Works,

PNG Digital ICT Cluster, National ICT Authority, Department of ICT			
Expedite the registration and issuance of National ID Cards across the country to allow access to telecom and banking services especially in the semi urban and rural areas	Increased telecom and banking services across the country	High	Department of National Planning, Civil Registry Office
Introduce broadband packages and plans specifically designed for e-commerce firms and small businesses	E-commerce facilitation and higher adoption	Medium	Mobile network operators, Broadband operators, Department of ICT
Take stock of existing ICT-enabled services in the private sector to ensure better management, raising awareness and timely provision of technical support when needed	E-commerce businesses are duly mapped, and activities recognised for better regulation, raising awareness of business and consumers, and timely provision of technical support	Medium	National Statistics Office, National ICT Authority, Department of ICT

Trade Logistics and Trade Facilitation

Indicative action	Expected outputs	Priority Level	Potential support by
Leverage the functionalities of ASYCUDA World to progress work towards a national electronic Single Window	Fully functioning ASYCUDA World contributes to more efficient customs procedures, lowering trade costs and thus increasing trade flows	High	National Trade Office, PNG Customs
Continue upgrading the transportation infrastructure to enhance connectivity and lower shipping costs	Low shipping time and costs, therefore leading to more frequent and larger trade flows of cross-border transactions via e-commerce channels	High	PNG Department of Transport, Department of Works, Department of Commerce and Industry
Introducing a trade facilitation roadmap with innovative schemes such as increase the de-minimis thresholds, streamline customs procedures, etc.	Businesses and consumers across the country can access export and import markets using E-commerce in a cheaper and timelier fashion.	High	National Trade Office, Department of Commerce and Industry PNG Customs

Payment Solutions

Indicative action	Expected outputs	Priority Level	Potential support by
Establish the central payments switch as foreseen in the Financial Development Strategy	Interoperability between national payment service providers reduces costs of E-commerce	High	Bank of PNG, Commercial Banks, etc.
Undertake sensitisation exercises to educate businesses and citizens to increase their confidence in electronic and mobile payment tools	Raising awareness across the general population about existing digital payment solutions and their benefits	Medium	Bank of PNG, Commercial Banks, Department of Community Development, Small Medium Enterprises Corporation
Promote the use of digital financial services, such as mobile money to increase access points especially in rural areas	Increased use of digital payments	High	Bank of PNG, Commercial Banks

Promote adoption of suitable forms of identification for opening a bank account	Increase access to formal banking	High	Bank of PNG, Commercial Banks
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Legal and Regulatory Framework

Indicative action	Expected outputs	Priority Level	Potential support by
<p>Draft and adopt the necessary laws to ensure that citizens are protected online, particularly focusing on</p> <ul style="list-style-type: none"> - Consumer protection law - Competition law - Data privacy law - Data protection law <p>Pass the electronic transactions draft as law</p>	Improved e-commerce business environment. Increased trust by consumers and businesses to transact online and to digitalize their operations. Validation of electronic documents and transactions.	High	PNG Digital ICT Cluster, National ICT Authority, Department of ICT, UNCTAD, PIFS
Carry out a regulatory gap analysis on e-commerce in order to assess needs to update and/or upgrade e-commerce related laws	Prioritize acts and regulations (formulation or update) needed for enhancing the e-commerce ecosystem	High	PNG Digital ICT Cluster, National ICT Authority, Department of ICT, UNCTAD, PIFS

E-commerce Skills Development

Indicative action	Expected outputs	Priority Level	Potential support by
Upgrade the existing education curriculum, engaging the private sector in its design	Enhance overall ICT literacy; Enhance the capacity of the labour force to meet the industry's needs	Medium	Private sector representatives, universities, USP, Department of Education, Department of Community Development
Expand the capacity of E-commerce enterprises by increasing innovation-focussed business incubators and accelerators	Increased businesses' capabilities to provide further value-added products/services	Medium	USP, Department of Education, Department of Community Development, Department of Commerce and Industry, Small Medium Enterprises Corporation

Access to Financing Initiatives

Indicative action	Expected outputs	Priority Level	Potential support by
Establish bank guarantee schemes through which the movement would provide a partial guarantee to the official loans granted, particularly for innovative SMEs	Increased access to finance and ease of getting credit.	High	Bank of PNG, Private sector representatives, Department of Commerce and Industry
Sensitise commercial banks on the characteristics of E-commerce	Reduce risk perception of lending to E-commerce businesses	Medium	Bank of PNG, Private sector representatives, Department of Commerce and Industry

Promote access to financing to E-commerce venture via grant schemes, possibly embedded in business incubators and accelerators, and by promoting E-commerce opportunities in PNG with venture capitalists and angel investors	Increased variety in the sources of finance for E-commerce	Medium	Bank of PNG, Private sector representatives, USP, University of PNG, Department of Commerce and Industry, Small Medium Enterprises Corporation
Provide training to MSMEs to build business proposals to acquire financing/investments	Improved understanding of credit sources and increased access to finance, allowing businesses to invest in innovative areas to increase added-value and create jobs	Medium	Bank of PNG, Private sector representatives, USP, University of PNG, Department of Commerce and Industry, Department of education, ADB, PIFS, MSG, WB, Small Medium Enterprises Corporation

Annex I: Stakeholders Consulted and Survey Respondents Stakeholders consulted

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International Economics Consulting Ltd

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Survey Respondents

Name	Organisation	Position	Email
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Private Sector

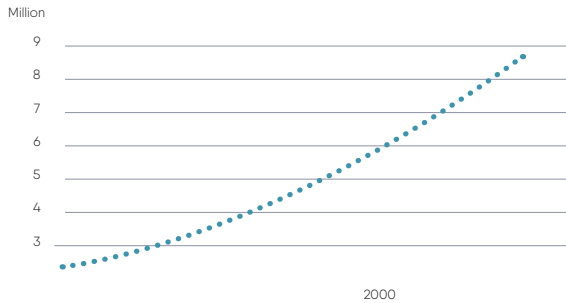
Susan Bakani	-	-	Artisanculture2017@gmail.com
Raphael Uranguai	National Trade Office	-	-

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David Kui	Department of Treasury	Acting Assistant Secretary	david_kui@treasury.gov.pg
Andrew Hambaghunia	PNG Cocoa Products Ltd	Managing Director	hambaghuniaandrew06@gmail.com
Yole Kapili	Small Medium Enterprises Corporation (SMEC)	Acting Manager SME Development	YKapili@smecorp.gov.pg

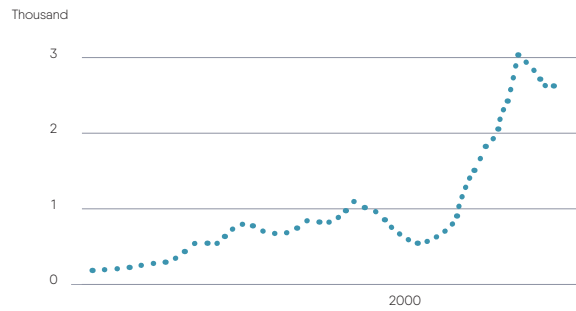
Annex II: Papua New Guinea country profile

Population



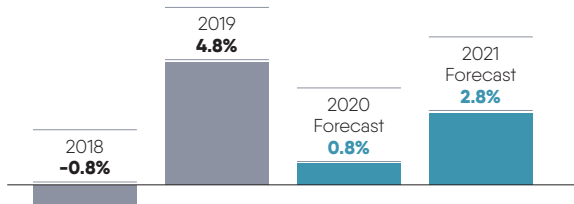
Source: WB WDI

GNI Per capita, Atlas Method
(Current US\$)



Source: WB WDI

GDP Growth Rate: Papua New Guinea
(% per year)



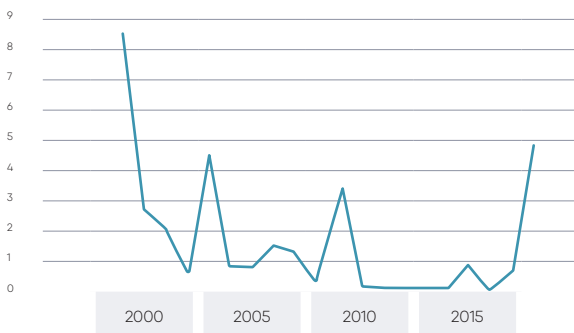
Source: Asian Development Bank. *Asian Development Outlook 2020* (April 2020)

Current account balance
(% of GDP)



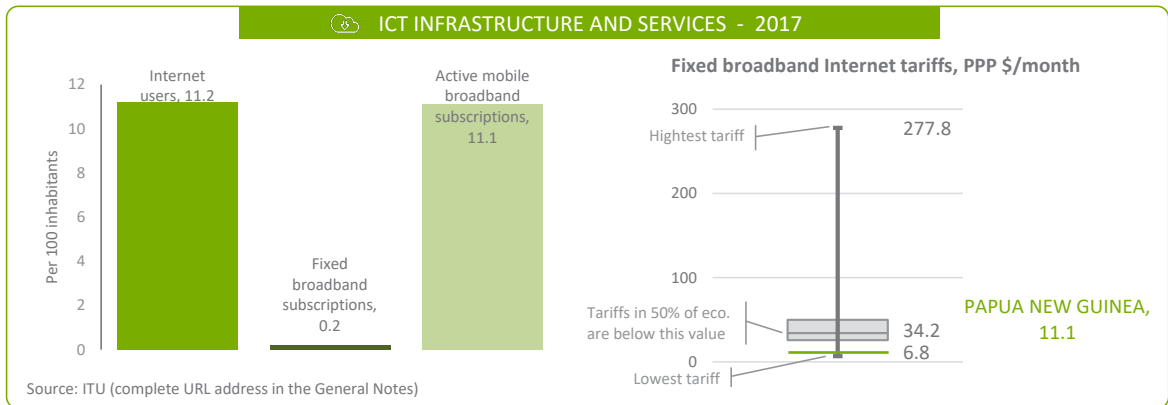
Source: WB WDI

Foreign direct investment, net inflows
(% of GDP)

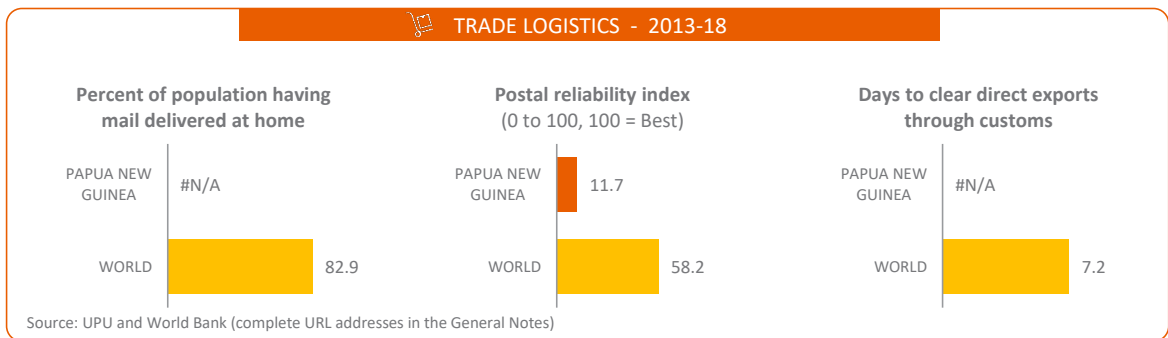


Source: WB WDI

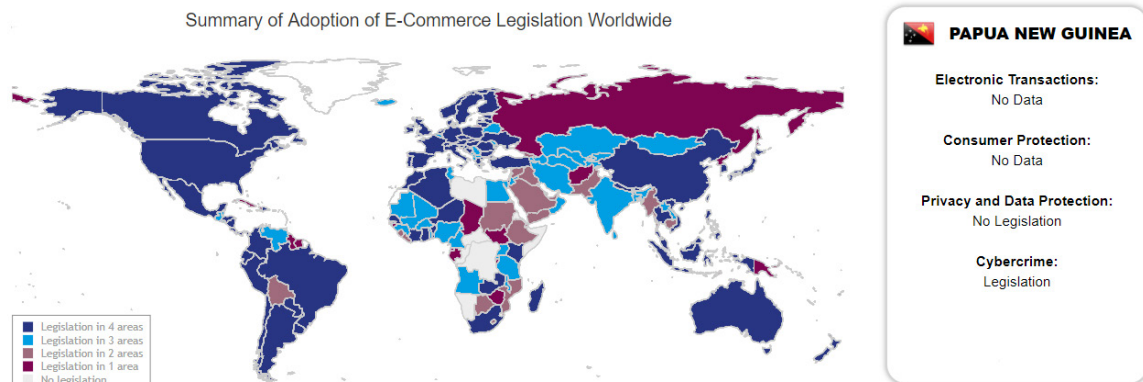
ICT Infrastructure and Services, 2017



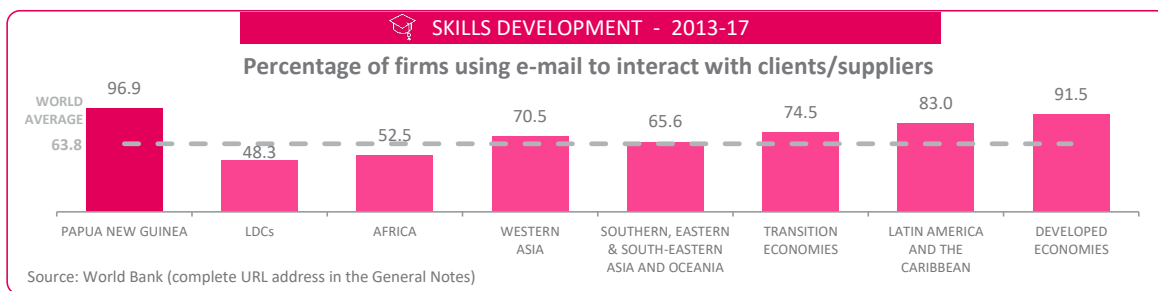
Trade Logistics, 2013-18



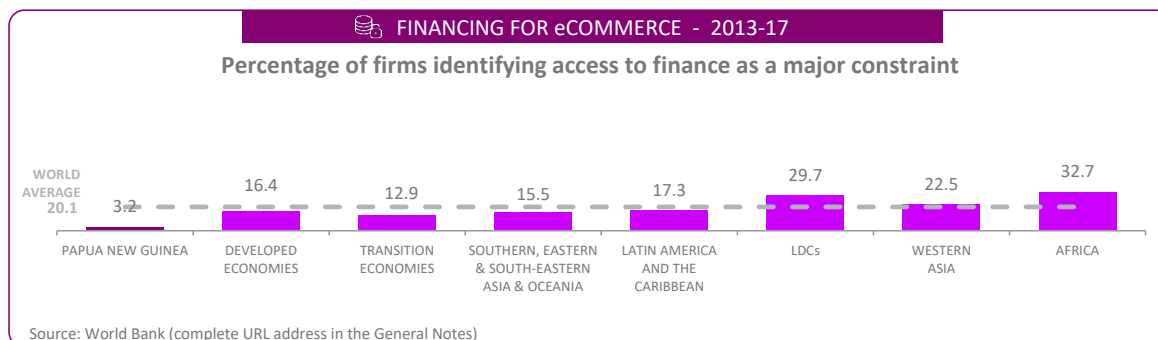
Legal and Regulatory Frameworks, 2019



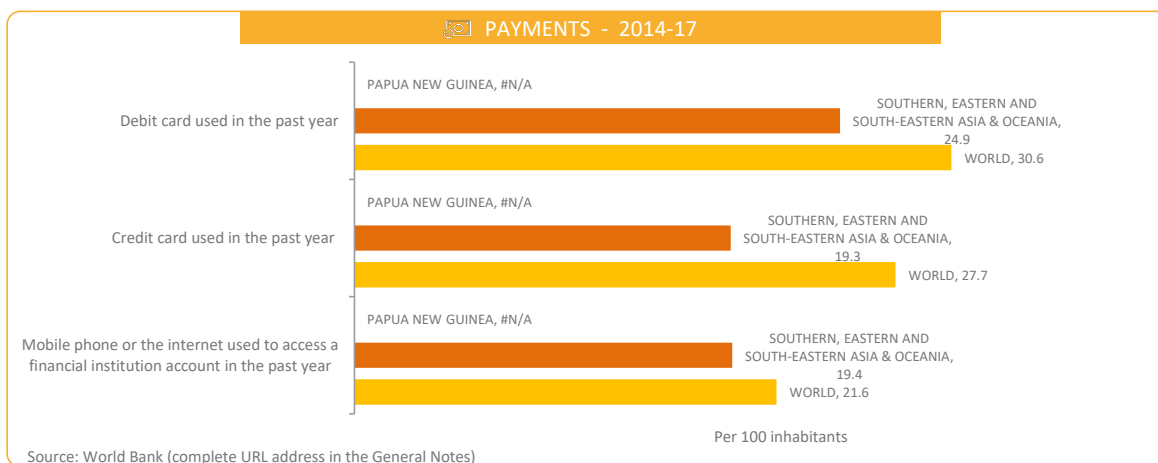
Skills Development, 2013-17



Financing for E-commerce, 2013-17



Payments, 2014-2017



Sources: UNCTAD eTrade for all Country Profile: Papua New Guinea; accessed 27 May 2020

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