Pacific E-commerce Initiative

E-commerce Assessment

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Pacific Region

PACIFIC ISLANDS FORUM

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Preface by Zarak Khan, Director Programs and Initiatives, Pacific Islands Forum Secretariat

This regional report represents an important milestone of Secretariat's work on E-commerce, also known as Pacific E-commerce Initiative.

In line with 2018 determinations by Forum Trade Officials, the Secretariat has worked relentlessly to support analytical and policy work aimed at improving E-commerce readiness in the Pacific region. It has done so by facilitating approval of Enhanced Integrated Framework (EIF) funding for E-Trade Readiness Assessments undertaken by the United Nation Conference for Trade and Development (UNCTAD) in our Least Developed Country Members, and by securing additional funds and overseeing the development of E-commerce Assessments in additional five Members.

As of November 2020, ten Forum Island Countries (FIC) have finalised reports assessing challenges and proposing solutions to promote digital trade in their respective territories. Besides providing guidance for country-level action, these national assessments have served as a robust evidence-base for the development of the Regional E-commerce Assessment which is included in this publication.

All the assessments undertaken so far draw on the test UNCTAD methodology, which focuses on seven key areas of critical importance for cross-border and domestic E-Commerce development:

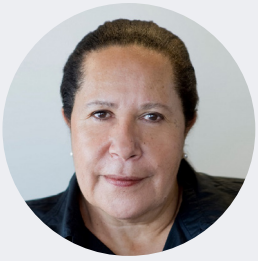
- E-Commerce policies and strategies;
- Legal and regulatory frameworks;
- ICT infrastructure and E-Commerce support services ecosystem;
- Trade facilitation and logistics ecosystem;
- Payment solutions for E-Commerce;
- Access to financing initiatives in E-Commerce; and
- E-Commerce skills development.

Consultations shall soon commence for the drafting of our Regional E-commerce Strategy and Roadmap, with the view of identifying and agreeing priority actions where regional collaboration, harmonization, and integration can lead to marked improvements in our collective readiness to trade digitally.

I wish to extend my sincere gratitude to the hundreds of stakeholders that over the past few year have pro-actively contributed to our Pacific E-commerce Initiative, and I am looking forward to their further engagements in the months to come.

Zarak Kahn
Director Program and Initiatives,
Pacific Islands Forum Secretariat

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. To achieve this priority, the Pacific Islands Forum Secretariat has taken the lead in supporting Forum Islands Countries (FICs) in their efforts to take 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. With conducive policy environment, E-Commerce presents opportunities for Members to explore new ways of doing business, trading and to increase the diversification of their economies towards new sectors such as services and creative industries. 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.

The major investment in submarine cables across the region has made the internet faster and more accessible to a growing number of Pacific people, however, its full potential has yet to be realised. The key to supporting a vibrant e-commerce sector in the Pacific is providing more reliable and affordable access to the internet including for small and micro-enterprises as well as the emerging women and youth entrepreneurs.

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 e-commerce assessments as the first step towards developing a Regional E-Commerce Strategy, continues to progress.

This Regional Assessment Report consolidates the findings from the national assessments conducted so far by the PIFS and the UNCTAD, including anecdotal evidence from other reputable sources. By doing so, this knowledge product provides a sound springboard for the development of a regional consensus on E-commerce through the development of a Regional E-Commerce Strategy and Roadmap, which will be the key focus for 2021.

We will continue working in close cooperation with all partners of the Pacific E-commerce Initiative, including national governments, private sector, regional and international organisations, and development partners.

We will aim for a Strategy and Roadmap focussing on areas where regionalism can most effectively complement national efforts to improve E-commerce readiness, thus ensuring full alignment between the work on E-commerce and our Leaders' directions as enshrined in the Framework for Pacific Regionalism.

Finally, may I acknowledge the TradeCom II – an OACPS Secretariat managed and European Union funded programme for its support in the development of this Regional E-Commerce Assessment.

Meg Taylor, DBE
Secretary General of the Pacific Islands Forum

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The Assessment team wishes to also thank all participants who attended and provided feedback during the regional E-commerce workshop organised by the PIFS on 3 November 2020.

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Abbreviations

2G	Second-generation cellular network
2IPD	Integrated Index for Postal Development
3G	Third-generation cellular network
4G	Fourth-generation cellular network
ADB	Asian Development Bank
AFI	Alliance for Financial Inclusion
AML	Anti-Money Laundering
APG	Asia Pacific Group on Money Laundering
ASYCUDA	Automated System for Customs Data
ATM	Automated Teller Machines
ATS	Automated Transfer System
AUF	Agence Universitaire de la Francophonie (Vanuatu)
B2C	Business to Consumer
BSP	Bank South Pacific
CBRs	Correspondent Banking Relationships
CDD	Customer Due Diligence
CFT	Combating the Financing of Terrorism
COM-FSM	College of Micronesia
CPSC	Central Pacific Shipping Commission
CROP	Council of Regional Organisations in the Pacific
DFS	Digital Financial Services
DTT	Department of Transport and Telecommunications, FSM
EDI	Electronic Data Interchange
EGDI	E-Government Development Index
EMIS	Education Management Information System
EPA	Economic Partnership Agreement
EU	European Union
EU-TRA2	European Union Trade-Related Assistance Programme (PNG)
FAIDP	Framework for Action on ICT for Development in the Pacific

FATF	Financial Action Task Force
FFA	Forum Fisheries Agency
FIC	Forum Island Countries
FICs	Forum Islands Countries
FIT	Fiji Institute of Technology
FNU	Fiji National University
FSM	Federated States of Micronesia
G2B	Government-to-Business
G2C	Government-to-Citizen
G2E	Government-to-Employee
G2G	Government-to-Government
GATT	General Agreement on Tariffs and Trade
GB	gigabyte
GDP	Gross Domestic Product
GOS	Global Outsourcing Services
HCI	Human Capital Index
ICT	Information and Communications Technology
IFC	International Finance Corporation
ILO	International Labour Organisation
IMF	International Monetary Fund
ISCED	International Standard Classification of Education
ISI	ICT Skills Indicator
IT	Information Technology
ITU	International Telecommunications Union
JICA	Japan International Cooperation Agency
KCCI	Kiribati Chamber of Commerce & Industry
KIT	Kiribati Institute of Technology
KM	Kilometre
KYC	Know Your Customer
LDC	Least Developed Country
LSCI	Linear Shipping Connectivity Index
MCIC	Ministry of Commerce, Industry and Cooperatives (Kiribati)

MCTT	Ministry of Communications, Transport and Tourism (Tuvalu)
MELAD	Ministry of Environment, Lands and Agricultural Development (Kiribati)
MFMRD	Ministry of Fisheries & Marine Resource Development (Kiribati)
MFTA	Melanesian Free Trade Agreement
MMEIDCC	Ministry of Meteorology, Energy, Information, Disaster Management, Climate Change and Communication (Tonga)
MNO	Mobile Network Operators
MSG	Melanesian Spearhead Group
MSME	Micro Small and Medium Enterprise
MTC	Ministry of Transportation and Communication (Kiribati)
NiDC	Niue Island Information, Technology & Communication and Development Council
NSO	National Statistics Office
OCGIO	Office of the Governments Chief Information Officer
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OECD	Organisation for Economic Co-operation and Development
OSI	Online Services Index
PACER	Pacific Closer Economic Relations
PACER Plus	Pacific Closer Economic Relations Plus Agreement
Pacific TAFE	Pacific Technical and Further Education
PacLII	Pacific Islands Legal Information Institute
PAFTS	Pacific Aid for Trade Strategy
PFTAC	Pacific Financial Technical Assistance Centre
PIAAC	Programme for the International Assessment of Adult Competencies
PICTA	Forum Islands Countries Trade Agreement
PIDP	Pacific Islands Development Programme
PIFS	Pacific Islands Forum Secretariat
PILNA	Pacific Island Literacy and Numeracy Assessment
PIRI	Pacific Islands Regional Initiative
PIRRC	Pacific ICT Regulatory Resource Centre
PITA	Pacific Islands Telecommunications Association
PNG	Papua New Guinea
POS	Point of Sale

PPA	Pacific Power Association
PPP	Purchasing Power Parity
PREL	Pacific Resources for Education and Learning
PRIF	Pacific Region Infrastructure Facility
PRIP	Pacific Regional Integration Programme
PRISAP	Pacific Regional ICT Strategic Action Plan
PSR	Product Specific Rules
PTC	Pacific Telecommunications Council
RMI	Republic of the Marshall Islands
ROO	Rules of Origin
SCCN	Southern Cross Cable Network
SIDS	Small Island Developing States
SOPAC	South Pacific Applied Geoscience Commission
SPARTECA	South Pacific Regional Trade and Economic Cooperation Agreement
SPC	Pacific Community
SPREP	Secretariat of the Pacific Regional Environment Programme
SPS	Sanitary and Phytosanitary
SPTO	South Pacific Tourism Organisation
TFA	Trade Facilitation Agreement
TII	Telecommunication Infrastructure Index
TMPI	Tonga Maritime Polytechnic Institute
TPL	Third-Party Logistics
TVET	Technical Vocational Education and Training
UN	United Nations
UNCITRAL	United Nations Commission on International Trade Law
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UPU	Universal Postal Union
USD	United States Dollar
USP	University of the South Pacific
WCO	World Customs Organisation
WTO	World Trade Organisation

Executive Summary

Overall, the Information, Communication and Technology (ICT) revolution has brought rapid growth of the ICT sector in Pacific economies. A number of factors are driving this revolution especially the de-regulation and liberalisation of the telecommunications sector throughout the Pacific in the 2000s. ICT penetration has also been increasing and has been greater in countries with a larger urban population as compared to countries with a majority rural population. The global mobile phone uptake has found its way into the Pacific with mobile penetration increasing rapidly. While fixed-line communications growth has been stagnant, mobile internet has led to a rapidly growing ICT sector in most Forum Island Countries (FICs). The ICT revolution is particularly transformative due to its potential to address the region's demographic, geographic and economic challenges. The sparsely populated region of 14 culturally diverse, small developing countries and territories has a combined population of around eleven million. Most of this population is dispersed through hundreds of islands within an area of almost one third of the globe's surface, thus distancing the region from global economic centres. Challenges such as these can be addressed through ICT advancements and in turn through E-commerce adoption.

In this context, E-commerce holds immense potential for the Pacific region, in particular, to help overcome the main challenges of remoteness from the main international markets, poor connectivity between and within the FICs, and lack of economic opportunities for disadvantaged rural communities.

A number of regional initiatives have been put in place to leverage E-commerce potential. For example, the Pacific Islands Information and Communication Technologies Policy and Strategic Plan (2002) and the Pacific Plan Digital Strategy (2005) were the first ICT-centred plans, followed by the 2010 Framework for Action on ICT for Development in the Pacific (FAIDP). In 2016, the Council of Regional Organisations of the Pacific's (CROP) ICT Working Group developed the Pacific Regional ICT Strategic Action Plan (PRISAP) 2015-2020 for better utilisation of ICT in the region. At country level, all FICs except Nauru and Niue have already adopted dedicated policies for ICT development. However, many significant gaps remain in terms of policy implementation and progress tracking.

In terms of regional infrastructure, submarine cables have been the primary drivers of internet connectivity, whereas, satellite connectivity remains prominent for calling and voice services, and for the provision of internet to the most remote areas. The adoption of ICT has grown rapidly from around 12 percent of the population using the internet in 2010 to over 35 percent in 2017. This was fuelled by high mobile services adoption in the region thanks to the lower prices and higher speed mobile data. Overall, the ICT ecosystem is at different stages of development throughout the Pacific, despite ICT infrastructure projects being carried out in the whole region. ICT-enabled services such as E-commerce and E-government are growing slowly, and in most countries and are still at a nascent stage. COVID-19 has spurred a sudden peak in E-commerce uptake globally, which has also been witnessed across the region.

Despite the good progress made, significant challenges remain. While essential trade connectivity throughout the region is enabled by shipping routes with major international trading partners for all categories of cargo, freight rates in the Pacific region remain high by international standards. Home deliveries, quintessential for E-commerce, are not always an option, with more than 60 percent of the FICs' population still having to collect mail from a postal establishment. Generally, the FICs have high border and documentary compliance times for both importing and exporting. Along with this, trade costs are among the highest in the world when measured as a proportion of total trade values.

The region's environment for payment solution is still embryonic. Most FICs are still heavily cash-based economies, with cash being the main payment method used by individuals and businesses. Access to formal financial services is relatively low compared to the world average. This is mainly due to small markets, difficult terrain and poor infrastructure, high cost of serving remote areas, low-income customers,

and high cost of service. Additionally, lack of interoperability among financial service provider platforms, lack of standardised agent management practices, undeveloped consumer protection, low financial literacy, and lack of trust from consumers in financial products also pose challenges to the adoption of mobile money and other cashless payment solutions necessary for E-commerce to grow.

The regulatory frameworks for financial services are at different stages across the Pacific. Most countries lack basic E-commerce-related regulations. Data protection and privacy laws, though sometimes prescribed under domestic telecommunication acts, have not been officially made into law in all FICs, and laws on electronic transactions, consumer protection, and cybercrime, are either absent or generally outdated, with some of them having been enacted more than two decades ago.

In terms of digital skills and the related digital literacy, the FICs as a whole are facing significant challenges. The development of ICT skills is hindered by factors such as outdated curricula in schools and universities, lack of mainstreaming ICT in non-ICT educational subjects, and in some countries, by the lack of awareness about digital skills requirements. Many FICs suffer from the poor basic education. While FICs have achieved substantial progress in access to primary education, significant challenges remain, such as low access to quality early childhood education, and equity gaps that prevent children in outer islands from accessing schools.

Finally, overall financial inclusion in the Pacific region is low, especially due to geographic remoteness, low financial and technological literacy and limited digital infrastructure. These challenges make it harder for businesses in the region to access credit facilities, with domestic credit extended towards the private sector varying greatly. Along with formal financial institutions there are a number of business incubators and accelerators at country level that provide some financing opportunities for the private sector. Various schemes with extending finance at low or zero interest rates, and providing business grants also exist that are aimed at encouraging entrepreneurship and youth development in the region.

Overall, E-commerce in the Pacific is at a nascent stage. While some sectors and countries are observing growth in activity, for E-commerce to flourish, the crucial constraints highlighted in this report should be addressed through a comprehensive regional initiative.

A total of ten out of fourteen Forum Island Countries have undergone rapid diagnostic assessments between 2017 and 2020. The common recommendations from those studies are summarised in this document, at the end of each chapter.

1 E-COMMERCE LANDSCAPE

1.1 Introduction to the Pacific Island context

The Forum Island Countries (FICs) are scattered over a vast expanse of the Pacific Ocean and are mainly small, low-lying coral atoll nations mostly reliant on agriculture, fisheries, and tourism. The region is home to more than 11 million people, with a rural population of 81 percent. The largest of all FICs is Papua New Guinea (PNG) with the biggest population and land area. PNG has a total land area of 452,000 square kilometres inhabiting over 8.5 million people. The country also has the highest share of rural population of all FICs, at 86.9 percent. Following PNG, Fiji has around 900,000 inhabitants, with over 18,000 square kilometres of land. **All other FICs are smaller and highly dispersed.** Nauru and Tuvalu are the smallest countries with a land area of only 20 and 30 square kilometres, respectively. Niue has the smallest population in the region with only 1,624 people residing in the country. These archipelagic FICs are highly affected by geographic isolation, ecological fragility, limited resources, a narrow economic base, migration, and financial dependence on a handful of markets, all of which affects their development options.

Table 1: Forum Islands Countries-Demographics

Country	Land area (sq. km)	Population	Rural Population	Urban Population	Rural Population (% of total population)	Urban Population (% of population)
Cook Is.	240	17,459*	4,347	13,112	24.9	75.1
Fiji	18,270	883,483	386,524	496,959	43.75	56.25
Kiribati	810	115,847	53,220	62,627	45.94	54.06
Marshall Is.	180	58,413	13,417	44,996	22.97	77.03
FSM	700	112,640	87,071	25,569	77.3	22.7
Nauru	20	12,704	0	12,704	0	100
Niue	251	1,624	-		-	-
Palau	460	17,907	3,594	14,313	20.07	79.93
PNG	452,860	8,606,316	7,472,864	1,133,452	86.83	13.17
Samoa	2,830	196,130	160,356	35,774	81.76	18.24
Solomon Is.	27,990	652,858	497,804	155,054	76.25	23.75
Tonga	720	103,197	79,328	23,869	76.87	23.13
Tuvalu	30	11,508	4,328	7,180	37.61	62.39
Vanuatu	12,190	292,680	218,720	73,960	74.73	25.27
Total		**11,082,766**	**8,981,573**	**2,099,569**		
			81%	**19%**		

Note: *Population for the Cook Islands is 2016 data. All other data belongs to the year 2018
Source: World Bank World Development Indicators

Overall, the FICs vary in levels of economic development. Palau has the highest Gross Domestic Product (GDP) per capita (at Purchasing Power Parity – PPP rate) of over USD 18,000, followed by the Cook Islands at over USD 13,000. On the other hand, countries like Kiribati and Solomon Islands fare poorly, with GDP per capita as low as USD 2,258.

Table 2: FICs- Economic Indicators

Country	GDP (current USD) (Mn)	GPD per capita, PPP (USD)	Gross fixed capital formation (% GDP)	Trade in services (% of GDP)	Merchandise trade (% of GDP)	Ease of doing business score	School enrolment, Primary (% net)
Cook Is	355	16,700	-	-	-	-	-
Fiji	5,543	13,808	18 (2017)	43.17	67.93	61.5	96.76
Kiribati	176	2,259	32 (2018)	41.02	66.08	46.9	94.69
Marshall Is	220	3,894	22 (2018)	44.59	52.87	50.9	73.15
FSM	382	3,469	-	-	55.73	48.1	85.45*
Nauru	125	11,487	-	43.11	108.05	-	93.69
Niue	25*	-	-	-	-	-	-
Palau	289	18,070	26 (2018)	-	57.40	53.7	94.91**
PNG	24,009	4,236	20 (2005)	8.62	59.98	59.8	73.65
Samoa	846	6,329	-	43.78	49.85	62.1	94.86
Solomon Is	1,297	2,365	20 (2016)	26.04	82.33	55.3	72.40
Tonga	530	6,267	27 (2018)	43.51	53.96	61.4	85.94*
Tuvalu	45	3,953	-	-	58.70	-	76.24
Vanuatu	904	3,130	27 (2017)	67.54	45.58	61.1	79.84*

Note: GDP data is 2019. PPP, Trade in services, Merchandise trade are 2018 numbers; Ease of doing business score is 2020 data (0 = lowest performance to 100 = best performance); School enrolment from 2016; * Values for 2015 ** Values for 2014

Source: World Bank World Development Indicators and Asian Development Bank. Note: data for Niue is from Niue Statistics Office[i] and data for Cook Island is from the ministry of Finance[ii]

Pacific economies are highly dependent on trade, and merchandise trade is dominated by imports. Merchandise trade to GDP ratios range from 45 percent for Vanuatu to over 100 percent for Nauru. Merchandise exports from the region are dominated by natural resource-based products in both processed and unprocessed forms. FICs are highly import reliant due to their small size and resource-base. The region's import basket mainly consists of machinery and transport equipment, fuel, food products, and manufactured goods.

Services trade averages 40 percent of Pacific economies' GDP and is dominated by exports, notably export of tourism-related services (travel and transport).[iii]

FICs fare relatively well in terms of their business environment compared to other developing countries. The World Bank's Doing business indicators of 2020 score ten FICs in terms of ease of doing business. Samoa scores the highest with 62.1 points out of 100, followed by Fiji at 61.5 points.

FICs have also made progress in education, with net primary enrolment now approaching the target of universal primary education. However, with persisting difficulties in improving transition to higher levels – net secondary school enrolment remains between 55 percent and 85 percent.

1.2 Regional E-commerce landscape

The adoption and diffusion of Information, Communication and Technologies (ICT) has brought rapid growth of digitisation in Pacific economies. Several measures have been taken in strategic areas of digital development, such as ICT infrastructure and connectivity, policy reforms and sector regulations, at both national and regional level. ICT connectivity has been increasing throughout the region with the deployment of a number of underwater fibre optic cables that enable digital services and reduce ICT costs in the Pacific.

Liberalisation and regulatory reform of the telecommunications sector boosted digital transformation in the region. Tonga was among the first of the FICs to deregulate its telecoms sector in 2003, followed by most FICs over the following 15 years. Liberalisation led to a drastic reduction of mobile phone rates, thereby rapidly increasing the number of subscribers. ICT markets in the region are mostly private sector-led and relatively competitive.

Internet penetration has been greater in countries with a larger urban population. For instance, Nauru has a 100 percent urban population and one of the highest rates of internet users in the region. On the other hand, PNG, which has an urban population of only 13 percent, has the lowest internet penetration of around 11 percent of the total population.

While fixed-line communications growth, in particular broadband, has been stagnant, mobile communications (including internet) have grown rapidly. Mobile penetration in the region is high with over 50 percent of the population having subscriptions. On the other hand, fixed-line penetration has been extremely low throughout the Pacific. The main reasons include lower liberalisation of this segment compared to mobile communications, deficiencies in infrastructure for fixed-line services, and high installation and maintenance costs, which make the mobile technologies more attractive to the operators.

Table 3: ICT Rankings for FICs

Country	ITU ICT Development Index Rank 2017	E-Government Development Index Rank 2020	EGDI Level	UPU Postal Development Index Rank (2020)
Fiji	107	90	High	123
Kiribati	154	145	Middle	146
Marshall Islands	-	156	Middle	-
FSM	-	161	Middle	-
Nauru	-	154	Middle	-
Palau	-	125	High	-
Papua New Guinea	-	175	Middle	164
Samoa	127	149	Middle	162
Solomon Islands	157	166	Middle	165
Tonga	110	108	High	104
Tuvalu	-	151	Middle	150
Vanuatu	141	142	Middle	158

Note: data for Niue and Cook Island is not available

Source: ITU (2017) Global ICT Development Index (https://www.itu.int/net4/ITU-D/idi/2017/index.html), UN (2020) E-Government Development Survey (https://www.un.org/development/desa/publications/publication/2020-united-nations-e-government-survey), UPU (2019) Postal Development Indicators (https://www.upu.int/UPU/media/upu/publications/postalDevelopmentReport2019En.pdf)

Several development indexes help analyse the E-commerce readiness of FICs. In the ICT Development Index of 2017 compiled by the ITU, Fiji ranks 107th out of 176 countries which is the highest in the region, indicating moderate ICT development. The E-Government Development Index (EGDI) of the United Nations (UN) classifies three FICs (Fiji, Palau, and Tonga) as high EGDI-level countries, whereas the rest of the FICs are classified as middle EGDI countries. The analysis of the Universal Postal Union (UPU) Postal Development Index, which provides information on another important aspect of E-commerce, shows that six out of eight FICs for which data are available are classified as Least Developing Operators, the lowest category, while Tonga and Fiji are classified as Potential Performers, the lower-middle category.[1]

Ten out of fourteen Forum Island Countries have undergone rapid diagnostic assessments between 2017 and 2020. The recommendations from those studies are summarised at the end of each chapter. While all recommendations were considered. Table 1 lists the criteria used in selecting those recommendations which are presented in this document. These criteria mirror those of the Framework for Pacific Regionalism, which was adopted by Pacific Leaders in 2014.

1 The four categories of the Postal Development Index are: Postal Champions, Good Performers, Potential Performers, and Least Developed Operators.

Table 4: Criteria for Selecting National Recommendations

Tests	Criteria
Regionalism	The initiative should meet one of the following criteria at a sub-regional or regional level, in support of national priorities and objectives: a) Establish a shared norm or standard b) Establish a common position on an issue c) Deliver a public or quasi-public good which is regional (or sub-regional) in its scope d) Realise economies of scale or scope e) Overcome national capacity constraints f) Complement national governments where they lack capacity to provide national public goods like security or the rule of law g) Facilitate economic or political integration
Benefit	The initiative should bring substantial net benefits, as demonstrated by a cost-benefit analysis. The distribution of benefits across countries and across stakeholders within the region should also be considered—particularly with respect to: a) The relative costs and benefits for smaller island states (a "SIS test"). b) How inclusive the proposal is of all stakeholders who might benefit from regionalism.

Note: Words in Italic have been added by authors and are not part of the source document
Source: Pacific Island Forum Secretariat (2014). The Framework for Pacific Regionalism. PIFS: Fiji

2 E-COMMERCE POLICIES AND STRATEGIES

2.1 Regional policies related to ICT, E-government, and E-commerce

E-commerce has been rapidly gaining importance globally as one of the major sources of development from encouraging Small and Medium Enterprises' participation in the economy to uplifting rural communities. E-commerce holds immense potential for the Pacific region, in particular, to help overcome the main challenge of remoteness.

Since the early 2000s, a number of regional policy initiatives have shaped the perspectives of ICT. The **Pacific Islands Information and Communication Technologies Policy and Strategic Plan**,[iv] 2002, and the **Pacific Plan Digital Strategy**, 2005, were the first ICT-centred plans. The Pacific Digital Strategy was later revised in 2010 as the **Framework for Action on ICT for Development in the Pacific (FAIDP)**.[v] The FAIDP eventually informed the work of the CROP ICT Working Group, which in 2015 developed the **Pacific Regional ICT Strategic Action Plan (PRISAP)** for the period 2015 to 2020.[vi] PRISAP provides guiding principles, identifies regional responsibilities and action themes that are critical to ICT development in the region. The latter are similar to those typically included in E-commerce assessments and include:

1. Leadership, governance, coordination and partnership;
2. ICT Policy and Legislation;
3. ICT Infrastructure and Universal Access;
4. Cybersecurity and Human Capacity Building;
5. Financing, Monitoring and Evaluation;
6. Social Inclusion and Gender Equality.

Table 4 provides an overview of FICS' ICT policies, which reveals that most FICs adopted ICT strategies and policies. While FICs have made substantial progress in developing ICT sector policies, many significant gaps remain in terms of policy implementation and progress tracking which hamper the utility of these documents. Another challenging issue is the outdated nature of ICT policies in several countries across the region.

Table 5: ICT Policies in the Pacific region

Country	National ICT policies	Policy Name	Responsible Ministry	Governance Mechanism
Cook Islands	Yes	National ICT Policy, 2015-2020	-	National ICT Committee
Fiji	Yes	National ICT Policy, 2004	-	ICT Development Unit
Kiribati	Yes	National ICT Policy, 2011	MTC	-
Marshall Islands	Yes	National ICT Policy, 2018	-	-
Federated States of Micronesia	Yes	National ICT and Telecommunications Policy, 2012	DTT, FSM	-
Nauru	No	(in progress)	-	-

Niue	No	(in progress)	-	NiDC
Palau	Yes	National ICT Policy, 2013-2016	-	National ICT Policy Task Force
Papua New Guinea	Yes	ICT Policy, 2008	-	Interagency ICT Task Force
Samoa	Yes	National ICT Policy, 2012 – 2017	-	National ICT Steering Committee
Solomon Islands	Yes	National ICT Policy, 2017	-	ICT Working Group
Tonga	Yes	National ICT Policy, 2008	MMEIDCC	-
Tuvalu	Yes	National ICT Policy, 2017	MCTT	-
Vanuatu	Yes	National ICT Policy, 2013	OCGIO	-

Note: '-' indicates information is not available
Source: The Commonwealth Secretariat, PIFS, WB, Country Government Websites, ESCAP (2019). Regulatory Policies and ICT Trends, Insights from Timor-Leste

As part of the Pacific E-commerce Initiative, ten FICs have already undertaken E-commerce assessments. UNCTAD has conducted five FIC eTrade Readiness Assessments, including for Vanuatu, Tuvalu, Samoa, Kiribati and the Solomon Islands. PIFS has carried out an additional five assessments, including for the Federated States of Micronesia (FSM), Fiji, Niue, Papua New Guinea (PNG) and Tonga – for Fiji and PNG, these have been conducted in cooperation with the MSG Secretariat.

Table 6: E-commerce Assessments in the Pacific

Country	Report Name	Year	Sponsor
Cook Islands	N/A	N/A	N/A
Fiji	Fiji: National E-Commerce Assessment	2020	PIFS-MSG
Federated States of Micronesia	FSM: National E-Commerce Assessment	2020	PIFS
Kiribati	Kiribati: Rapid eTrade Readiness Assessment	2019	UNCTAD
Marshall Is	N/A	N/A	N/A
Nauru	N/A	N/A	N/A
Niue	Niue: National E-Commerce Assessment	2020	PIFS
Palau	N/A	N/A	N/A
PNG	PNG: National E-Commerce Assessment	2020	PIFS-MSG
Samoa	Samoa: Rapid eTrade Readiness Assessment	2017	UNCTAD
Solomon Is	Solomon Islands: Rapid eTrade Readiness Assessment	2018	UNCTAD
Tonga	Tonga: National E-Commerce Assessment	2019	PIFS
Tuvalu	Tuvalu: Rapid eTrade Readiness Assessment	2019	UNCTAD
Vanuatu	Vanuatu: Rapid eTrade Readiness Assessment	2018	UNCTAD

Source: UNCTAD, PIFS

2.2 Trade policies related to E-commerce

Cross-border E-commerce is an avenue for foreign trade expansion and trade diversification. Trade policies and agreements can be used as a way to accelerate regional and international trade and further leverage E-commerce for development.

FICs have negotiated a number of regional trade agreements, but it appears that they didn't create rules on E-commerce, with the exception of the Melanesian Free Trade Agreement (MFTA). The first regional trade liberalisation endeavour began in 1981, with the **South Pacific Regional Trade and Economic Cooperation Agreement** (SPARTECA), which involved 12 FICs, as well as Australia and New Zealand. This non-reciprocal preferential agreement granted FICs duty-free access to Australia and New Zealand.[vii] The **Pacific Islands Countries Trade Agreement** (PICTA),[viii] signed in 2001 and progressively implemented from 2007, aimed at liberalising trade in goods between FICs. To date, eight FICs[2] have announced their readiness to trade under PICTA.

A number of Pacific Island Countries have also negotiated an Economic Partnership Agreement (EPA) with the European Union (EU). The agreement was ratified by the EU in January 2011, and by PNG in May 2011. The government of Fiji started applying the agreement in July 2014. Samoa acceded to the EPA on 21 December 2018 and Solomon Islands on 17 May 2020 and are applying it since then. The EPA is a development-oriented free trade agreement that provides duty-free, quota-free access for the four EPA Pacific countries' merchandise exports to the EU. The EPA with the Pacific states does not cover trade in services, E-commerce nor include any provisions on investment. However, the EPA establishes the framework for a comprehensive EPA to be developed in the future. For their part, the EPA Pacific countries are progressively reducing their tariffs on EU imports to zero.[ix]

The most recent regional trade and development agreement, the **Pacific Closer Economic Relations Plus Agreement Plus** (PACER Plus), has been signed in 2017 by Australia, New Zealand and nine FICs,[3] and will enter into force on 13 December 2020 – as of October 2020 eight countries have ratified.[4] PACER Plus, which replaces the one-way SPARTECA by reciprocal access rights, covers goods, services, investment, labour, sanitary and phytosanitary (SPS) measures, aid and some other issues.[x] Under the PACER Plus, a dedicated development assistance package has the potential to provide E-commerce related assistance.

Box 1: The Value of PACER Plus for E-commerce

Regional Trade Agreements (RTAs), such as the PACER Plus, contain various provisions on matters relating to, and enabling, E-commerce matters. This includes, importantly, rules and commitments on trade in services that encompass critical digitally-enabling services, such as telecommunications, computer, or payment services, as well as a vast array of digitally-enabled services, including professional and other business services or distribution services.

Rules and commitments in this area can provide the necessary transparency, predictability and competitive environment to help attract investment in these digital services and allow these sectors to grow, facilitate access to efficient and quality digital services by consumers and companies, and provide export opportunities for such services throughout the region.

Also of note, are specific obligations on the regulation of the telecommunication sector (the so-called Reference Paper), which most FICs have contracted through their services schedule in the context of the PACER Plus Agreement. These rules, based on international best practices, help ensure adequate regulation of the telecom sector, helping to lower costs of telecom services, to facilitate competition and access to such services, thereby facilitating the supply of services over digital networks. The above-mentioned provisions covering digital services are not contained in E-commerce chapters of RTAs; but without such provisions, the contribution of a typical E-commerce chapters would be limited.

2 Cook Islands, Fiji, Niue, Samoa, Solomon Islands, Tuvalu, Vanuatu, and Kiribati.
3 Cook Islands, Kiribati, Nauru, Niue, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.
4 New Zealand, Australia, Samoa, Kiribati, Tonga, Solomon Islands, Niue and Cook Islands.

In 2020, the Pacific Islands Forum Secretariat (PIFS) introduced the **Pacific Aid for Trade Strategy (PAFTS) 2020-2025**, which includes E-commerce as a regional priority. The PAFTS features E-commerce along with other priority areas of services and connectivity as elements to narrow the distances and trade costs in the Pacific**.** Through the PAFTS, the PIFS is mobilising funding for E-commerce readiness assessments in the region. The Secretariat is also extending assistance for the development and implementation of a regional strategy to improve readiness to trade electronically and to benefit from E-commerce.[xi]

At a sub-regional level, the **MFTA** is the third iteration of the FTA between Fiji, PNG, Vanuatu and the Solomon Islands. Electronic commerce is embedded in Part 7 of "Chapter 6 Trade in Services" of the Melanesian Free Trade Agreement (MFTA), a comprehensive free 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. As state parties undertake measures to liberalise services sectors, the parties also undertake measures to promote the development and use of E-commerce through cooperation between the parties and other countries. E-commerce is expected to address the challenges and unlock the benefits for small and medium enterprises to export goods and services covered in the Agreement. Fiji and Solomon Islands signed the MFTA, which is is awaiting ratification by Members.

Table 7: FICs membership in regional trade agreements

Country	PICTA	SPARTECA	PACER Plus	EU-Pacific iEPA	MFTA
Cook Islands	★	★	★		
Fiji	★	★		★	★
FSM		★			
Kiribati	★	★	★		
Marshall Islands		★			
Nauru	★	★	★		
Niue	★	★	★		
Palau					
Papua New Guinea	★	★		★	
Samoa	★	★	★	★	
Solomon Islands	★	★	★	★	★
Tonga	★	★	★		
Tuvalu	★	★	★		
Vanuatu	★	★	★		

Note: a grey star indicates a country which has signed an agreement but which has yet to ratify and apply it. A blue star refers to country which has ratified and is applying the agreement
Source: ITC MacMap, PIFS: https://www.forumsec.org/regional-trade-agreements/ , and Australian Border Force: https://www.abf.gov.au/importing-exporting-and-manufacturing/free-trade-agreements/forum-islands-(including-fiji)

Most FICs have adopted national Trade Policies that provide for policy measures intended to develop ICT, E-Business, or E-commerce. For example, Fiji's National Export Strategy recognises ICT as one of the priority areas for export diversification.[xii] Vanuatu dedicates ample space to the ICT industry in its Trade Policy Framework Update,[xiii] and presents recommendations to increase export of ICT and ICT-related services, including through E-commerce. Kiribati's Trade Policy Framework[xiv] reiterates the need to increase access to and use of ICT, and advocates for E-commerce adoption by the private sector. It also focuses on the need to develop an E-commerce policy and regulatory framework. Both Tuvalu and Solomon Islands' Trade Policies[xv] highlight the potential role of ICT for economic development. In PNG, E-commerce is partly covered by the National Trade Policy of 2017-2032.[xvi] Niue mentions telecommunications as an economic backbone service in its Trade Policy Framework, recommends to draft a National ICT Policy, introduce competition in the telecoms sector and establish an enhanced regulatory framework for the telecoms sector.[xvii]

However, some FICs like FSM and the Marshall Islands, did not mention ICT or E-commerce development in their trade policies. Both countries were among the first to develop trade policies in the region, in the early 2010s. Back then, the full potential of ICT and E-commerce had yet to be fully understood, and this can explain why ICT aspects were not considered.

2.3 Availability of relevant statistics

The availability of data in the Pacific is poor, with insufficient statistics relating to E-commerce and the digital economy. ICT related data used in this report, such as internet penetration rates, number of internet servers, connectivity information, postal development indices, etc.; was found mainly through international databases, such as the UN-ITU, World Bank, UNESCAP, Pacific Region Infrastructure Facility (PRIF) and UNCTAD. Apart from these, a digital statistics overview of 12 FICs was conducted by Hootsuite in February 2020, therefore giving general information on ICT usage.[xviii]

A number of remote and small FICs such as Niue, Nauru, Cook Islands, Kiribati, have not yet been ranked on many ICT-related development indexes. Most FICs have not been included in the ITU ICT Development Index (6/176 economies), the United Nations Conference on Trade and Development (UNCTAD) B2C E-commerce Index (0/152 economies), the Universal Postal Union (UPU) Integrated Index for Postal Development (8/172 economies), or the World Bank (WB) Doing Business Index (10/190 economies). In some cases, data on the region's ICT-related development has not been updated as far back as 2014.

Reliable and updated data is critical to inform the process of policymaking in general and E-commerce specifically. Robust data will support the planning, monitoring, and evaluation of various ICT and E-commerce initiatives. Reliable data on the number of mobile and fixed-broadband internet subscribers, and the number of overall internet users is particularly important for benchmarking and the measurement of progress of the sector. To achieve this, a regional collection mechanism and capacity building activities for National Statistics Offices (NSO) may be required.[xix]

2.4 Summary of recommendations from country assessments

Table 8: Recommendations on E-Commerce Policies and Strategies

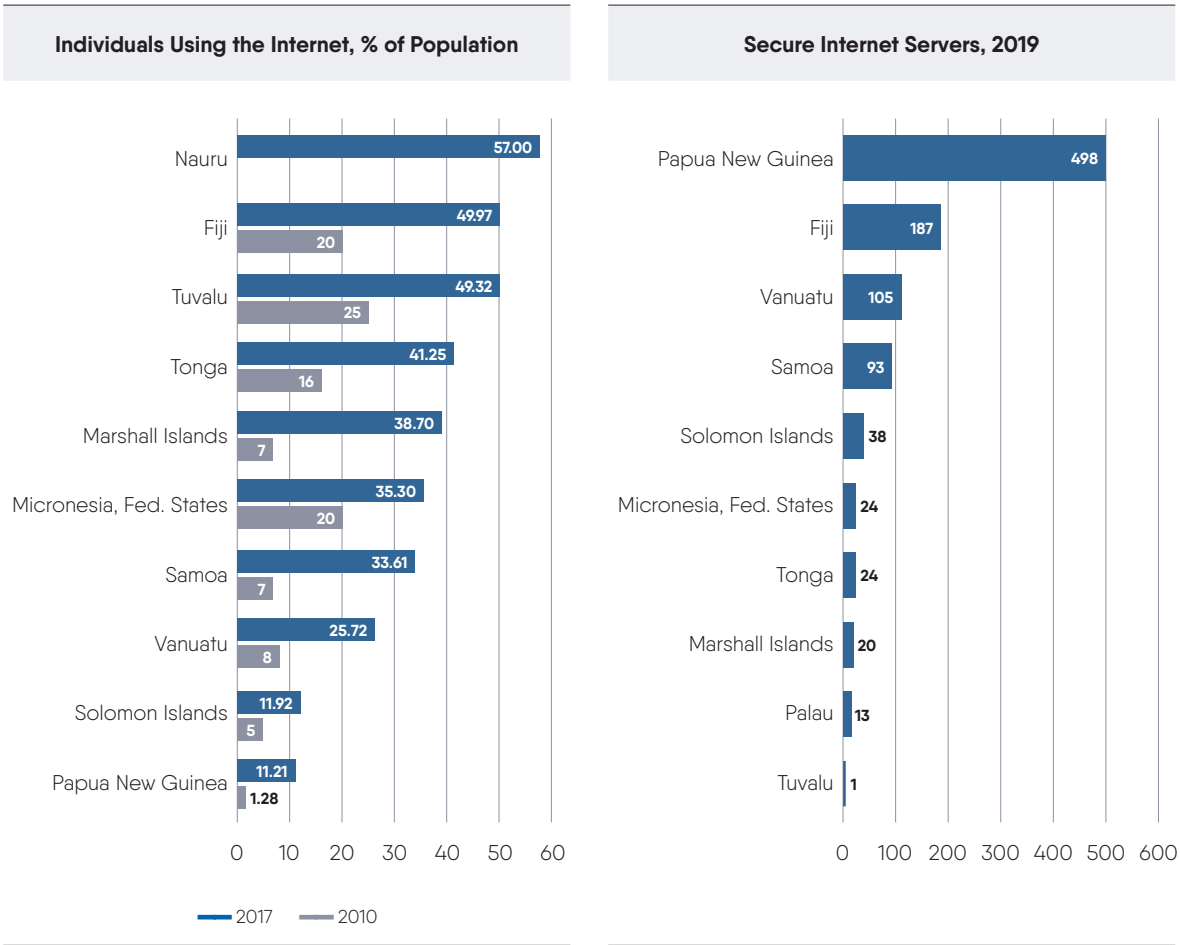
Recommendations	Timeline
1. **Develop a single coordination mechanism** facilitating multi-stakeholder dialogue, comprising of stakeholders with institutional mandates for policy areas relevant to E-commerce.	Short
2. **Formulate a national E-commerce policy or strategy**. Ensure that formulation is inclusive and paired with awareness-raising activities and education on E-commerce.	Short
3. **Develop an E-government strategy** to improve government processes, especially with regard to E-procurement and the delivery of public services.	Short
4. **Improve statistics on E-commerce,** ensuring that a set of key statistics on E-commerce are collected to support comparative purposes and national objectives.	Medium

3 ICT INFRASTRUCTURE AND E-COMMERCE SUPPORT SERVICES ECOSYSTEM

3.1 Broadband, mobile, and smartphone penetration

The overall internet penetration rate in the Pacific[5] stood at 35.4 percent. In the region, Nauru had the highest percentage of individuals using the internet in 2017, at 57 percent, followed by Fiji, 50 percent and Tuvalu at 49 percent. A comparison of 2010 data on internet use shows that there has been an increase of 50 percent or above in the FICs. The most significant increase in the region was in the Marshall Islands, where individuals using the internet grew by seven times from 2010 to 2017. Along with this, in 2019 PNG had the highest number of secure internet servers (498),[6] a variable closely related to country size, presence of big companies, and importance of the finance industry. However, PNG had the lowest internet penetration out of all FICs, at 11.2 percent in 2017.

Figure 1: Individuals using the internet in 2010-2017 and Secure Internet Servers in 2019



Source: ITU, World Bank WDI

5 Average of 10 FICs for which data was available. Papua New Guinea, Solomon Islands, Vanuatu, Samoa, Micronesia, Marshall Islands, Tonga, Tuvalu, Fiji, Nauru.

6 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.

One of the main aspects of ICT penetration is mobile connectivity. **Mobile cellular subscriptions in the Pacific, measured as a percentage of the population, have been steadily increasing from 52 percent in 2010 to 70 percent in 2017.** Almost all FICs show an increasing trend in the number of mobile subscriptions. Fiji had the highest mobile subscription rate of 117.83 percent, followed by Tonga with 105.82 percent. The Federated State of Micronesia had the lowest rate of mobile subscriptions (20.74 percent). Factors such as market size, ITC connectivity and affordability are among those explaining the observed differences. Since most of the Pacific population using the internet does so through a mobile phone, it is possible to conclude that **only about 50 percent of existing mobile subscriptions include internet connectivity** – with the other 50 percent still limited to voice and SMS.

Table 9: Mobile cellular subscriptions (percentage of population)

Country Name	2010	2011	2012	2013	2014	2015	2016	2017
Fiji	81.17	84.20	99.28	107.49	101.12	111.20	119.75	117.83
Kiribati								32.2
Marshall Islands					27.11	26.99		27.56
FSM	26.74	26.68	29.87	29.64		20.67	21.24	20.74
Nauru	61.97	66.53	67.06			90.53	94.51	94.58
Palau	80.82	87.04	97.23	101.93	108.44	134.41		
Papua New Guinea	26.11	32.12	35.50	38.52	42.27	43.91	45.72	47.62
Samoa	48.40		53.04	52.37	55.42	62.28	77.63	63.58
Solomon Islands	21.88	50.76	54.34	56.55	64.16	70.42	67.25	73.16
Tonga	52.22	53.11	54.51	56.50	67.31	72.92	79.10	105.82
Tuvalu	15.19	20.03	26.07	31.32	34.63	59.46	67.71	70.36
Vanuatu	71.94	56.44	58.55	49.58	59.14	64.48	78.54	79.86
Average	**48.6**	**53.0**	**57.5**	**58.2**	**62.2**	**68.8**	**72.4**	**66.7**

Note: Cook Island and Niue are not covered by the databases
Source: ITU, World Bank, ESCAP

On the other hand, in most FICs, there has been a static or declining trend in fixed broadband subscriptions. As seen in Table 8, the average fixed-line subscriptions per 100 inhabitants show a stagnating trend. Fiji recorded the sharpest decline, where fixed-line broadband subscriptions fell from 2.70 in 2010 to 1.38 in 2017, probably due to the increase uptake in mobile subscriptions. Tuvalu had the highest fixed-line subscription rates of 3.96 percent, followed by FSM at 3.39 percent. However, these rates are still very low when compared to international levels.

Table 10: Fixed broadband subscriptions (per 100 people)

Country Name	2010	2011	2012	2013	2014	2015	2016	2017
Fiji	2.70	2.69	1.56	1.26	1.43	1.47	1.41	1.38
Kiribati	0.82	0.81	0.75	0.65	0.46	0.11	0.06	0.07
Marshall Islands				2.26	2.40	1.74	1.73	1.72
FSM	0.97			1.95	2.88	3.01	2.88	3.39
Palau	1.33	2.92	5.09	10.25	6.30	6.93		

Papua New Guinea	0.08	0.10	0.12	0.15	0.17	0.19	0.21	0.21
Samoa	0.11		0.57	0.65	1.05	1.08	1.11	0.87
Solomon Islands	0.48	0.45	0.38	0.33	0.23	0.24	0.26	0.18
Tonga	1.06	1.26	1.46	1.67	1.78	2.44	2.97	2.94
Tuvalu	2.28	4.23	4.19	4.14	4.10	4.05	4.01	3.96
Vanuatu	0.21	0.14	0.12	0.12	1.73	1.58	1.58	1.59

Source: ITU, World Bank. Note: Cook Island and Niue are not covered by the databases

3.2 Reliability, affordability, latency, speed and coverage

The cost of telecommunications services in the FICs has consistently remained much higher as compared to average global prices. According to Cable UK, **all FICs except Fiji rank at or over 100 in the worldwide mobile data pricing ranking**, with the average price of 1 gigabyte (GB) of internet ranging between USD 0.59 in Fiji and USD 30.47 in Nauru. Fiji's low prices can be attributed to a relatively high internet penetration, sizeable market, well-developed internet infrastructure, as well as competition amongst operators. On the other hand, prices for Nauru are affected by its small market size, lack of key ICT infrastructure (including submarine fibre optic cable), and remoteness.

Table 11: Cost of 1GB of mobile data, Oceania, 2020

Rank	Country	Average price of 1GB (USD)	Plans measured	Cheapest 1GB in a 30 day plan (USD)	Most expensive 1GB (USD)
11	Fiji	0.59	21	0.32	4.41
200	Kiribati	10.50	23	3.91	19.38
184	FSM	7.20	7	0.90	54.25
226	Nauru	30.47	6	11.12	34.88
151	Niue	4.50	11	0.68	24.87
100	Palau	2.50	8	1.00	2.50
173	Papua New Guinea	5.40	18	1.44	13.30
201	Samoa	10.86	26	1.25	25.65
192	Solomon Islands	8.53	20	6.00	30.00
125	Tonga	3.41	12	1.20	8.21
147	Vanuatu	4.25	19	0.75	9.91

Notes: Ranks out of 228 countries/regions
Source: Cable.co.uk, https://www.cable.co.uk/mobiles/worldwide-data-pricing/

Cable UK also ranked the prices of fixed-line services in 206 countries/regions. According to this ranking, **fixed-line services are even more expensive than mobile data in the Pacific**. The average cost of a fixed-line broadband package in the FICs ranges from USD 39.02 to USD 95.35 per month. PNG has the cheapest fixed-line broadband package in the region, costing USD 51 per month, whereas, prices in Vanuatu are most expensive at USD 95.24 per month.

Table 12: Cost of a fixed-line broadband package, Oceania, 2020

Rank	Name	Average cost of a fixed-line broadband package (Per month in USD)
121	Papua New Guinea	51.06
128	Fiji	55.42
168	FSM	81.00
175	Marshall Islands	86.20
177	Palau	89.98
178	Cook Islands	92.12
181	Vanuatu	95.25

Notes: Ranks out of 206 countries/regions
Source: Cable.co.uk, https://www.cable.co.uk/mobiles/worldwide-data-pricing/

In terms of speed and coverage, the GSMA Mobile Connectivity Index includes six FICs, ranking them based on Infrastructure, Affordability, Consumer Readiness and Content. According to GSMA, all six countries have seen **significant improvement in their Mobile Connectivity Index scores over the last three years**, with an average improvement in the index score for the region of ten points. This is mainly attributed to the growth in the infrastructure, with the progress in mobile broadband network deployments across the region.

PNG and the Solomon Islands are classified as 'emerging,'[7] **while the other four FICs surveyed by GSMA (Fiji, Samoa, Tonga, and Vanuatu) are considered to be in the 'transitioning' phase of mobile connectivity.**[8] None of the FICs surveyed falls into the lowest mobile development group – 'discoverers'.

Table 13: GSMA Mobile Connectivity Index, 2018

Country	Index Score	Infrastructure	Affordability	Consumer Readiness	Content and Services
Fiji	57.49	66.84	55.38	79.88	36.95
Samoa	57.23	58.58	49.67	70.43	52.36
Tonga	54.95	55.60	52.29	74.25	42.23
Vanuatu	50.55	45.92	49.33	62.05	46.44
Papua New Guinea	47.04	51.37	47.78	46.64	42.78
Solomon Islands	37.52	28.17	40.74	57.70	29.92

Source: GSMA, https://www.mobileconnectivityindex.com

The GSMA also includes network coverage and speed as part of the Infrastructure component of its Mobile Connectivity Index. **The best network coverage and performance can be seen in Fiji**, with one of the strongest 4G coverages in the region. All Pacific countries mentioned in the index have a strong 2G and 3G coverage (except the Solomon Islands). 4G services are available in all countries, however, their coverage ranges from 10 to 98 percent. The poorest network coverage and performance can be seen in the Solomon Islands.

7 Countries with a score between 35 and less than 50 over 100.
8 Countries with a score between 50 and less than 50 over 100.

Table 14: Overview of internet coverage in the Pacific

Country	Network coverage	Network performance	2G Coverage	3G Coverage	4G Coverage
Fiji	96.80	61.27	96.00	96.00	98.00
Tonga	89.75	41.37	98.00	95.00	80.37
Samoa	83.57	52.81	97.00	95.00	65.43
Papua New Guinea	76.04	46.18	89.00	74.86	70.73
Vanuatu	68.71	42.07	98.00	83.19	39.59
Solomon Islands	32.95	9.30	94.00	25.00	10.37

Source: GSMA, https://www.mobileconnectivityindex.com

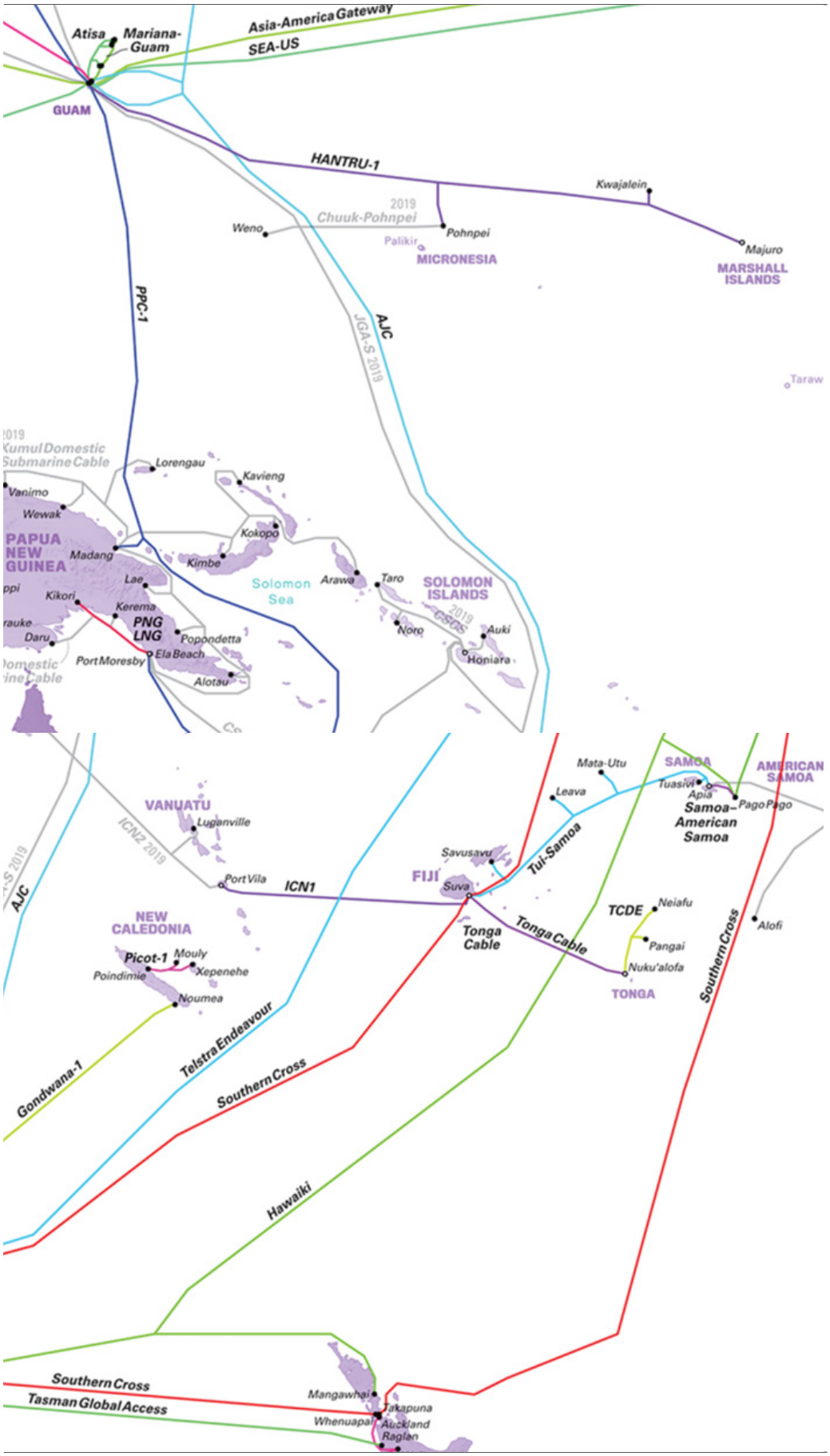
3.3 Major infrastructure projects

International connectivity to the Pacific islands has improved significantly over the last decade, from only four Pacific islands connected to submarine cables in 2007,9 to fourteen in 2020.10 Satellite technology has also been a major source for internet and voice services for a large number of widely dispersed islands in the Pacific due to its broad spectrum. However, submarine cables remain the more reliable source of internet connectivity due to the uninterrupted nature, higher bandwidth and operating cost-effectiveness whereas, satellite connectivity remains prominent for calling/voice services and for the provision of internet to remote communities.xx

9 Northern Mariana Islands, Guam, Fiji, and PNG.

10 American Samoa, Northern Mariana Island, FSM, Fiji, French Polynesia, Guam, New Caledonia, Palau, PNG, Marshall Islands, Samoa, Tonga, Vanuatu and Wallis and Futuna.

Figure 2: Submarine Cables in the Pacific



Source: TeleGeography Submarine Cable Map, https://www.submarinecablemap.com/

Fibre optic submarine cable-based connectivity in the Pacific has been developing since the early 2000s to supplement satellite-based connectivity infrastructure and to provide higher bandwidth data and voice services. The main submarine cables linking the Pacific are mentioned in Table 15.

Table 15: Submarine Cables in the Pacific

Name	Operational from (year)	Landing Points
Southern Cross Cable Network (SCCN)	2000	Australia, New Zealand, Fiji, United States of America
Australia-Papua New Guinea-2 or APNG-2 Cable	2006	Australia and Papua New Guinea
Gondwana-1 Submarine Cable	2008	Australia, New Caledonia
HANTRU1	2010	Marshall Islands, Guam, FSM
Tonga Cable	2013	Fiji, Tonga
Interchange Cable Network 1 (ICN1)	2014	Vanuatu, Fiji
Tui-Samoa Submarine Cable	2018	Samoa, Wallis and Futuna, Fiji
Manatua Cable constellation	2020	Cook Islands, Niue, Samoa, French Polynesia
Coral Sea Cable System	2020	Solomon Islands, Papua New Guinea, Australia
Interchange Cable Network 2 (ICN2)	2019	Solomon Islands, Vanuatu
Southern Cross NEXT	2022	Australia, Samoa, Kiribati, United States, Tokelau, Fiji, New Zealand

Source: Submarine Cable Map

Box 2: Southern Cross Cable Network (expected in 2022)

Southern Cross NEXT is a private fibre-optic submarine cable network connecting **Australia, New Zealand, Fiji, Samoa, Tokelau, Kiribati,** and the **United States.** This project complements the existing Southern Cross Cable Network (SCCN) to form a stronger Southern Cross ecosystem, strengthening the resilience of connectivity on US-South Pacific routes. Southern Cross NEXT consists of four fibre pairs on the US-Australia route, with a design capacity of 18Tbps per fibre pair and a total design capacity of 72Tbps using the current 100 Gbit/s transmission technology.[xxi]

Amongst donor partners, the World Bank plays a critical role to extend the fibre-optic cable system to all Pacific Island states through the **Pacific Regional Connectivity Programme**. This programme is being conducted in four phases:

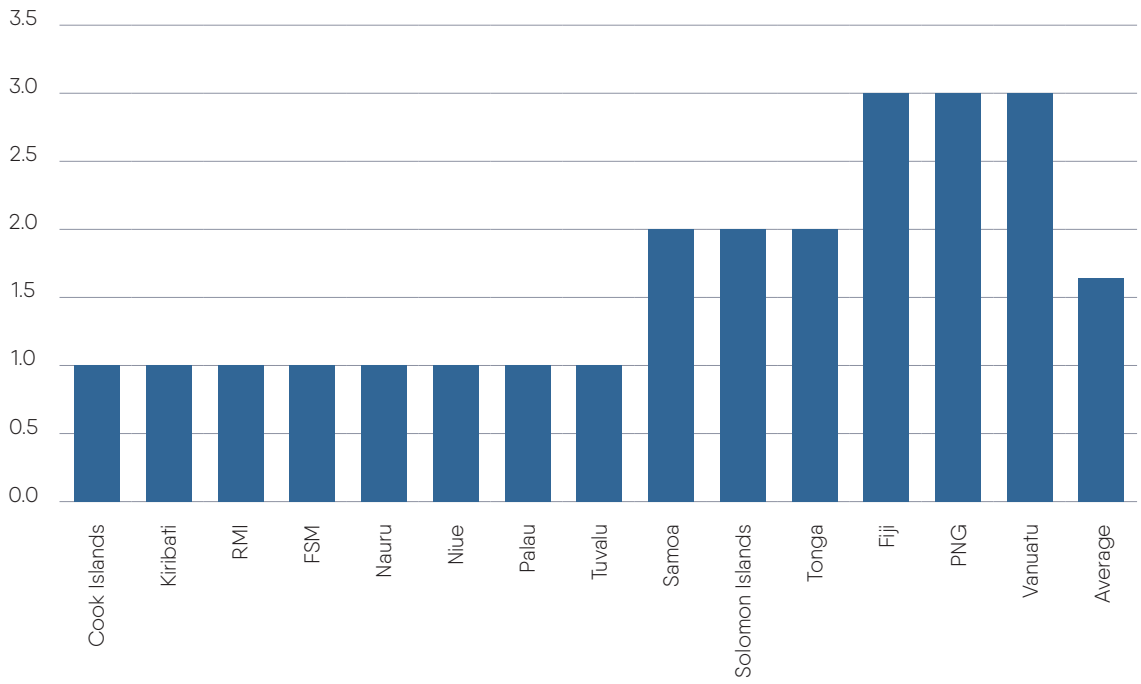
- **Phase 1 (2011–2018):** Building the Tonga–Fiji submarine cable;
- **Phase 2 (2014–2022):** Building the East Micronesia Cable (EMC), a submarine cable system connecting the Federated States of Micronesia, Kiribati and Nauru to Guam;
- **Phase 3 (2015–2021):** Building the Samoa–Fiji submarine cable system;
- **Phase 4 (2017–2022):** Extending the Phase 2 (submarine cable), plus provision of related technical advice.[xxii]

The arrival of submarine cables in the Pacific has led to a significant drop in the cost of the internet and a rise in internet penetration. However, maintenance of these cables is expensive and the cost of distributing connectivity in the Pacific remains high. The bandwidth of most cables remains strong around the city centres, whereas coverage beyond a particular radius is reported to be slow and unreliable. The high cost of laying and maintaining submarine cables leads to poor private sector investment in the area. Therefore, development partner support remains necessary to expand the submarine cable infrastructure in the Pacific.[xxiii]

3.4 ICT Services

The number of mobile telecommunication service providers remains limited. Small population and low density, together with some persisting monopoly positions,[xxiv] make it difficult for countries to support more than one mobile operator. Amongst the 14 FICs, only six have more than one operator, with Fiji, PNG, and Vanuatu featuring three operators. Across the region, there is an average of 1.6 operators per market.[xxv]

Figure 3: Number of mobile operators across the Pacific



Source: GSMA

The overall E-commerce activity in the FICs is low. From a private sector perspective, informational websites and social media (mainly Facebook) are the two main channels for promoting business. Except for the hospitality and travel sectors, the websites of businesses in other sectors are quite simple and are mainly used to serve advertisement and/or promotion of goods and services.[xxvi, xxvii]

E-commerce is still at a nascent stage in the region. Businesses that are interested in venturing into the online shopping space mainly build small-scale websites. The main challenges facing businesses and consumers in the various policy areas highlighted by this report – from ITC infrastructure, to logistics, online payment systems, skills, etc. – still impede a broad update of B2C activity.

Nevertheless, as ICT connectivity improves, new opportunities for digital trade can emerge. Global Outsourcing Services (GOS), for example, are one type of service that can further benefit from E-commerce, particularly as these relate to IT Outsourcing, Business Processing Outsourcing, and Knowledge Process Outsourcing. Among the FICs, Fiji, Samoa, and Tonga may have the greatest potential for the development of a significant GOS sector due to the adequate skills, sufficient Internet bandwidth, and an adequate business and legislative regime.[xxviii]

ICT enabled Government (E-government) solutions are being increasingly deployed in the FICs. E-government ranges from simple informational services to more sophisticated digital transactions where the public sector functions as both consumer and supplier of digital services. Thus, E-governments are becoming a crucial part of the E-commerce ecosystem. In order to provide such services, a government needs to possess the requisite Infrastructure, hardware, software/applications, and skills.[xxix] E-government services can be classified into four types: government-to-government (G2G), government-to-employee (G2E), government-to-business (G2B), and government-to-citizen (G2C).

According to the United Nations E-Government Survey of 2020, Fiji ranks 90th out of 193 economies, which is the highest amongst all FICs. Fiji's E-Government Development Index Score stood at 0.66 out of 1. Along with Fiji (rank 90), Tonga (rank 108) and Palau (rank 125) are also classified as High EGDI countries, mainly due to their high Human Capital Index (HCI) scores. All other FICs have middle EGDI values, ranging between 0.25 and 0.50. PNG was the worst performer in the region with a score of 0.28, resulting from deficiencies in online services and poor infrastructure.

Table 16: UN E-government Survey Rankings, 2020

Rank	Country Name	EGDI score	OSI	HCI	TII	EGDI Level
90	Fiji	0.66	0.51	0.82	0.65	High
108	Tonga	0.56	0.38	0.83	0.48	High
125	Palau	0.51	0.28	0.88	0.37	High
142	Vanuatu	0.44	0.34	0.60	0.38	Middle
145	Kiribati	0.43	0.49	0.68	0.12	Middle
149	Samoa	0.42	0.26	0.74	0.26	Middle
151	Tuvalu	0.42	0.30	0.68	0.28	Middle
154	Nauru	0.42	0.17	0.60	0.47	Middle
156	Marshall Islands	0.41	0.34	0.75	0.12	Middle
161	FSM	0.38	0.35	0.67	0.11	Middle
166	Solomon Islands	0.34	0.32	0.50	0.21	Middle
175	Papua New Guinea	0.28	0.22	0.50	0.12	Middle

Notes: OSI- Online Service Index, HCI- Human Capital Index, TII- Telecommunication Infrastructure Index, EGDI- E-Government Development Index. Very High EGDI: 0.75-1, High EGDI: 0.5-0.75, Middle EGDI: 0.25-0.5, Low EGDI: 0-0.25
Source: United Nations E-Government Survey 2020

Table 17 shows the status of E-government initiatives in the region. Fiji, PNG, Samoa and Vanuatu have E-government plans, whereas, Kiribati, Nauru, Solomon Islands, Tonga and Tuvalu do not have dedicated E-government strategies/ plans. However, all the mentioned FICs have online websites and portals for specific ministries. E-services have also been established in most FICs.

Table 17: E-government landscape in the Pacific

Country	E-government plans	Ministries have websites/ portal	E-services established
Fiji	Yes	Yes	Yes
Kiribati	No	Yes	Yes
Nauru	No	Yes	No
PNG	Yes	Yes	Yes
Samoa	Yes	Yes	Yes
Solomon Islands	No	Yes	No
Tonga	No	Yes	Yes
Tuvalu	No	Yes	No
Vanuatu	Yes	Yes	Yes

Source: The Commonwealth Secretariat (2017)

Box 3: E-government in Fiji: digitalFIJI

In June 2018, the Fijian government launched a new platform and a mobile app called ***digitalFIJI***.[xxx] This 4-year programme aims to enhance the overall ICT infrastructure and build government capacity in digital transformation. This plan is also known as the Digital Government Transformation Programme and is in line with the Fijian Government's National Development Plan (NDP) which prioritises the improvement of the quality and accessibility of government services.

The ***digitalFIJI*** platform operates as a directory service with contact information for government departments and entities, allowing users to submit feedback on government services. At present, the E-government structure in Fiji consists of online information portals and applications for a limited number of services such as registration of company names; foreign investors' business applications; application for government scholarships; registration for exams and results publishing; application for forestry licenses; online services for marriage registration (special license) and requests for birth, death and marriage certificates.

The government's official website provides news, official press releases, information on various ministries, and links to other government agencies' websites. The webpage covers 55 government ministries and agencies; other statutory and regulatory entities have their own websites.[xxxi]

3.5 Summary of recommendations from country assessments

Table 18: Recommendations on ICT Infrastructure and E-Commerce Support Services Ecosystem

Recommendations	Timeline
1. **Liberalise the telecommunications sector,** opening up the sector to foreign competition, which would lead to better service and reduced cost for consumers.	Short
2. **Accelerate E-government programs.** Elements for digitization highlighted in the country reports comprise business registration, import/export licensing, taxation, government procurement, fees and fines collection, and access to information.	Medium
3. **Upgrade and improve ICT infrastructure,** including by leveraging Public-Private Partnerships (PPP).	Medium-Long
4. **Set up or strengthen Universal Access Funds** to promote the establishment of infrastructure serving remote areas that might not be commercially attractive	Short
5. **Provide targeted support to priority ICT and ICT-enabled** services so as to Strengthen the ICT ecosystem.	Medium-Long

4 TRADE LOGISTICS AND TRADE FACILITATION ECOSYSTEM

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

FICs are remote and dispersed in nature. Most FICs are classified as archipelagos, with a few main islands surrounded by smaller islands. In most FICs, in-land transportation is essentially facilitated by the road network, whereas inter-island transportation is conducted through seaports and airports.

Road transportation faces numerous challenges in all FICs. PNG and Fiji have the largest land area, and therefore the longest road network. PNG's road system comprises more than 15,000 km of roads, whilst Fiji's roadways span around 11,000 km. Smaller and more dispersed FICs, like Kiribati and the Marshall Islands, only record 33 km and 65 km of sealed roads, respectively, along their main islands.

The road network in the region is mainly constructed around the city centre, and has very few redundant paths; therefore, any damage to the existing road network may completely interrupt transportation. Damages from natural disasters add to those caused by heavy vehicles, especially in countries such as Fiji, Solomon Islands, and PNG, where forestry, sugarcane, construction, and other heavy industries operate with either poor regulation or enforceable weight limits.[xxxii] In most FICs there is also a striking difference between rural and urban areas in terms of the extent and quality of the road network, a noticeable lack of road infrastructure initiatives, and insufficient maintenance.[xxxiii]

Table 19: Key logistics in the FICs

Country	Road Network (Km)	Number of Ports	Number of International Airports
Cook Islands	295	2	1
Fiji	11,000	5	2
Marshall Islands	65*	2	1
Kiribati	33*	2	2
FSM	388	4	4
Niue	106	1	1
Palau	116	1	1
Papua New Guinea	> 15,000	16	2
Samoa	-	6	1
Solomon Islands	1,183	2	2
Tonga	680	3	2
Vanuatu	2,036	2	2

Notes: *Sealed roads only
Source: DLCA, Logistics Capacity Assessment

In the archipelagic FICs, domestic inter-island connectivity is carried out mainly through waterways. Ferry services operate through various domestic ports transporting both passengers and freight. Ferries range from pure passenger or cargo ferries to combined passenger and cargo vessels serving outer islands and smaller ports. The size and standard of these vessels are much lower than those used in international trade. Overall, all FICs have a problem of domestic connectivity due to the low number of domestic routes to the outer islands and irregularity in ferry schedules.[xxxiv]

Maritime transportation is a key international mode of transportation for FICs. Throughout the region, there are relatively few shipping connections with major international trading partners for all categories of cargo. PNG has the highest number of ship arrivals, 2,944 in 2018, followed by Fiji at 1,974 ship arrivals. Kiribati, on the other hand, saw only 42 ship arrivals in 2018. Overall, ship arrivals are positively correlated with variables such the country population, GDP levels, merchandise trade and cruise tourism.

Table 20: Number of ship arrivals in the Pacific in 2018

	FJI	KIR	FSM	MHL	PNG	TON	TUV	WSM	SLB
All ships	1,974	42	136	118	2,944	287	72	171	206
Passenger ship	924	-	-	-	582	136	-	11	50
Wet bulk	244	-	-	12	433	72	-	90	75
Container ship	370	42	40	51	646	79	-	70	81
Dry breakbulk	325	-	96	55	942	-	72	-	-
Dry bulk	35	-	-	-	241	-	-	-	-
Roll-on/roll-off ship	38	-	-	-	-	-	-	-	-
LPG carriers	38	-	-	-	100	-	-	-	-
All ships/GDP	0.36	0.21	0.34	0.53	0.13	0.64	1.67	0.21	0.15

Note: GDP is expressed in million dollar, 2018 value
Source: UNCTAD STAT

For the smallest FICs shipping services are not only limited in number, but also very irregular and uncertain. This challenge has been addressed through sub-regional approaches such as the establishment of regulatory bodies limiting the number of shipping companies allowed to operate along specific routes via a licensing system, and setting predetermined schedules and specific freight rates. Examples include the Micronesian Shipping Commission (MSC) [xxxv]and Central Pacific Shipping Commissions (CPSC).[xxxvi]

FICs score poorly in terms of the Linear Shipping Connectivity Index (LSCI). PNG has the highest LSCI, with a score of 12.63 out of 100 in 2019, followed by Fiji (11.20/100) and the Solomon Islands (10.66/100). Overall, the LSCI scores of the region have slightly improved over the years, from 7.8 in 2015 to 8.1 in 2017.[11]

Table 21: Liner Shipping Connectivity Index, 2015-19

Country	2015	2016	2017	2018	2019
Papua New Guinea	12.75	12.38	13.23	12.67	12.63
Fiji	12.74	12.47	13.27	13.33	11.20
Solomon Islands	11.15	10.75	10.73	10.54	10.66

11 The Liner Shipping Connectivity Index (LSCI), generated by UNCTAD, aims at capturing the level of integration into the existing liner shipping network by measuring liner shipping connectivity across six components: the number of scheduled ship calls per week, total deployed capacity, the number of regular liner shipping service to and from the country, the number of liner shipping companies that provide services from and to the country, average size in TEU (Twenty-Foot-equivalent Units) of the ships deployed, and number of other countries that are connected to the country through direct liner shipping services. The higher the index, the easier it is to access a high capacity and frequency global maritime freight transport system and thus effectively participate in international trade. Therefore, LSCI can be jointly considered as a measure of connectivity to maritime shipping and as a measure of trade facilitation. See: https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=92.

Samoa	6.45	6.95	6.66	6.83	8.07
Vanuatu	8.75	8.59	8.54	8.24	7.91
Tonga	5.66	7.34	8.26	8.18	7.59
FSM	2.50	2.50	2.70	4.53	4.47
Nauru	2.45	2.12	1.88	2.20	2.20
Kiribati	4.73	5.58	5.83	5.78	2.01
Tuvalu	2.96	3.17	2.03	1.98	2.01

Source: UNCTAD STAT [xxxvii]

Sea freight rates in the Pacific region are stable, but high. Shipping routes from the Pacific to the main export markets are long with high-cost of ship operation. The region also has limited export quantities which lead to a low weight, high-cost scenario.[xxxviii]

Air connectivity is important for the transport of low-volume high-value items which are bought and sold electronically. According to World Bank data, in 2018 the FICs carried 151.3 million ton-km of air freight through their network of international airports. Around 70 percent of this air freight was from Fiji - 106.8 million ton-km. With its 30.9 million ton-km, PNG's share of air freight was around 22 percent in 2018. Fiji and PNG's productive capacities explain the concentration of air freight. Moreover, Fiji's strategic location in the Pacific makes it a regional transit hub for many FICs to the markets of North America, Australia, New Zealand, and Asia. The weak quality of the air infrastructure is a common issue across the region. Despite the over 700 airports and airstrips in the Pacific, only about 7 percent are paved.[xxxix]

While some of the E-commerce giants can afford their own delivery services, most SMEs involved in E-commerce can only rely on third-party service providers, such as the postal sector or express couriers. **Rates of express couriers confirm the competitive challenges facing the Pacific**. For example, DHL rates from major developed countries to the Pacific range between USD 95 and USD 169 for a one-kilogram parcel. The cheapest rate is found for the USA,[xl] whilst quite surprisingly the most expensive rate is that for Australia, the most important market for most FICs.

Table 22: Charges of shipping to and from Pacific Countries: DHL Express

Weight of the parcel (kg)	Shipping to and from the USA (USD)	Shipping to and from Australia (USD)	Shipping to and from China (USD)	Shipping to and from the UK (USD)
0.5	78.79	136.60	134.67	98.99
1.0	94.78	169.11	164.75	115.25
1.5	106.61	199.52	194.82	125.54
2.0	118.8	229.93	224.90	137.11
2.5	130.8	268.19	254.97	146.11
3.0	144.72	292.85	284.90	156.26
3.5	153.56	317.51	314.82	166.42
4.0	162.26	341.17	344.75	176.58
4.5	171.28	366.83	374.68	186.73
5.0	179.93	391.49	404.61	196.89

Source: DHL Express Worldwide [xli,xlii,xliii]

Rates for postal services are often more affordable than those for express couriers. The table below shows postal charges of Express Mail Services (EMS) shipping to and from Pacific Countries, thus suggesting that the global postal network represent an advantageous option to pursue E-commerce solutions, especially for MSMEs.

Table 23: Charges of shipping to and from Pacific Countries: Postal Express Mail Services, December 2020

Weight of the parcel (kg)	Shipping to and from the USA (USD)	Shipping to and from Australia (USD)	Shipping to and from China (USD)	Shipping to and from the UK (USD)
0.5	53.12	37.06	40.75	53.01
1.0	58.91	45.90	49.85	59.81
1.5	64.82	54.54	58.80	66.26
2.0	69.90	62.52	66.99	72.50
2.5	77.47	72.24	77.26	80.52
3.0	82.27	74.79	85.03	86.52
3.5	87.71	86.41	93.52	93.28
4.0	92.64	89.02	101.31	99.36
4.5	98.11	92.49	109.75	105.70
5.0	102.95	95.08	117.53	111.79

Source: UPU

The importance of postal services to the development of E-commerce is growing worldwide. In fact, the development of E-commerce has led many Posts around the world to diversify their activities, in particular in logistics. To that end, the Universal Postal Union (UPU) has developed a programme predicated on three pillars to assist countries reaping the benefit of fairly priced logistic services for E-commerce. This programme can be beneficial for FICs, noting the high cost of express couriers. The three pillars focus on improving operational, strategic, and E-payment readiness of postal operators – Operational readiness for E-commerce (ORE); Digital readiness for E-commerce (DRE); and Payment Readiness for E-commerce (PRE) programmes.[xliv]

Postal sector development in FICs is inadequate, with all FICs falling in lower performance categories of the Integrated Index for Postal Development (2IPD). Among the eight FICS that have been ranked by the Universal Postal Union (UPU) in 2020, the best one is Tonga, which ranks 104th out of 170 countries with a score of 22.69%.

Table 24: Integrated Index for Postal Development (2IPD) in Pacific countries

Country	Rank	2IPD 2020[12]
Tonga	104	22.69
Fiji	123	16.73
Kiribati	146	11.12
Tuvalu	150	9.85
Vanuatu	158	6.78
Samoa	162	6.12
Papua New Guinea	164	5.24
Solomon Islands	165	5.13

Source: 2IPD by UPU (2020)

12 The Integrated Index for Postal Development, as composed by the UPU, ranked 172 countries' postal sector performance on a relative basis, with the best performer's and worst performer's scores are 100 and 0 respectively. This means a country's absolute progress on a specific dimension of the 2IPD will impact the final ranking if its peers have not made even greater gains in performance.

Table 25: Postal Services in select FICs

Indicator	Fiji	Kiribati	Samoa	Tonga
Area of territory (km^2)	18,274	726	2,831	650
Total number of permanent post offices	133	25	6	7
Average area covered by a permanent office (km^2)	137.40	29.04	471.83	92.86
Average number of inhabitants served by a permanent office	6,842	4,655	33,333	15,303
Number of express items, domestic service	49,462	-	-	92
Number of express items, international service - dispatch	4,434	54	2,094	450
Number of parcels, domestic service	4,208	176	-	436
Number of parcels, international service - dispatch	5,537	62	547	108
Percentage of items delivered through post office boxes	80	80	98	80
Percentage of the population having mail delivered at home	9	25	15	1
Percentage of the population having to collect mail from a postal establishment	63	75	75	99

Source: World Bank, UPU 2019

As a part of UPU work on E-commerce readiness, three operational audit of the postal operators in Kiribati, Solomon Islands and Vanuatu were carried out in 2018 and 2019 to assess the postal network's level of E-commerce readiness and to make recommendations in any areas requiring improvement in the postal supply chain and end-to-end service reliability from the collecting/posting throughout delivery.

Home delivery is not always an option for many of the FICs populations. Among the FICs with UPU available data, between 63 and 99 percent of the population still have to collect mail from a postal establishment. For countries with a low rate of home delivery, E-commerce businesses might consider the adoption of click-and-collect models - i.e. buy online and pick up in store, or at third party convenient locations.

Developing a physical addressing and postal codes system can improve E-commerce readiness by facilitating traceability. FICs adopting a physical addressing system would benefit from also adopting an international addressing standard, such as UPU S42,[xlv] to facilitate international recognition and speed-up processing for both postal operators and businesses. Some countries or territories in the region may follow the addressing system of the country with which they have special relations. Countries such as the USA, UK, and New Zealand are S42 certified, but none of the FICs are S42 certified directly as of November 5, 2020.[13]

Table 26: Physical Postal Systems in FICs

Country or Territory	Correct Postal Addressing System	UPU S42 Standard recognised
Cook Is.	0	0
Fiji	0	0
Kiribati	1	0
Marshall Is.	1	0
FSM (Micronesia)	1	0

13 The S42 international addressing standard comprises of a generic list of address elements (used in all UPU member countries) and country-specific templates that tell users how to transform address elements into an accurately formatted address.

Nauru	1	0
Niue	1	0
Palau	1	0
PNG (Papua New Guinea)	1	0
Samoa	1	0
Solomon Is.	0	0
Tonga	0	0
Tuvalu	0	0
Vanuatu	0	0
Total	**8**	**0**

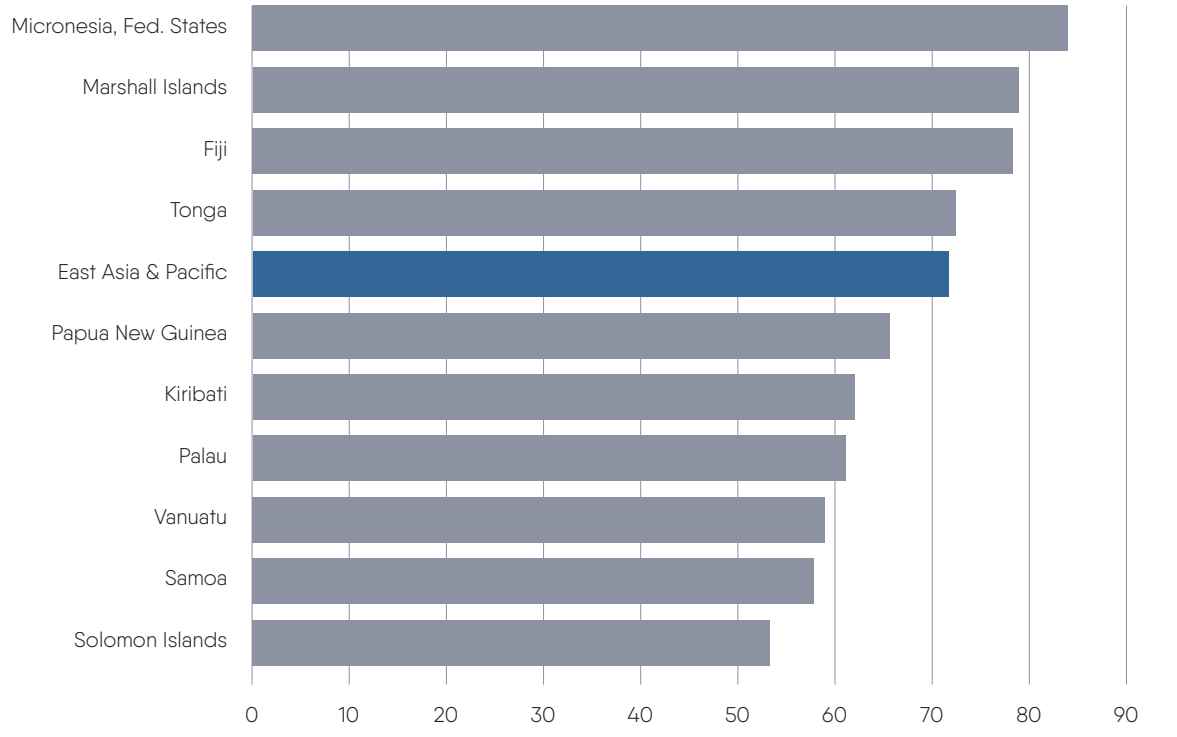
Source: UPU

Digital alternatives to a physical addressing system can also be explored by FICs – such as what3words, already adopted by Tonga.[xlvi]

4.2 Trade Facilitation

The Trading Across Borders component of the World Bank's Doing Business indicator provides information on the degree of trade facilitation. In 2020, FSM emerged as the best performing FIC, with a value of 84.0 and a rank of 65th out of 190 economies. On the other end of the spectrum, Solomon Islands presents a score of 53.4.

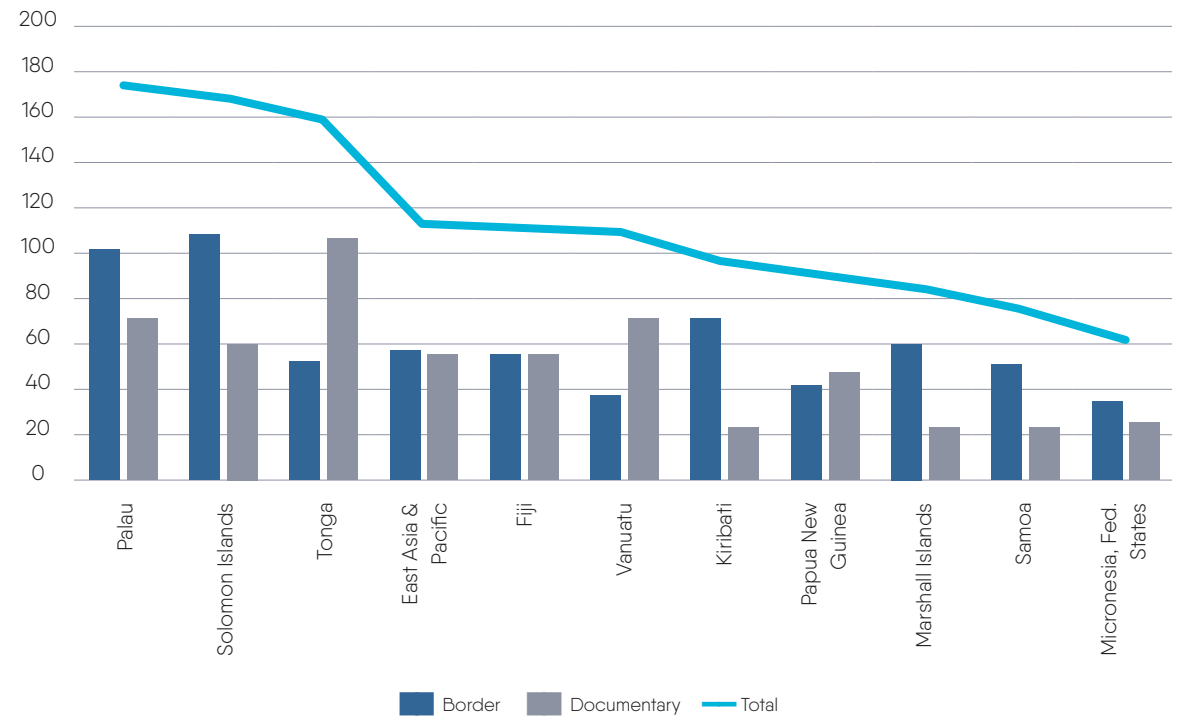
Figure 4: Trading Across Borders Score in FICs



Source: World Bank Doing Business 2020

The FICs have high border and documentary compliance[14] times and costs for both importing as well as exporting a standard container of goods. Time to export a standard container of goods in the FICs ranges from 2.5 days to over 7.0 days and costs between USD 250 and USD 1,600. Time to import ranges between 2.9 days and 7.5 days and costs between USD 260 and USD 1,130. **Pacific figures are mostly higher than the East Asia and Pacific average, especially in terms of costs.** Average East Asia-Pacific time to export is 4.5 days costing an average of USD 490, whereas five days and USD 531 are the corresponding figures for import. Overall, this implies delays or high costs relating to cross border E-commerce.

Figure 5: Time to export in FICs (hours)

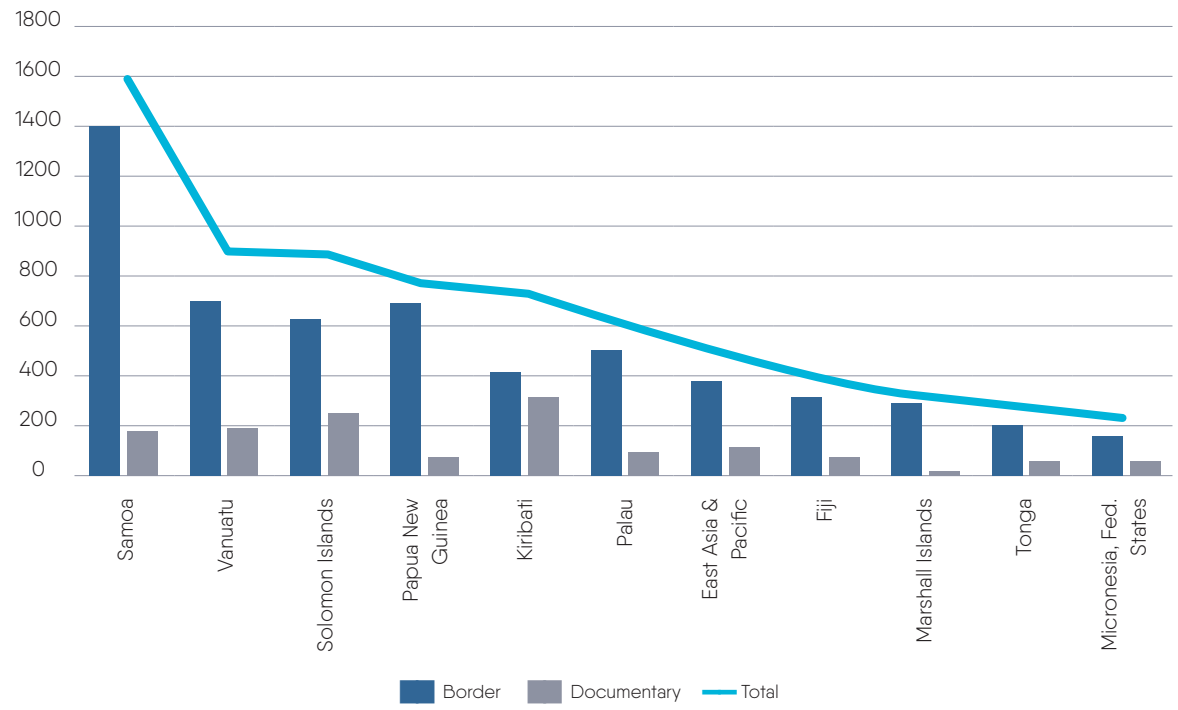


Source: World Bank Doing Business 2020

In the FICs, trade costs and times are among the highest in the world when measured as a proportion of total trade values. This creates a burden on domestic traders and industries, thus impacting them negatively by discouraging direct investment opportunities and limiting participation in global and regional value chains. However, high costs in the region are mainly due to certain unchangeable circumstances such as geographical isolation and small market size. These challenges given, FICs can improve this situation by increasing the efficiency of documentary and border procedures.

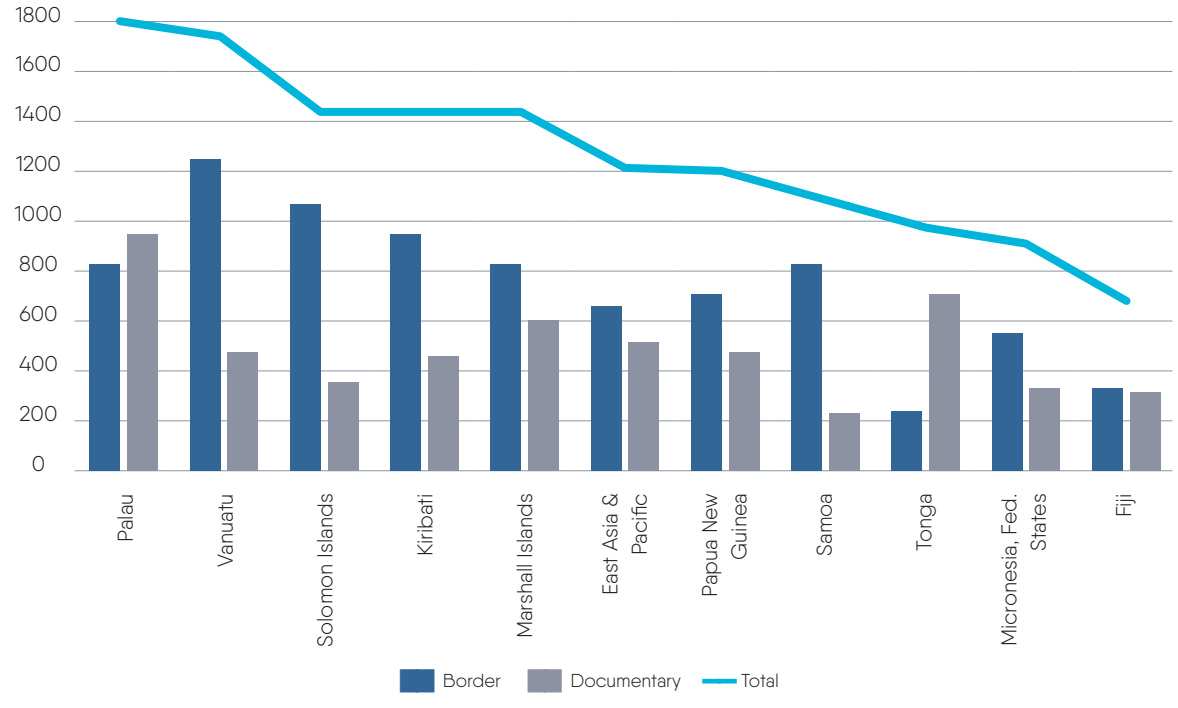
14 As noted by the World Bank: "Documentary compliance captures the time and cost associated with compliance with the documentary requirements of all government agencies of the origin economy, the destination economy and any transit economies, and, Border compliance captures the time and cost associated with compliance with the economy's customs regulations and with regulations relating to other inspections that are mandatory in order for the shipment to cross the economy's border, as well as the time and cost for handling that takes place at its port or border" See https://www.doingbusiness.org/en/methodology/trading-across-borders.

Figure 6: Cost to export in FICs (USD)



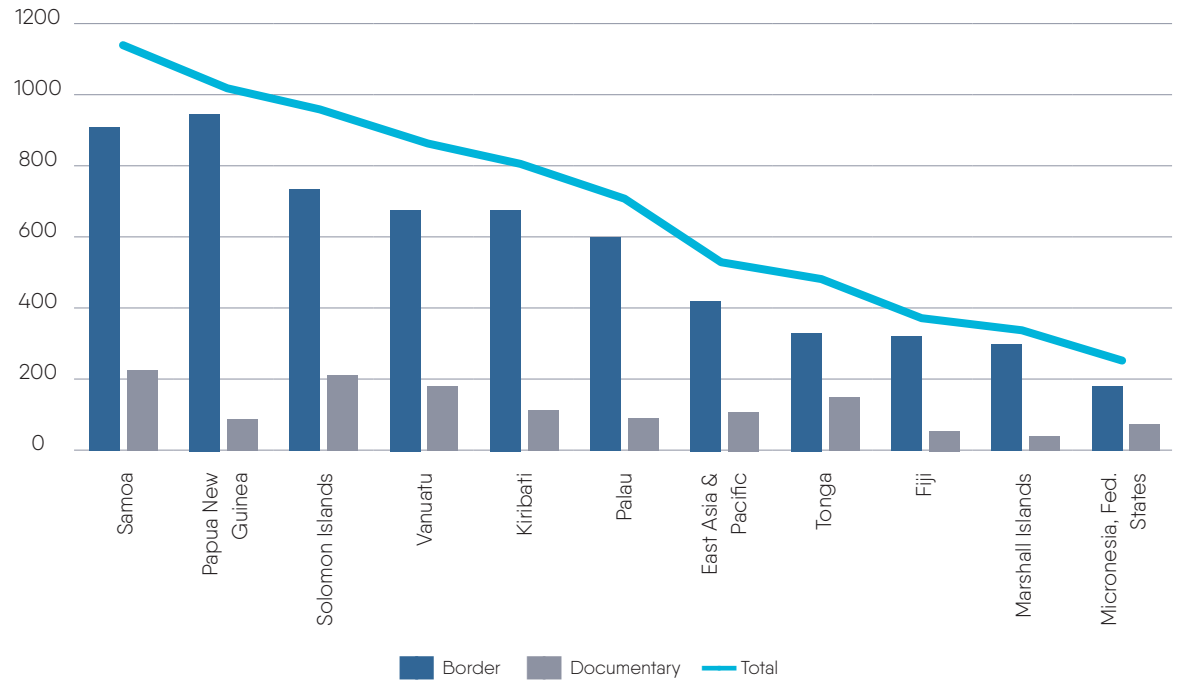
Source: World Bank Doing Business 2020

Figure 7: Time to import in FICs (hours)



Source: World Bank Doing Business 2020

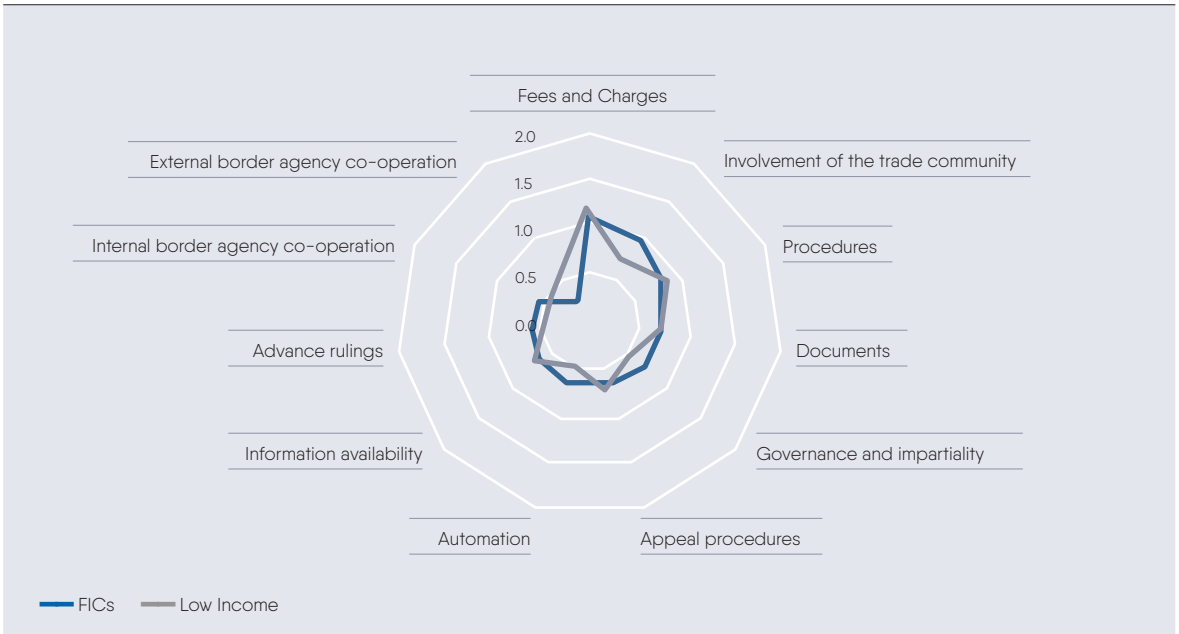
Figure 8: Cost to import in FICs (USD)



Source: World Bank Doing Business 2020

The FICs score poorly in trade facilitation. The OECD's Trade Facilitation Indicators of 2019 score nine FICs based on a number of trade facilitation indicators. The international best practice score for trade facilitation is 18.3, which is way higher than the scores in the Pacific region. Fiji is the highest scoring country and the closest to the international best practice, with a score of 11.9 out of 20. FICs score moderately well for the involvement of the trade community, fees and charges and simplified procedures. However, the region overall lacks in most indicators, especially in external border agency cooperation, governance, advance rulings, information and automation. Overall FICs' average score (6.7) is a bit lower than average for low-income countries (7.4).

Figure 9: OECD Trade Facilitation indicators of selected FICs and the Pacific region



Source: OECD

Table 27: OECD Trade facilitation indicators in FICs

Category	FJI	PNG	VUT	WSM	TON	PLW	SLB	FMS	KIR	FICs
Fees and charges	1.8	1.2	1.2	1.0	1.6	0.9	0.5	0.7	0.7	1.1
Involvement of the trade community	1.5	1.4	1.0	0.8	1.3	0.7	0.8	0.3	0.5	0.9
Procedures	1.4	1.2	1.0	0.7	0.7	0.5	1.0	0.5	0.5	0.8
Documents	0.9	1.1	0.6	1.0	0.3	0.6	0.8	1.0	0.9	0.8
Governance and impartiality	1.1	1.1							0.0	0.7
Appeal procedures	1.6	0.9	1.1	0.6	0.4	0.4	0.5	0.4	0.3	0.7
Automation	1.4	1.1	0.6	0.7	0.7	0.3	0.3	0.5	0.1	0.6
Information availability	1.2	0.8	0.9	0.4	1.0	0.5	0.3	0.3	0.1	0.6
Advance rulings	0.0	1.0	1.4	2.0	0.3	0.0	0.0	0.0	0.3	0.6
Internal border agency co-operation	0.6	0.4				1.0			0.0	0.5
External border agency co-operation	0.3	0.4				0.0			0.0	0.2
Total	**11.9**	**10.5**	**7.8**	**7.2**	**6.4**	**4.9**	**4.3**	**3.7**	**3.3**	**6.7**

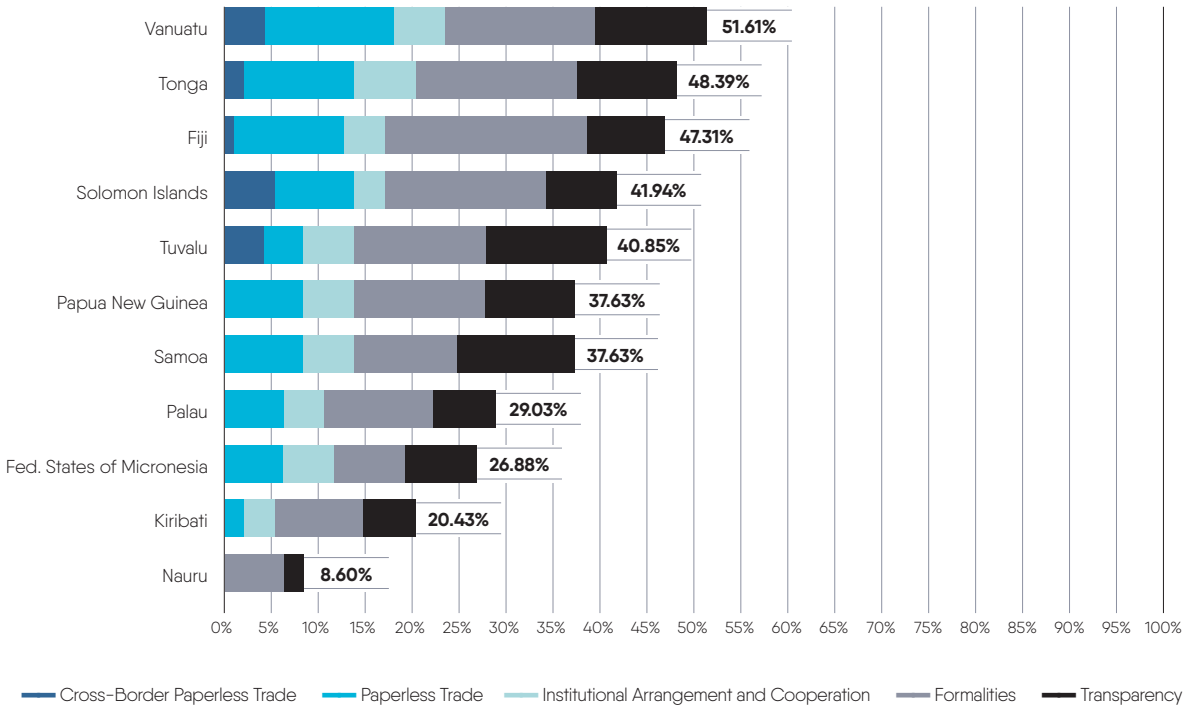
Source: OECD

The introduction of the Automated System for Customs Data (ASYCUDA) is important to support improvement in the areas where FICs are performing poorly. Fiji, Samoa and Vanuatu were the first countries in the Pacific that introduced ASYCUDA in 2002, thereby improving automation and reducing paperwork. PNG and Solomon Island are also using ASYCUDA in their customs processes. Additionally, the Cook Islands, Kiribati, Nauru, Niue, Tonga and Tuvalu are in the process of introducing ASYCUDA. The ASYCUDA system, and its related technical assistance, has helped the FICs' customs clearance procedures to come down from an average of 35 steps to less than ten steps.[xlvii] Importantly, the ASYCUDA system allows for standardisation of procedures and is therefore suitable to streamline trade within the Pacific region. It can also serve as platform of choice for the establishment of Electronic Single Windows – as is happening in Vanuatu.[xlviii]

Interfacing the postal system with ASYCUDA can help facilitating E-commerce. UPU, in collaboration with UNCTAD, has developed an ASYCUDA. The system, known as Customs Declaration System (CDS), allows for information coming along with a parcel to be shared with the receiving post operator via Electronic Data Interchange (EDI) before the package is sent. Further the electronic interfacing between UPU-CDS and UNCTAD-ASYCUDA will allow for the same information to be shared with the customs administrations that are using ASYCUDA, thus allowing for expedited clearance. This is crucial in the context of the legal requirements taking effect in 2020/21, such as those established by the United States of America (Synthetics Trafficking and Overdose Prevention (STOP) Act), China, the Russian Federation and the European Union (Union Customs Code, Import Control System 2). Upcoming security requirements include sending pre-loading advance cargo information (PLACI) before an item leaves the country of origin, confirming the correct export processing to destination customs and transport airlines, and possibly sending security alerts back to the country of origin.[xlix]

The UN 2019 Global Survey on Digital and Sustainable Trade Facilitation notes that the average implementation of trade facilitation measures by Pacific Island Economies stood at 35.5 percent, which is significantly lower than the Asia-Pacific average of 59.7 percent. This substantially confirms the findings of the World Bank and the OCED with regard to the level of trade facilitation in the region. The survey report states that "in general, more advanced or larger economies are at a higher level of trade facilitation than many other countries in the region, while small or less developed countries, such as LDCs or small Pacific countries, lag in the implementation of trade facilitation measures, particularly paperless and cross-border paperless trade measures." It was also noted that most countries implemented some 'Paperless Trade' measures, whereas only a few countries only implemented 'Cross-Border Paperless Trade' measures.

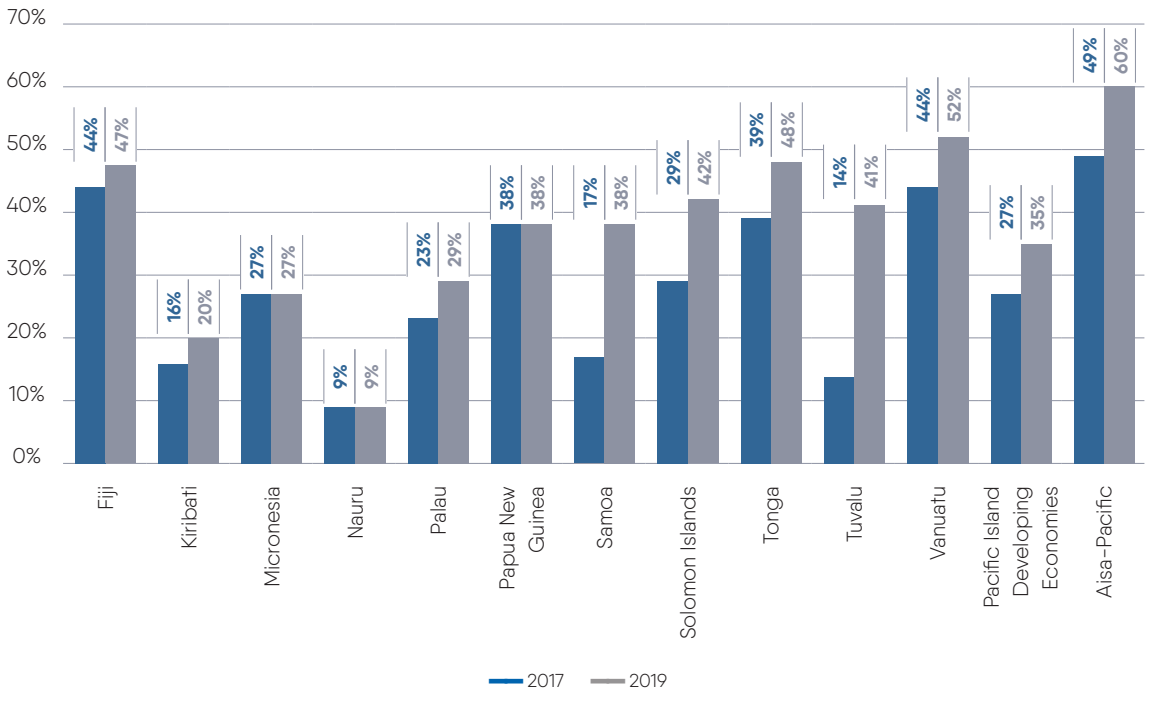
Figure 10: Digital and Sustainable Trade Facilitation in Pacific Islands Developing Economies (2019)



Source: UN Global Survey on Digital and Sustainable Trade Facilitation 2019

A comparison between 2017 and 2019 shows a decent level of progress in trade facilitation. On average, there was an eight percentage-point increase in implementation, from 27 percent to 35 percent. FICs made the most progress in implementing transparency measures and formalities, whereas they recorded a slower growth in implementing paperless trade and cross-border paperless trade measures.[1]

Figure 11: Trade facilitation implementation by FICs between 2017 and 2019



Source: UN Global Survey on Digital and Sustainable Trade Facilitation 2019

International organisations such as the World Trade Organisation (WTO) and the World Customs Organisation (WCO) have promoted agreements for trade facilitation that can favour E-commerce. Fiji, PNG, Samoa, Tonga and Vanuatu are all members of the WTO and WCO. The Solomon Islands, on the other hand, is only a member of the WTO.

Four FICs (Fiji, PNG, Samoa, Vanuatu) have ratified the WTO Trade Facilitation Agreement (TFA).[lii] The TFA contains provisions for expediting the movement, release and clearance of goods, including goods in transit. Of particular relevance for E-commerce are:[liii,liii]

- Article 1 Publication and Availability of Information:
  - Paragraph 1 Publication;
  - Paragraph 2 Information Available Through Internet.

Improving the accessibility of information for traders is intended to reduce the cost of trade for business. Such disciplines enable the expedited exchange of trade-related data and documents, facilitating faster clearance of goods through automated processes.

- Article 7 Release and Clearance of Goods:
  - Paragraph 1 Pre-arrival Processing

Allowing electronic data to be provided in advance of arrival facilitates the expedited release of goods and improved risk assessment, which is particularly important for high volume, low value parcels associated with the growth in E-commerce.

  - Paragraph 8.2.d Expedited Shipments

Providing a *de minimis* threshold under which customs duties, taxes and charges (other than domestic taxes) will not be collected would allow for a more efficient cross border movement of low value parcels, as these goods are not held by revenue collection.

- Article 10 Formalities Connected with Importation, Exportation and Transit:
  - Paragraph 4 Single Window

The implementation of a Single Window facilitates the free flow of goods across the border, providing a simpler, faster and more efficient system. Digitalisation in a single window has the potential to improve the efficiency of customs procedures and better facilitate online trade in goods.

On the WCO side, the Revised Kyoto Convention (RKC), is the key agreement on trade facilitation. Six FICs (Cook Islands, Fiji, Kiribati, PNG, Samoa, Tuvalu and Vanuatu) are contracting parties to the RKC. Many RKC measures, including computerised or Electronic Data Interchange (EDI) Customs systems, Customs risk management systems, and pre-arrival information, are expected to improve customs release times, which is beneficial directly and indirectly for E-commerce businesses and businesses in general.[liv]

Besides WCO's legal texts, there exist a series of relevant WCO standards and guidelines. For example, the joint WCO-UPU Guidelines on the Exchange of Electronic Advance Data between Posts and Customs are an element worth taking into consideration to facilitate the submission of electronic information for cargo.[lv]

In addition, the WCO Framework of Standards on Cross-border E-Commerce provides 15 baseline global standards with a focus on the exchange of advance electronic data for effective risk management and enhanced facilitation of the growing volumes of cross-border small and low-value Business-to-Consumer (B2C) and Consumer-to-Consumer (C2C) shipments, through simplified procedures with respect to areas such as goods clearance, revenue collection and return, in close partnership with E-Commerce stakeholders. It also encourages the use of the Authorised Economic Operator concept, non-intrusive inspection equipment, data analytics, and other cutting-edge technologies to support safe, secure and sustainable cross-border E-Commerce.[lvi]

Eleven FICs are signatories of the PACER Plus. The benefit of the PACER Plus will be particularly important for those FICs that are not WTO Members and therefore not party to the WTO's TFA, as the PACER Plus mirrors many of the trade facilitation provisions of the WTO TFA. Those FICs that are WTO Members will also benefit from the PACER Plus, including through increased support.

Finally, **the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) is expecting that the Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific will enter into force in the short-term**. The Framework Agreement will, amongst others, promote paperless trade readiness at national level, and make national paperless trade practices interoperable and better prepared to support cross-border trade data exchange.[lvii]

Table 28: FICs International Memberships

Forum Island Country	WTO Member	WCO Member	RKC Signatory	TFA Signatory	PACER+ Signatory	ASYCUDA User	UNESCAP Member
Cook Islands			★		★		★*
Fiji	★	★	★	★		★	★
Kiribati					★		★
Marshall Islands							★
FSM							★
Nauru					★	★	★
Niue					★		★*
Palau							★
PNG	★	★	★	★		★	★
Samoa	★	★	★	★	★	★	★
Solomon Islands	★				★	★	★
Tonga	★	★			★		★
Tuvalu			★		★		★
Vanuatu	★	★	★	★	★	★	★

Notes: WTO-World Trade Organisation, WCO-World Customs Organisation, TFA-Trade Facilitation Agreement, ASYCUDA-Automated System for Customs Data, UNESCAP – United Nations Economic and Social Commission for Asia and the Pacific. *: Associated Members.
Source: WTO, WCO, UN, ASYCUDA, UNESCAP

4.3 Summary of recommendations from country assessments

Table 29: Recommendations on Trade Logistics and Trade Facilitation Ecosystem

Recommendations	Timeline
1. **Implement National Single Windows** to facilitate access to trade information, submission of trade-related documents, and payment of trade-related fees and duties.	Medium-Long
2. **Simplify border procedures** in line with the provisions of the WTO's Trade Facilitation Agreement and other best-practices such as those developed by the OECD the WCO, and the UPU.	Medium-Long
3. **Adopt a *de minimis* regime** facilitating trade in small and low value parcels, which are the ones that SMEs use the most.	Short-Medium

4. **Accede to relevant trade facilitation arrangements** such as the UN-ESCAP Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific, the WTO's Trade Facilitation Agreement, and the WCO Kyoto Convention.	Medium
5. **Improve connectivity** by upgrading the domestic transportation network (roads, ports, airports) and improving national providers of logistics services – in particular postal and domestic shipping services.	Long
6. **Establish a home addressing system** which incorporates UPU addressing standards to facilitate last-mile delivery. Adoption of alternative geocode systems can be considered.	Medium

5 PAYMENT SOLUTIONS FOR E-COMMERCE

5.1 Banking Penetration

The banking and finance sectors in each FIC are developing at different paces. On the one hand, there are countries with a fully developed financial system, including a central bank, a development bank, a number of commercial banks and other financial institutions such as insurance companies, money transfer agencies, etc. This group includes Fiji, PNG, Samoa, Solomon Islands, Tonga, and Vanuatu. On the other hand, there are FICs without their own currency[15] and without a central bank to regulate the financial sector.

On commercial service providers, most countries have a combination of foreign-owned and locally-owned banks. ANZ Banking Group and Bank of South Pacific are the most popular across the FICs, and are present in eight countries across the region (see Table 30).

Table 30: List of banks in the Pacific Islands

Country	Central Bank	Development bank	Commercial bank
Cook Islands	n/a	n/a	Bank of the Cook Islands (D) ANZ Banking Group (F) Bank of South Pacific (F) Capital Security Bank (F)
Fiji	Reserve Bank of Fiji	Fiji Development Bank	ANZ Banking Group (F) Bank of Baroda (F) Bank of South Pacific (F) Bred Bank (F) Westpac Banking Corporation (F) Home Finance Company (HFC Bank) (D)
Kiribati	n/a	Development Bank of Kiribati	ANZ Bank Kiribati (F)
Marshall Islands	n/a	Marshall Islands Development Bank	Bank of the Marshall Islands (D) Bank of Guam (F)
Micronesia, Fed. Sts.	n/a	FSM Development Bank	Bank of the Federated States of Micronesia (D) Bank of Guam (F)
Nauru	n/a	n/a	Bendigo and Adelaide Bank Limited of Australia (F)
Niue	n/a	Niue Development Bank	Kiwibank Limited and Niue Commercial Enterprises Limited (F)
Palau	n/a	National Development Bank of Palau	Bank of Guam (F) Bank of Hawaii (F) Bank Pacific (F) Asia Pacific Commercial Bank (D) Palau Construction Bank (D)

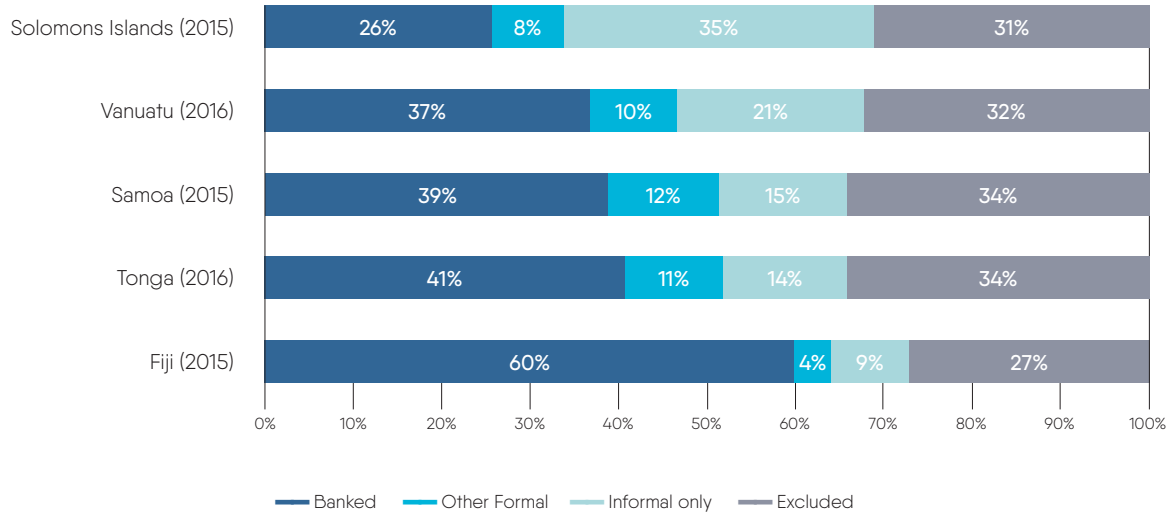
15 Such as Nauru (using Australian dollar), Niue (using New Zealand dollar) and Palau (using United States Dollar).

Papua New Guinea	Bank of Papua New Guinea	National Development Bank	Bank South Pacific (D) Kina Bank (D) ANZ Banking Group (F) Westpac Bank (F)
Samoa	The Central Bank of Samoa	Development Bank of Samoa	ANZ (F) Bank of the South Pacific (F) Samoa Commercial Bank (D) National Bank of Samoa (D)
Solomon Islands	Central Bank of Solomon Islands	Development Bank of Solomon Islands	ANZ Banking Group (F) Bank South Pacific (F) BRED Bank (F) Pan Oceanic Bank (D)
Tonga	National Reserve Bank of Tonga	Tonga Development Bank	ANZ Banking Group (F) Bank of South Pacific (F) MBF Bank (D)
Tuvalu	n/a	Development Bank of Tuvalu	National Bank of Tuvalu (D)
Vanuatu	Reserve Bank of Vanuatu	Vanuatu Agriculture Development Bank	National Bank of Vanuatu (D) ANZ Banking Group (F) BRED Bank (F) Bank of South Pacific Vanuatu (F) Wanfuteng Bank (F)

Notes: F denotes that the bank is foreign-owned, D denotes that the bank is domestically-owned
Source: Author's compilation, based on ADB (2019)[xvii]

Overall banking penetration is low in the Pacific, and this represents an obvious hindrance to the development of E-commerce. According to the National Financial Services Demand Side Surveys undertaken in five FICs,[16] Fiji has the highest level of banking penetration, with around 60 percent of adults having a commercial bank account, followed by Tonga (41 percent) Samoa (39 percent), and Vanuatu (37 percent). In other countries for which data is available, the banking penetration rate is below 30 percent – for example, 25 percent in FSM and 15 percent in Kiribati. Overall, Pacific figures are low compared to the world average at 68.5 percent of the adult population.[17]

Figure 12: Banking penetration in Forum Islands Countries

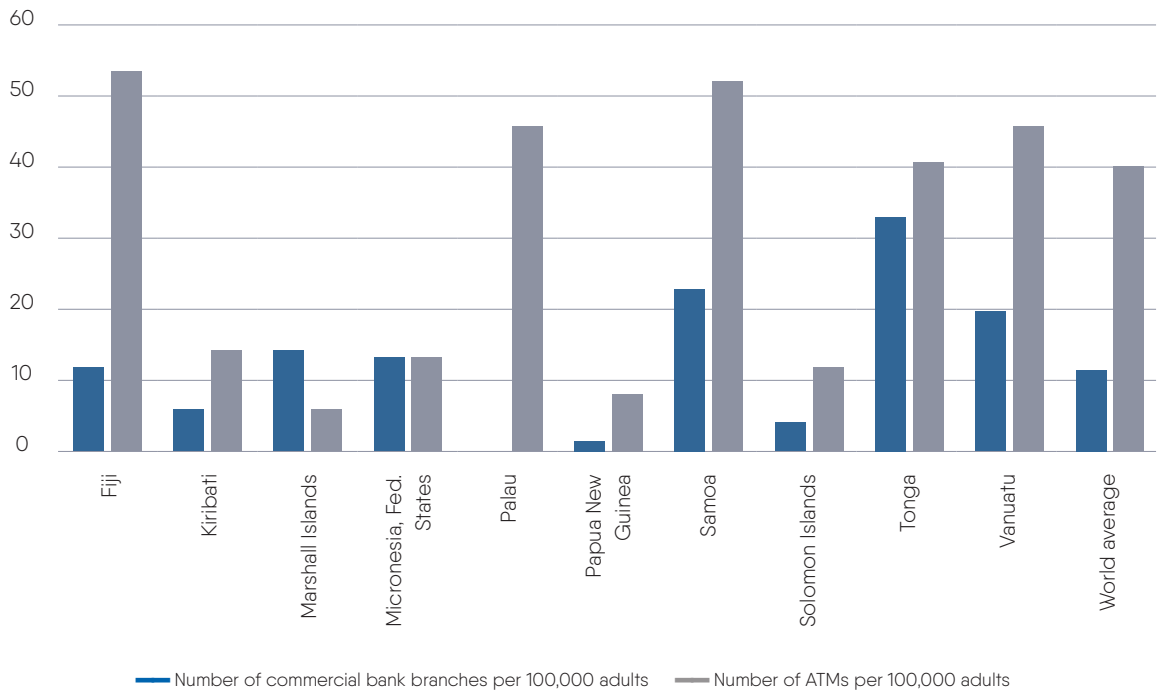


Source: Financial Services Demand Side Survey, Reserve Bank of Vanuatu, 2016

16 The five countries that have done Financial Services Demand Side Surveys are Fiji, Samoa, Solomon Islands, Tonga, and Vanuatu.
17 According to the World Bank's indicator of Account ownership at a financial institution or with a mobile-money-service provider (% of population ages 15+). World Bank (2020). World Development Indicators (database), The World Bank Groups. Available at https://data.worldbank.org/.

Data on commercial bank branches and Automated Teller Machines (ATMs) provides a similar picture,[lix] with only Fiji, Samoa, Tonga, and Vanuatu performing better than the world averages (see Figure 13).

Figure 13: Number of commercial bank branches and ATMs per 100,000 adults, by country



Notes: Data for Cook Islands, Nauru, Niue, and Tuvalu are missing. Data for Kiribati is from 2013; data for Solomon Islands is from 2018 (commercial bank branches) and 2017 (ATMs); data for Palau (ATMs) is from 2017; data for Palau (commercial bank branches) is missing
Source: World Bank WDI, at https://data.worldbank.org/

The small and dispersed population is one of the main causes of the observed low banking penetration. There are only three markets with more than half a million people (PNG, Fiji, and Solomon Islands), seven with a population between 100,000 and 500,000, as well as micro-markets, such as Niue (1,600), Nauru (10,000), or Tuvalu (12,000). Even for countries with a larger population, the low rate of urbanisation – which in some cases is less than 25 percent – discourages financial service providers to serve remote areas, due to the high cost of keeping the service running, the income profile of the costumers, the cost of developing the financial infrastructure, and the cost of service and cash management. According to the Alliance for Financial Inclusion (AFI),[lx] there is a need to increase the number of service points in outer islands, which will in turn require improvements in communications, middle management, and cash management.[18]

Other factors are causing a limited banking penetration, and more generally the limited penetration of payment system providers include:

- Lack of automated national clearance and settlement systems;
- Lack of interoperability between payment service providers (banks and non-banks);
- Unfavourable policy and regulatory environment for the national payment systems;
- Insufficient local development of fintech operators, including non-bank payment service providers, providers of online payment processing services (payment gateways), and merchant aggregators.

Clearing and settlement systems

Payment systems in many Pacific countries still operate through a manual clearing and settlement system, which involve considerable time, risks, and discourage electronic transitions. Internationally each system links into the systems of other countries through platforms and correspondent relationships – i.e. agreements for certain foreign banks acting as intermediaries to facilitate international transfer and settlement of funds.

18 Due to the remoteness, there will be need for effective communication among the service points/branches of the commercial banks. Most of the services provided for the regional market are savings and transfer services, with few opportunities to build earning assets (such as loans), thus increasing the need for middle management (branch managers) and cash management.

Automated systems operating at the national level are FIJICLEAR in Fiji and KATS in PNG.[lxi] Samoa, Solomon Islands, and Vanuatu will soon introduce **automated clearing and settlement systems** with the support of the International Finance Corporation (IFC). The systems in these countries will include a Real-Time Gross Settlement for large inter-bank payments, Automated Clearing House for retail payments open to non-bank payment service providers, as well as a Central Securities Depository for government bonds.[lxii]

Interoperability

Lack of interoperability between payment service providers increases the costs of financial transactions for both consumers and merchants,[lxiii] and may prevent the use of certain payment solutions. A **national payment switch** is a software consolidating national transactions taking place on Point of Sale (POS) systems, Automated Teller Machines (ATMs), mobile payments system and E-commerce portals, and channelling to the relevant payment service provider for settlement. The payment ecosystem in the Pacific remains under-developed as compared to other regions in the world. Except for PNG, which has launched the Retail Electronic Payments System (REPS) on 21 July 2019,[lxiv] other FICs have yet to establish fully interoperable payment systems. The World Bank Group has been working with Central Banks in the region to promote interoperability and establish national payment switches. It is estimated to take at least two to three more years for this work to be fully completed across the bigger countries in the region.[lxv]

Policy and regulatory environment

The level of robustness of the financial regulations across the FICs varies from country to country. While some have developed well-rounded financial regulatory frameworks covering the operation of financial services providers and are progressing to higher goals of financial inclusion and digitisation, others are still lagging behind. Fiji, PNG and Samoa already have in place **laws for the national payment system**[19] and are implementing **National Financial Inclusion Strategies**. Vanuatu and Solomon Islands submitted their Bills for the National Payment System Act to their respective Parliament for debate.[20]

National payment system laws are important as they bring all payment systems providers and issuer of electronic money under the same regulatory umbrella, thus enhancing trust in the payment system and protecting consumers. They may also provide for the establishment of national payment switches. Different in their scope and objectives, National Financial Inclusion Strategies share some common goals of improving financial literacy, financial inclusion, and consumer protection, among others.

Kiribati, FSM, and Palau will receive support from the Pacific Financial Technical Assistance Centre (PFTAC) to enhance the national banking regulatory framework in 2021. The proposed assistance will support these countries in reforming the banking legislation and prudential standards in line with international standards.[lxvi] Those regulations, once established, will create a stable and secure environment to facilitate banking and finance activities, and allowing for a broad range of payment solutions from banks and fintech providers.

Amongst the core financial regulations is **Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT)**. The AML/CFT regimes are fundamental to ensure countries are not cut off from the international financial system, and its businesses are impeded to conduct international financial transactions, including online ones.

Box 4: Definitions of KYC, AML, and CFT

Anti-money laundering (AML) refers to the laws, regulations, and procedures issued to prevent illegally obtained funds (e.g. from tax evasion, fraud, theft, organised crime, drug trafficking, embezzlement) as legitimate income.[lxvii]

Combating the Financing of Terrorism (CFT) involves investigating, analysing, deterring, and preventing sources of funding for activities intended to achieve political, religious, or ideological goals.[lxviii]

Know Your Customer/Customer Due Diligence (KYC/CDD) principles, also known as "guidelines" or "policies and procedures" in financial services, require banks to carry out due diligence in acquiring and keeping relevant information of customers. KYC principles have infiltrated the international AML framework and since then fitted within such scope.[lxix]

19 Vanuatu's Bill is pending the parliament's endorsement.

20 Fiji also adopted in 2018 the Fiji Interchange Network Act. This Act has been put into place specifically for an Interchange that allows for the convenience of payments to pass through a single national platform or 'switch' for the entire country.

All FICs already have in place regulations on AML/CFT, either under a standalone regulation or embedded in other acts (see Annex 1). Eleven FICs are members of the Asia Pacific Group (APG) on Money Laundering and three are participating as observers – i.e. Kiribati, Micronesia, and Tuvalu.[21] All APG members have engaged in the mutual peer evaluation to determine the levels of compliance with the international AML/CFT standards.[22] However, according to the IMF, Pacific countries' AML/CFT frameworks are still deficient, including due to underdeveloped analytical capacity from financial intelligence units, and insufficient AML/CFT supervisory frameworks. This, along with difficulties in verifying customer identity, has led to higher costs for payments or the withdrawal of correspondent banking relationships.[lxx, lxxi] FICs should ensure that their AML/CFT frameworks are aligned with international best practices, while at the same time leveraging fintech-based solutions for the national know-your-customer utility to strengthen AML/CFT compliance.[lxxii]

To accommodate the trials of digital financial products and services prior to the official launch, some countries have also introduced FinTech Regulatory Sandbox. The trailblazers in this area are PNG's Central Bank Regulatory Sandbox launched in December 2019 and Fiji's FinTech Regulatory Sandbox launched in early 2020.[23] There has also been an effort at the regional level in this area. Notably, in 2019, the Pacific Islands Regional Initiative (PIRI) Regional Regulatory Sandbox was initiated as the world-first regional sandbox, funded by UK Aid and jointly created by central banks of the seven FICs in PIRI.[24] It is expected that by acting as a regional bloc, countries participating in the sandbox will provide FinTech companies with access to a larger and more diverse market, as well as greater potential within a well-defined, regional regulatory structure.[lxxiii]

Box 5: Definitions of Regulatory Sandbox and National Switch

Regulatory sandbox

A framework set up by a regulator that allows FinTech start-ups, private firms, and other innovators to conduct small-scale, live testing of innovations in a controlled environment under a regulator's supervision. This concept is practical and important during the period of rapid technological innovation in financial markets to encourage and enable continuous innovation.[lxxiv]

National switch

National Financial Switch refers to shared payment system infrastructure that is established with the goal of inter-connecting the ATMs, Point of Sale (POS) Machines, mobile payment and other gadgets in the country and facilitating convenient banking and financial services.[lxxv]

As Digital Financial Services (DFS) expand and transaction volumes increase, regulators should keep abreast of fintech developments and forestall systemic risks related to imprudent lending practices, cyberattacks, money laundering, and large-scale technology failures. Greater efforts are also needed to safeguard consumer rights and privacy, as well as to enhance technology literacy and awareness of both the risks and benefits of fintech.[lxxvi] Whist legislation on national payment systems and AMF/CFT are helpful in this regard, other regulatory developments are necessary which are addressed in Chapter 6.

21 The APG is an inter-governmental organisation consisting of 41 members in the Asia-Pacific region, as well as organisations, and observers from outside the region, who are committed to the effective implementation and enforcement of the internationally accepted standards against money laundering, financing of terrorism and proliferation financing set by the Financial Action Task Force (FATF). See more at https://www.fatf-gafi.org/about/.

22 For all Mutual Evaluation reports, see http://www.apgml.org/mutual-evaluations/documents/default.aspx.

23 The main objective of Fiji's regulatory sandbox is to provide an innovative space for financial product trials and services prior to launching them into the market. One of the main goals of this sandbox is to broaden access to essential financial services, especially through the use of services such as credit and debit cards, QR code-based payments, agent banking, online banking, mobile money, and other emerging digital financial services. These applications of Financial Technologies will enhance the convenience and have the ability to reach remote businesses and communities.

24 Those are Banco Central de Timor-Leste, Bank of Papua New Guinea, Central Bank of Samoa, Central Bank of Solomon Islands, National Reserve Bank of Tonga, Reserve Bank of Fiji and Reserve Bank of Vanuatu.

5.2 Main mobile, cashless payment solutions available

Consumers

The OECD classifies cashless/digital payment solutions for E-commerce into seven instruments under two major systems. The account-based system includes credit card, debit card, mediating service,[25] mobile payment, and online banking. The electronic currency system includes smart cards and online cash.[lxxvii] For a long time, credit cards have been considered the major international digital payment means. However, with the rise of new technology and the expanded use of smartphones and the internet, other solutions have emerged, including for E-commerce.[lxxviii]

Digital payment solutions can be an effective and efficient tool to increase E-commerce-enabling financial inclusion, especially in those areas where geographical dispersion represents a major obstacle to the provision of financial services.[lxxix] Besides commercial purposes, digital payment solutions can also be used for other purposes such as disaster relief[26] and for remittances. It was estimated that sending remittances using fintech is about three percentage points cheaper than using the traditional mechanisms, with the cheapest mechanism being mobile money, followed by online platforms.[lxxx]

In the Pacific islands, digital payment solutions were introduced more than ten years ago. **Mobile money and mobile banking**[27] have proven particularly popular in Pacific islands such as Fiji, Samoa, and Tonga. These countries have large diasporas and mobile money operators enable users to transfer funds overseas at considerably less cost than using banks or traditional money transfer companies. On the other hand, these payment solutions are still at a nascent stage in countries like in Vanuatu and Kiribati, or merely exists in others like Niue, FSM, or Nauru.

Mobile banking services include the Australian and New Zealand Banking Group's (ANZ) goMoney, Bank South Pacific's (BSP) mobile-enabled accounts, and Westpac's Instore service. Mobile money services include Vodafone's M-PAiSA and Digicel's Mobile Money (see Table 31).[lxxxi]

Table 31: Digital Financial Services in the Pacific Islands

Country	Mobile Money Operator	DFS Services	Type of service	Year in operation
Fiji	Vodafone	M-PAiSA	Mobile money	2010
		Vodafone-mHITs	Mobile remittances	2010
	Digicel	Digicel Mobile Money	Mobile money	2010
		Digicel-KilckEx services	Mobile remittances	2010
Kiribati	ATH	M-PAiSA	Mobile money	2017
Papua New Guinea	Digicel	Cellmoni	Mobile wallet	2011
	NationWide MicroBank	Westpac and MiBank's MiCash	Mobile banking	2010
	ANZ	ANZ's goMoney	Mobile banking	2010
	BSP	BSP's Wantok Moni	Mobile banking	
Samoa	Digicel	National Bank of Samoa-Digicel Ezibank	Mobile money	2012
	ANZ	ANZ goMoney	Mobile banking	2012

25 Such as PayPal, also referred as e-wallet in other classifications. See: https://www.europeanpaymentscouncil.eu/sites/default/files/inline-files/Payment%20Methods%20Report%202019%20-%20Innovations%20in%20the%20Way%20We%20Pay.pdf.

26 Recently Vanuatu has pioneered digital cash as a disaster relief tool. See: https://www.theguardian.com/world/2020/nov/07/vanuatu-pioneers-digital-cash-as-disaster-relief.

27 Mobile money is a pay-as-you-go digital medium of exchange and store of value using mobile money accounts, facilitated by a network of mobile money agents. It is a financial service offered to its clients by a mobile network operator or another entity that partners with mobile network operators, independent of the traditional banking network. A bank account is not required to use mobile money services-the only pre-requisite is a basic mobile phone. On the other hand, mobile and internet banking is the facility which enables customers of a financial institution to execute financial transactions (such as deposits, account transfers, bill payments, online shopping) electronically via the internet, either using a mobile phone or another electronic device (According to IMF (2019). Financial Access Survey Guidelines and Manual, March 2019). Mobile payment is defined as payments initiated and transmitted by access devices that are connected to mobile communication networks, originating from two major sources, including customer funds located at banks in the form of a deposit account or credit account (including prepaid cards), or customer "stored-value funds" maintained by mobile network operators (MNOs) (According to IMF (2014). Oversight Issues in Mobile Payments). In this sense, mobile payment covers both mobile money and mobile and internet banking.

Solomon Islands	ANZ	ANZ goMoney	Mobile banking	2013
	BSP	BSP Mobile Banking	Mobile banking	
	Solomons Islands Postal Corp.	Ezi Pei	Mobile money	2020
Tonga	Digicel	Digicel- VeriFone Beep and Go	Mobile money	2011
		Digicel-KilckEx services	Mobile remittances	2011
Vanuatu	Digicel	Mani	Mobile wallet	2011
	ANZ	ANZ goMoney	Mobile banking	2014
	BSP	BSP Mobile Banking	Mobile banking	2014
	Vodafone Vanuatu	M-Vatu	Mobile money	2019

Source: Author's compilation based on ADB (2016)[lxxxii] & ITU (2019)[lxxxiii]

There is a potential to leverage post operators to support electronic payments, both national and cross-border.[lxxxiv] However, until now, none of the FICs have invested in this area. In 2019 UPU produced a report assessing ways in which Posts in Kiribati, Tonga, and Nauru could leverage digital financial services to improve financial inclusion in their respective markets – including supporting remittances, and acting as a cash merchant.[lxxxv]

Box 6: State of Digital Financial Services in the Pacific Islands

Fiji was the first Pacific country to implement Digital Financial Services (DFS) in the Pacific region with the launch of Digicel Mobile Money and Vodafone's M-PAiSA in 2010. In partnership with Fiji Post and Westpac, Digicel Mobile Money offers its customers the ability to transfer funds, pay bills, and deposit or withdraw cash using their mobile phones. In addition to utility payments, M-PAiSA can be used to make loan repayments to various financial institutions and receive government support payments. The two Mobile Network Operators (MNO) also partnered with service providers in New Zealand and Australia to implement account-to-mobile (Digicel-KilckEx services) or mobile-to-mobile (Vodafone-mHITs) cross-border transfers. The quick uptake of mobile money in Fiji can be attributed to the government's efforts in realising the country's financial inclusion goals under the Maya Declaration. The commitment has been translated into several initiatives, such as Direct Salary Deductions to Mobile Wallets, eTransport Card, Ria Money Remittance platform, etc.

Tonga was the second Pacific country to launch the Digicel Mobile Money service in 2011 and has seen a rapid uptake of these financial products. In May 2012, Digicel partnered with VeriFone to launch Beep and Go, the world's first fully inclusive mobile payments system linking Electronic Funds Transfer at Point Of Sale (EFTPOS) terminals to mobile money wallets. Digicel customers in Tonga have been able to receive mobile remittances through Digicel's partnership with KlickEx Pacific.

Papua New Guinea was also an early adopter of DFS, though the most prevalent form is mobile banking. All four commercial banks in PNG provide online or SMS banking services, giving the opportunity to make payments via mobile phones or at EFTPOS terminals. Bank-led services include BSP's Wantok Moni, ANZ's goMoney, Westpac, and MiBank's MiCash. In 2011, Digicel launched a mobile financial service, Cellmoni, in partnership with the Pacific Financial Inclusion Programme.

Samoa and **Solomon Islands** launched their mobile banking services, ANZ goMoney in 2012 and 2013, respectively. The product allows customers to access a wide range of financial services through their mobile phones, without the need for an internet connection. In **Samoa**, Ezibank was introduced in 2012 under the partnership between the National Bank of Samoa (NBS) and Digicel Samoa. As in Fiji, Digicel customers in Samoa can also receive remittances on their mobile phones through KlickEx Pacific. As for **Solomon Islands**, besides ANZ goMoney, the BSP also provides mobile banking services. **Solomon Islands** also saw the launch in November 2019 of the youSave Mobile, which provides a digital channel for youSave members who can now make deposits into their youSave account as well as registration through the mobile app.

In **Vanuatu**, there are two main DFS providers. Those are Digicel, with its Mani e-wallet introduced in 2011, and ANZ with goMoney mobile banking service introduced in 2014. Mobile payments are not widespread in Vanuatu, and cash remains the main payment method used by businesses.

In **Kiribati**, Vodafone's mobile money service M-PAiSA is available to customers with 3G-enabled mobile phones.

Source: Author's compilations based on ADB (2016) & CBSI (2019)

The overall use of mobile money remains relatively low. Mobile money transactions per 1,000 adults ranges from 1,000 in PNG to 3,900 in Fiji, compared to the world average (median) of 4,300 transactions.[lxxxvi] The total value of mobile money transactions ranges from 1 percent to 6 percent of GDP, compared to the average of around 40 percent of GDP in African countries where mobile money has been used extensively due to the limited availability of conventional financial infrastructure.[lxxxvii, lxxxviii]

Table 32: Use of mobile money in the Pacific Islands

Indicator	Fiji	Papua New Guinea	Samoa	Tonga
Number of registered mobile money agent outlets	367	16,081	5	5
Number of registered mobile money agent outlets per 1,000 km2	20	36	2	7
Number of registered mobile money agent outlets per 100,000 adults	59	291	4	8
Number of mobile money transactions per 1,000 adults	3,912	1,015	1,219	2,005
Number of mobile money transactions (total)	2,436,008	5,604,083	147,496	133,644
Value of mobile money transactions (% of GDP)	2.54	-	1	6

Notes: Indicators for registered mobile money agent outlets are similar to the indicators for the active mobile money agent outlets in Fiji, Samoa, and Tonga. Indicators for active mobile money agent outlets in Papua New Guinea, however, is not available, according to the IMF FAS Survey 2019
Source: IMF Financial Access Survey 2019, https://data.imf.org/

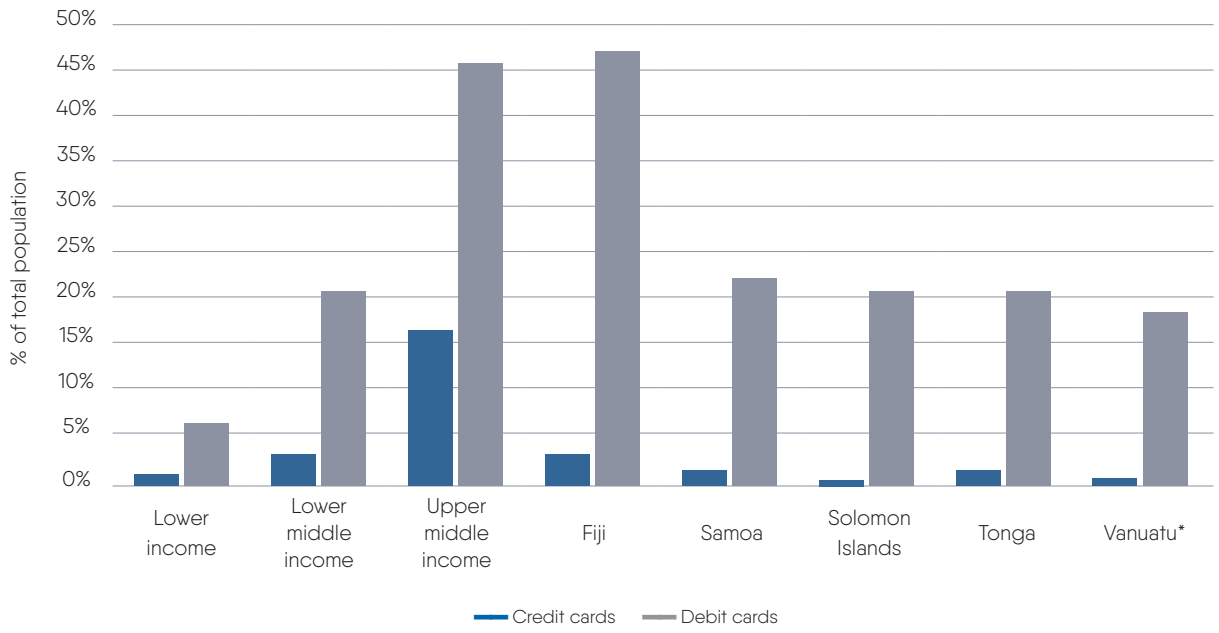
The use of mobile and internet banking also remains relatively low. According to the IMF Financial Access Survey, the number of mobile and internet banking transactions in the Pacific ranges from 359 transactions per 1,000 adults in Samoa to about 2,900 transactions per 1,000 adults in Fiji, compared to the world average of 16,500 transactions (median value) in 2018.

In terms of more traditional types of payment solutions, most FICs are still heavily cash-based economies, with cash remaining the main payment method used by individuals and businesses.[lxxxix]

Credit cards and debit cards are in relatively low use across the region, which represents a barrier to undertake commercial transitions on the biggest E-commerce platforms. According to the Financial Services Demand Side Surveys,[28] less than 3 percent of the population has credit cards, compared to 3.7 percent in lower-middle-income countries.[29] Debit cards are more widely used, with more than 47 percent of the population in Fiji having one, and around 20 percent for the remaining four countries, which is in line with the figure for lower-middle-income countries.[30] In other FICs, such as Kiribati, the debit and credit card system was in place but is seldom used due to constraints in the required deposit level, as well as consumer fears of cybercrime associated with the use of debit and credit cards.[xc]

28 The five countries are: Fiji (2015), Samoa (2015), Solomon Islands (2015), Tonga (2016), and Vanuatu (2016).
29 Note that the survey results were calculated as a percentage of the total population and not of the adult population, or number of households. This calculation might have the effect of dwarfing the actual use of credit and debits cards.
30 It should be noted that not all debit cards are accepted for commercial transactions on E-commerce platforms.

Figure 14: Percentage of the population owning credit/debit cards by country



Source: Adapted from Financial Services Demand Side Surveys for Fiji, Samoa, Solomon Islands, Tonga, and Vanuatu. Note: data is 2014, except in the case of Vanuatu, which is for 2016

Businesses and transactions

For an electronic transaction to happen, business readiness is required in addition to consumer readiness. For the acceptance of debit and credit card payments, this typically involves the need to open merchant accounts (or subscription to a payment aggregator), and to install EFTPOS machines or payment gateways (EFTPOS virtual equivalents). Pacific businesses are faced with challenges in all these areas, which in addition to the challenges faced by consumers, limit digital payments, and present barriers for E-commerce.

Setting up merchant accounts appears to be an issue in the Pacific. Stakeholder consultations reveal that the procedure for opening a merchant account at the bank for setting up payment for E-commerce businesses is a challenge, especially for SMEs. The paperwork would take up to three months, in addition to a high deposit requirement.[31]

Lack of local payment gateways[32] is an impediment to E-commerce in the Pacific. Payment gateways for E-commerce offered by international banks are sometimes difficult to integrate with locally developed marketplaces, and may require local E-commerce transactions to be conducted in foreign currency.[xci] This calls for a trustworthy local payment service provider. Besides the advantages of better local understanding, local payment service providers enable sellers to accept payments in local currencies, making payment much more straightforward and cheaper as there is no need to pay conversion fees.[xcii]

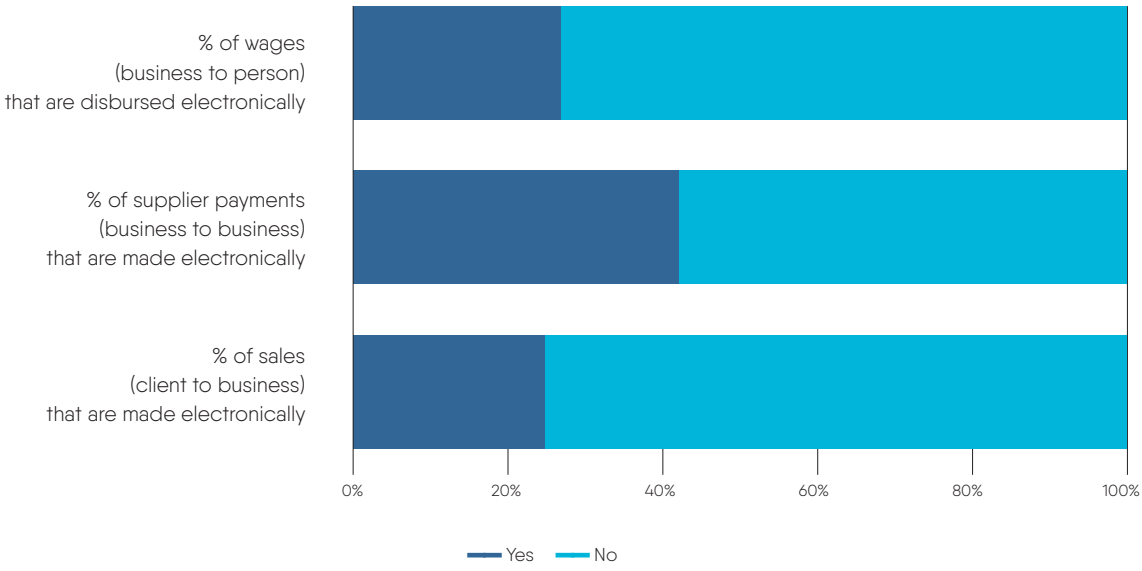
Non-bank payment service providers are introducing new solutions to grant access to online payment gateways at lower costs, by leveraging innovative business processes and technologies. PTI Australia has recently partnered with one payment service provider to offer an end-end payment processing solution to the tourism industry, initially in Fiji.

As a result of the low use of digital payment solutions by consumers and businesses, the share of electronic transitions remains limited in the Pacific. Besides limiting banking penetration, small market size acts as an obstacle to scaling-up digital payment solutions. This structural challenge is compounded by the difficulties to provide proper identification (national identity card or alternative means) to meet KYC requirements, which further reduce the number of potential clients.[xciii]

31 Most commercial banks in the Pacific region charge between USD 10,000 to USD 15,000 in the form of security deposits before granting access to any Pacific business to an online payments system (merchant account + payment gateway).

32 Payment gateway is a software that facilitate a transaction by communicating transaction information. It is a technology that creates a secure connection between business's website or browser and the credit card processing company. This secure connection is used to encrypt credit card payment data for every transaction, verifying the authenticity of a transaction and keeping sensitive information secure. It can be seen as the online replacement for a point-of-sale terminal. Popular payment gateways include PayPal/Braintree, Stripe, and Square.

Figure 15: Merchant payments by electronic mean in Fiji



Notes: Among all FICs, only data for Fiji is available
Source: Universal Financial Access 2020, at https://ufa.worldbank.org/

5.3 Summary of recommendations from country assessments

Table 33: Recommendations on Payment Solutions for E-commerce

Recommendations	Timeline
1. **Support development and adoption of national Payment Gateways or the adoption of suitable international Payment Gateways.** Continue expanding network of traditional non-cash payment processing services through EFTPOS.	Medium-Long
2. **Establish a conducive regulatory environment** by passing enabling legislation (Payment Systems Act) which acknowledges and regulates different Payment Systems Providers (PSPs) and payment methods, and allows for innovation through tools such as FINTECH Regulatory Sandboxes. Also, promote sound regulatory environment on Anti Money Laundering and Countering the Financing of Terrorism (AML/CFT) to prevent closure of international payment channels.	Short
3. **Promote adoption of electronic payment methods** supporting digital trade (debit and credit cards, electronic bank transfers, E-wallets, mobile money, etc.), and the establishment of new PSPs.	Medium-Long
4. **Establish a national payment switch** to ensure interoperability between banks and other PSPs.	Medium-Long
5. **Raise awareness** amongst consumers and businesses about benefits and risks of different payment methods.	Short

6 LEGAL AND REGULATORY FRAMEWORK

6.1 Adoption of E-commerce legislation

E-commerce is defined, broadly, as *"the sale or purchase of goods or services [...] conducted over computer-mediated networks, [...] but the payment and the ultimate delivery of the good or service may be conducted on or off-line"*[xciv] *or even broader as "production, distribution, marketing, sale or delivery of goods and services by electronic means"*.[xcv] Due to this broad coverage, E-commerce activities can be regulated under a wide range of national legislation under areas such as competition, intellectual property, banking, telecommunication, etc. UNCTAD considers four core areas of law that are essential for E-commerce to develop harmoniously. Those are electronic transaction law, data protection and privacy law, cybercrime law, and consumer protection law.[xcvi]

Box 7: Core E-commerce Legislation

UNCTAD considers four (4) different cyber laws needed for E-commerce to develop harmoniously:

- **E-transactions:** E-transaction laws that recognise the legal equivalence between paper-based and electronic forms of exchange is considered a prerequisite for conducting commercial transactions online. Such laws have been adopted by 158 countries (81 percent), of which 68 are developing or transition economies and 30 are Least Developing Countries.
- **Data Protection and Privacy:** Data protection and privacy laws regulate the collection, use, and sharing of personal information to third parties without notice or consent of such individual (Data Subjects). 132 out of 194 countries (66 percent) had put in place legislation to secure the protection of data and privacy.
- **Cybercrime:** This area of law aims to address all forms of illegal acts, violations, and infringements committed online or through the Internet. 154 countries (79 percent) have enacted cybercrime legislation, with the highest adoption rate in Europe (93 percent). Asia and the Pacific has an adoption rate of 77 percent.
- **Online Consumer Protection:** This area of law protects and safeguards the economic interests of online consumers and empower them with free and informed choice, while also bestowing rights should any problems arise. Out of 134 countries for which data are available, 110 have adopted legislation on consumer protection related to E-commerce. It was not possible to obtain data in 55 countries, suggesting that online consumer protection is not being fully addressed.

Besides the above four main regulatory areas, UNCTAD eCommerce and Law Reform Programme also acknowledges relevance of legislation on underlying issues underpinning E-commerce, including Intellectual Property, Competition, and Taxation. As E-commerce expands to cover almost every aspect of trade and business, these areas of law will have increasing importance for countries to regulate cross-border transactions.

Source: UNCTAD Cyberlaw Tracker

Besides E-commerce legislation, the quality of the ICT regulatory environment affects digital trade readiness impacts for E-commerce development. Such a regulatory environment should foster investment for deploying low-cost high-quality ICT networks, while at the same time protecting the legitimate rights and enforcing obligations of stakeholders.[xcvii]

Box 8: ITU's ICT Regulatory Tracker

The International Telecommunication Union (ITU) has developed the ICT Regulatory Tracker to identify and measure progress areas and gaps in the evolution of ICT regulation worldwide. Countries are evaluated based on their related ICT regulations according to 50 indicators across four regulatory clusters (i.e. regulatory authority, regulatory mandate, regulatory regime, and competition framework). All indicators are given a score between 0 and 2 (0 is the lowest and 2 is the highest). The evaluated countries are then split into score thresholds that relate to generations of regulation:

- First Generation (0 ≤G1<40): Regulated public monopolies – command and control approach;
- Second Generation (40 ≤G2<70): Basic reform – partial liberalisation and privatisation across the layers;
- Third Generation (70 ≤G3<85): Regulations enabling investment, innovation, and access – dual focus on stimulating competition in service and content delivery, and consumer protection;
- Fourth Generation (85 ≤G4 ≤100): Integrated regulation – led by economic and social policy goals.

Source: ITU (2018), ICT Regulatory Tracker 2018[xcviii] https://www.itu.int/net4/itu-d/irt/#/about-tracker

Overall, all FICs are at a nascent stage of ICT regulatory development, according to ITU's ICT Regulatory Tracker. Among the eleven FICs for which data is available, four are in the first generation, six are in the second generation, and only one (Vanuatu) is in the third generation (see Box 9). This situation could potentially be a reflection of the small market size that limits competition as well as the resource constraints faced by regulators in the FICs.[xcix] For FICs still under the first regulatory generation (FSM, Tuvalu, Marshall Islands, and Solomon Islands) more competition and a better regularity regime appear to be urgently needed.

Table 34: ICT Regulatory Tracker 2018

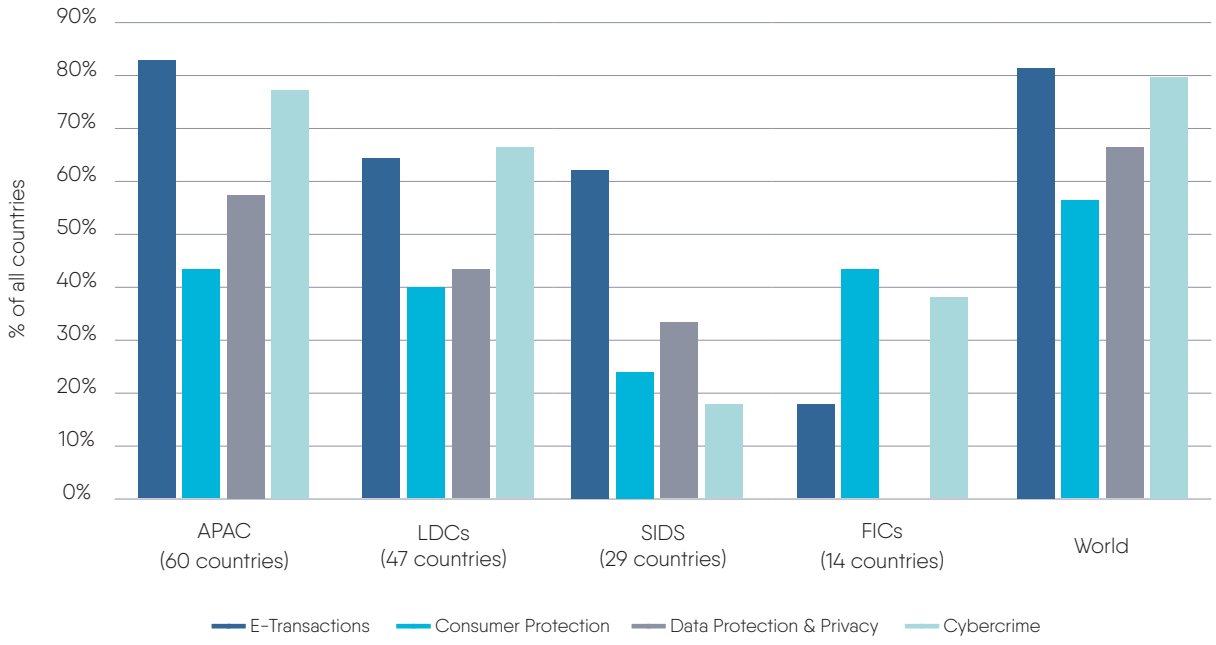
Country	Regulatory Authority	Regulatory Mandate	Regulatory Regime	Competition Framework	Overall	World Rank	Generation
Vanuatu	17	15	14	26	71	114	3G
Samoa	14	17	22	13	66	130	2G
Fiji	13	14	19	17	63	138	2G
Papua New Guinea	16	20	12	11	59	151	2G
Nauru	10	12	6	23	51	163	2G
Tonga	1	11	15	23	50	165	2G
Kiribati	13	19	4	12	48	167	2G
Solomon Islands	9	14	8	4	35	177	1G
Marshall Islands	2	7	4	3	16	186	1G
Tuvalu	-	4.5	0	5	10	189	1G
FSM	-	4	4	0	8	190	1G
SIDS best performer	19	20	28	28	95	8	4G

Notes: data for Cook Islands, Niue, and Palau is not available
Source: ITU's ICT Regulatory Tracker 2018

The development and widespread application of ICT is inevitably associated with risks, such as false information and misuse of personal information. As technologies are evolving rapidly, the ICT regulatory environment needs to be strengthened to promote a dynamic and sustainable ICT sector.

A similar situation is seen with regards to E-commerce legislation. FICs have seen a low rate of E-commerce legislation enactment compared to the global average, although in some areas are performing better than SIDS. Data from UNCTAD (2020) and PacLII (2020) reveal that, out of the 14 FICs,[33] only ten have at least one piece of E-commerce legislation (Figure 16). Marshall Islands, FSM, Niue, Palau, and Tuvalu have no recent law to regulate E-commerce. While consumer protection and cybercrime have been more widely adopted in FICs, electronic transaction laws have only been established in three countries (Fiji, Samoa, and Vanuatu), and data protection and privacy laws in no countries.

Figure 16: Adoption of E-commerce Legislation Worldwide



Notes: APAC: Asia-Pacific; SIDS: Small Island Developing States; LDCs: Least Developed Countries; FIC: Forum Island Countries. All FICs are also identified as SIDS
Source: UNCTAD Global Cyberlaw Tracker, and Pacific Islands Legal Information Institute.[c] Accessed on 13 August 2020

Table 35: E-Commerce Regulations in Forum Island Countries

Legal area	Country	Title of Legislation/Draft Legislation	Year
Consumer Protection	Cook Islands	Consumer Guarantees Act 2008	2008
	Fiji	Commerce Act 1998	1998
	Kiribati	Consumer Protection Act, 2000	2000
	Micronesia	Title 34 - Consumer Protection, Revised Code of the Federated States of Micronesia, 2014 Edition	2014
	Samoa	Competition and Consumer Act 2016	2016
	Solomon Islands	Consumer Protection Act	1996
	Tonga	Consumer Protection Act 2000	2000

33 In this report, reference to PIF or FICs will exclude Australia and New Zealand due to the distinctive advanced stage of development of these two countries.

Cybercrime	Fiji	Crimes Decree 2009 - Division 6 on Computer Offences - Ss 336 – 346	2009
	Fiji	Online Safety Act	2018
	Kiribati	Telecommunications Act 2004; amended in 2017	2004
	Nauru	Cybercrime Act 2015	2015
	Papua New Guinea	Cybercrime Code Act 2016	2016
	Samoa	The Telecommunication Act No 20/2005 lately amended in 2008	2005/2008
	Tonga	Computer Crimes Act 2003	2003
E-Transactions	Fiji	Electronic Transactions Act 2008; amended in 2017	2008/2017
	Kiribati	E-Transaction Bill	Draft
	Papua New Guinea	Electronic Transaction Legislation	Draft
	Samoa	Electronic Transactions Act 2008	2008
	Tonga	Electronic Transaction Legislation	Draft
	Vanuatu	Electronic Transactions Act No 24 of 2000, amended in 2010	2000/2010
	Vanuatu	E-Business Act 2000, third amended in 2017	2000/2017

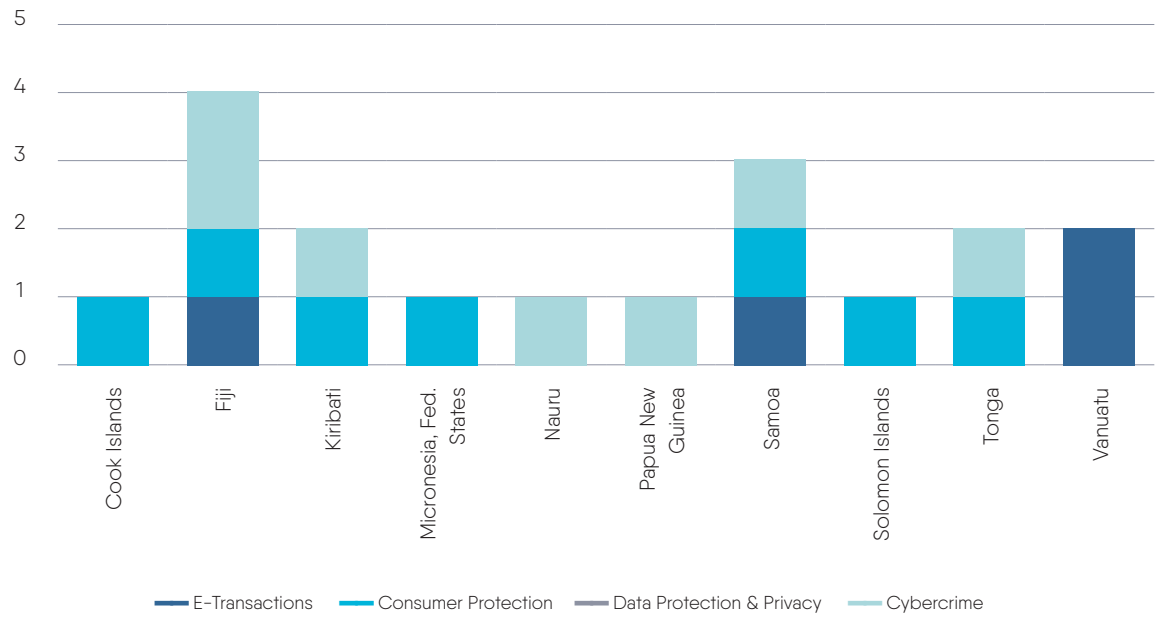
Source: UNCTAD Global Cyberlaw Tracker, and Pacific Islands Legal Information Institute. Accessed on 13 August 2020

Data protection and privacy laws have not been officially made into law in any of the FICs. There are a number of provisions prescribed under domestic telecommunication acts[34] that are similar to the data protection regime, such as the obligation of a telecommunication service provider to protect information about its customers or any persons, the right of the customers to inspect, correct, or remove the consumer information, as well as the prohibition of unsolicited communications.[35] However, these provisions are only applicable to telecommunication services providers and not to other players operating in the ICT and ICT-enabled environment.

34 Such as the Cook Islands' Telecommunications Act 2019 (Section 3, Competition and consumer protection), or Vanuatu's Telecommunications and Radiocommunications (Consumer Protection) Regulations Order n°157 of 2015 (Section 5, Protection of Consumer Information).

35 Unsolicited communications, or spam, refers to emails or mobile messages that advertise products and services to a large group of recipients without their prior request or consent. See Infocomm Media Development Authority – Unsolicited Communications. Available from: https://www.imda.gov.sg/for-community/Infocomm-regulation-and-guides/unsolicited-communications#:~:text=Unsolicited%20communications%20or%20spam%20refers,behaviour%20of%20telecom%20service%20providers.

Figure 17: Adoption of E-commerce Legislation in the Pacific Islands



Notes: According to UNCTAD and PacLII, PIFS countries which do not have E-commerce legislation or for which data was unavailable are, Marshall Islands, FSM, Niue, Palau, and Tuvalu. Note: There can be more than one law in a specific area. For example, Fiji has two laws covering cybercrime, whilst Vanuatu has two laws relevant to e-transactions.
Source: UNCTAD Global Cyberlaw Tracker, and Pacific Islands Legal Information Institute. Accessed on 13 August 2020

A number of initiatives are taking place in order to catch up with the fast-changing nature of the digital environment. On **electronic transactions**:

- In 2017, Fiji amended its Electronic Transactions Act to bring its domestic rules in line with the United Nations Convention on the Use of Electronic Communications in International Contracts and other major trading partners.[ci]
- Vanuatu updated its E-Business Act 2000 for the third time in 2017 in order to provide a robust and sustainable environment for the development and growth of the electronic business.[cii]
- PNG has not enacted an E-transaction law, but the drafting of an Electronic Transaction Legislation has been ongoing since 2018 with support from the European Union Trade-Related Assistance (EU-TRA2) Programme.[ciii] This Bill is expected to be passed by Parliament in 2020,[civ, 36] and to be followed by the drafting of additional legislation, such as consumer protection or privacy data protection.[cv]
- The Government of Tonga has prepared draft legislation to support electronic transactions, privacy and data protection, and cybersecurity with support from the World Bank. The Bill has yet to be enacted.[cvi]
- Kiribati started to draft an e-transaction Bill in 2017 and has sought support from the United Nations Commission on International Trade Law (UNCITRAL) to make the draft law compatible with international standards.[cvii]

On cybercrime, Fiji, Nauru, and PNG have recently adopted some new laws, including Fiji's Online Safety Act 2018, Nauru's Cybercrime Act 2015, and PNG's Cybercrime Code Act 2016. Fiji's new draft Cybercrime Bill, which follows the Budapest Convention Framework for Cyber Crime, has not yet been adopted.[cviii] Tuvalu formulated a law addressing cybercrime in 2019.[cix]

On consumer protection, most regulations are outdated. Dated back to as early as 1996, the provisions under these acts were crafted for direct transactions, and thus need to be updated to reflect the new context of electronic and cross border transactions. In parallel, it also crucial to ensure consumer awareness of their rights in the new context.

36 A cursory search at the PNG Parliament's website indicates that the Draft Electronic Transactions Act has not been passed, as of the date of access [29 September 2020]. According to http://www.parliament.gov.pg/bills-and-legislation/2020.

At the regional level, none of the trade agreements currently in force include provisions on E-commerce. Amongst the agreements likely to be in force soon, only the MSG-TA includes a chapter on E-commerce.

At the international level, only Fiji and Kiribati have ratified the **United Nations Convention on the Use of Electronic Communications in International Contracts** (New York, 2005) in 2017 and 2020 respectively.[cx] The ratification of this convention is expected to support the two countries' adoption of international good practices for electronically exchanged contracts and other communications. Fiji has already amended its national legislation (i.e. the Electronic Transactions Amendment Act 2017) to ensure alignment with the convention rules. Kiribati's E-Transaction Bill is expected to incorporate the convention rules into national legislation.

The national E-commerce legal framework plays an important role in enabling and facilitating E-commerce transactions within the country and across its borders. It creates a sense of certainty that is much needed for the shift from traditional business transactions to a virtual environment. FICs should conduct a comprehensive review of the current E-commerce legal framework as a basis for accelerating adoption or updating of law on the four core areas (i.e. e-transactions, consumer protection, data protection, and cybercrime law), and ensure alignment with UNCITRAL model laws and conventions. Awareness is an important factor in ensuring effective law enforcement, thus besides adopting/updating legislation, FICs should also undertake awareness campaigns to boost the confidence of both merchants and consumers in E-commerce.

Box 9: United Nations Conventions and Model Laws on Electronic Commerce

- **UNCITRAL Model Law on Electronic Commerce (1996)** establishes rules for the formation and validity of contracts concluded electronically and for the attribution and retention of data messages.
- **UNCITRAL Model Law on Electronic Signatures (2001)** establishes basic rules for assessing possible responsibilities and liabilities for the signatory, the relying party, and trusted third parties intervening in the signature process.
- **United Nations Convention on the Use of Electronic Communications in International Contracts (2005)**, building upon and updates the provisions of the two aforementioned Model Laws, contributes to enabling paperless trade by, among others: 1) validating the legal status of electronic transactions by setting general functional equivalence requirements of "writing", "original" and "signature"; 2) preventing medium and technology discrimination; 3) enabling cross-border recognition of electronic signatures; 4) permitting the use of electronic means in alternative dispute resolution mechanisms.
- **Model Law on Electronic Transferable Records (2017)** aims to enable the legal use of electronic transferable records via all technologies and models, such as registries, tokens, and distributed ledgers both domestically and across borders on the principles of non-discrimination against the use of electronic means, functional equivalence and technology neutrality.

Source: United Nations Conventions and Model Laws on Electronic Commerce[cxi]

6.2 Summary of recommendations from country assessments

Table 36: Recommendations on Legal and Regulatory Framework

Recommendations	Timeline
1. **Draft or update E-transactions, consumer protection, privacy and data protection, and cybercrime legislation** (based on regulatory gap analysis, and following best international practices), to meet E-commerce requirements.	Short-Medium

7 E-COMMERCE SKILLS DEVELOPMENT

7.1 Skills gap identification

There is currently no globally agreed definition of E-commerce skills, nor of the broader concept of ICT and digital literacy skills.[cxii] The contours and meaning of these skills vary over time with technological changes and geographically, reflecting the specific needs of the various societies. Demographic factors, and the rapid evolution of computer technologies and the internet economy inevitably create skills gaps and shortages even in the most advanced industrialised countries as shown by the OECD's "Programme for the International Assessment of Adult Competencies" (PIAAC), which revealed that in nearly all OECD countries, between 7 percent and 27 percent of adults have no experience in using computers or lack the most elementary computer skills, such as the ability to use a mouse.[cxiii]

Box 10: Defining ICT competences

When defining ICT-related competences, most frameworks reference three types of literacies:

- **Information literacy:** The capacity to access, evaluate and to use information.
- **ICT literacy:** The capacity to make an effective and efficient use of digital technologies.
- **Technological literacy:** The capacity to use of digital technologies, communication tools, and information networks to access, evaluate, manage, integrate, and create information.

Source: Joynes, Chris, Serena Rossignoli and Esi Fenyiwa Amonoo-Kuofi: 21st Century Skills: evidence of issues in definition, demand and delivery for development contexts, K4D Emerging Issues report, August 2019

The International Labour Organisation (2017) pointed out widespread skill shortages in technical, managerial, professional, entrepreneurial, and generic workplace skills across all countries in the region. The national E-commerce assessment reports, the reports from CROP agencies and regional donors as well as academic studies,[cxiv, cxv] all indicate the existence of a deep digital divide between male-female and urban-rural groups in all FICs, and very large gaps between available E-commerce skills and the needs of public and the private employers.

Nevertheless, large differences exist across the region in terms of ICT skills shortages. According to a recent study by Redeker and Strum (2019), the ITC Skills Indicator (ISI) score is highest in Fiji and Samoa (6.1 and 6.0), followed by Tonga (5.8). The average score is significantly lower in Palau (5.5) and in FSM (5.3).[37, cxvi]

Among FICs, Fiji stands out in terms of ICT skills. A World Bank study[cxvii] focusing on the feasibility of leveraging ICT-enabled Global Outsourcing Services (GOS), has found that Fiji has a small labour pool that is qualified for basic Business Process Outsourcing (BPO) tasks, is relatively well educated, has a high level of English skills, and is comparatively computer literate. At the time of the study, Fiji's BPO industry already hosted two major BPO-focused operations[38] with 1,060 workers and was expected to grow. At the other end of the spectrum, other FICs with much smaller human resource pools or economic capacities such as Kiribati and Niue, have faced difficulties in building the basic skills required for embracing E-commerce.

37 In measuring digital skills, the authors departed from the nine-item scale as suggested by Eurostat (2012) and adopted by the ITU (2014) by testing for variation within this group of relatively skilled respondents, which include (1) copying or moving a file or folder; (2) using copy and paste tools to duplicate or move information within a document; (3) sending e-mails with attached files; (4) using basic arithmetic formulae in a spreadsheet; (5) connecting and installing new devices; (6) finding, downloading, installing and configuring software; (7) creating electronic presentations with presentation software; (8) transferring files between a computer and other devices; and (9) writing a computer program using a specialized programming language. Additionally, the authors added three items that are considered necessary to have "advanced skills levels" specifically asking for the ability to "manage content of a website", "design a website" and "write a computer program using a specialized programming language".

38 ANZ Pacific Operations and Mindpearl.

For some FICs, brain-drain is an important contributor to ICT skills shortages. In Samoa for example, where ICT-related subjects have been included in university curricula, a challenge is the in-country retention of the few ICT graduates.[cxviii]

7.2 Overview of the basic education landscape

The quality of general, foundational education, is an important determinants of a country's level of skills, including ICT skills.

Good progress has been made in a number of countries, including Cook Islands, Fiji, FSM, Kiribati, Solomon Islands, and Vanuatu, to increase access to pre-primary education. Nevertheless, **about four in every ten children in the Pacific islands are still not enrolled in pre-primary school**, and access to quality early childhood education is low.[cxix] Access to pre-primary education is important, because failure to participate puts children at a disadvantage from the start.

Overall, FICs have achieved substantial progress in primary education access over the last decade. The 2019 net primary-education enrolment rate is 90 percent or above in all FICs, except in Marshall Islands (74 percent) and Tuvalu (85 percent). According to UNICEF, whilst most countries are on track to achieve universal primary education, significant challenges remain. These include equity gaps that prevent children with disabilities, those on outer islands, out-of-school children, and other vulnerable groups from accessing and benefitting fully from schooling; limited parent and community engagement; and limited availability and use of data to inform improvements to the education system. [cxx]

Table 37: Total net enrolment rate, primary, both sexes (%)

Country	2014	2015	2016	2017	2018	2019
Cook Islands	98.01	98.10	99.20	..	..	98.76
Fiji	..	99.12	99.44	..	..	98.59
Kiribati	98.65	97.44	98.24	96.09	..	..
Marshall Islands	..	74.73	75.98	..	..	74.14
Micronesia (Fed. Sts.)	90.73	85.46	89.89	..	..	89.67
Nauru	97.71	..	97.19	..	..	99.27
Niue	96.77	99.33	99.78	..	..	94.17
Palau	95.25	..	..	..	..	..
Papua New Guinea	..	..	92.67	..	..	..
Samoa	99.19	99.45	98.65	99.39	98.71	98.93
Solomon Islands	99.45	99.93	81.38	99.83	95.62	..
Tonga	98.37	98.88	..	..	..	..
Tuvalu	91.14	95.24	88.16	..	..	85.11
Vanuatu	..	92.15	..	..	..	..

Source: UNESCO Institute for Statistics, at http://data.uis.unesco.org. Data extracted on 23 September 2020

Despite progress in primary enrolment, performance on basic literacy and numeracy points to considerable barriers to learning for children in the Pacific.[cxxi] Nevertheless, significant progress has been observed during the past few years, according to the Pacific Island Literacy and Numeracy Assessment (PILNA).[cxxii, 39]

39 PILNA 2018 also shows that girls significantly outperform boys in both literacy and numeracy. In year 4 literacy, 46% of boys met or exceeded minimum expected proficiency levels as compared to 60% of girls. In year 6, the results were 55% for boys and 74% for girls.

Figure 18: PILNA Results: percentage of students meeting or exceeding minimum expected proficiency levels

	Domain	2012	2015	2018	% point change (2012 to 2018)
Year 4	Numeracy	74%	86%	83%	+9
	Literacy	43%	46%	53%	+10
Year 6	Numeracy	56%	68%	83%	+27
	Literacy	48%	46%	63%	+15

Source: PILNA

A review of the literature indicates the presence of large discrepancies among FICs in terms of literacy. Overall, values in Polynesia are higher than in Melanesia. For example, in PNG 66 percent of women and 80 percent of men of aged 15-49 are literate.[cxxiii] On the other hand, 99 percent of Samoan women and 95 percent of men aged 15-49 are literate.[cxxiv] For the Solomon Islands, the official figure is 79 percent for women and 89 percent for men of age 15+.[cxxv] Vanuatu's literacy rate among persons aged 15+ is 88 percent in 2018. No data is available for Kiribati, but it is considered that literacy and numeracy rates are relatively low.[cxxvi] Data from UNESCO are presented below.

Table 38: Adult literacy rate, population 15+ years, both sexes (%)

Country	2014	2015	2016	2017	2018	2019
Cook Islands	..	..	..	..	..	..
Fiji	..	..	..	99.08	..	..
Kiribati	..	..	..	..	..	..
Marshall Islands	..	..	..	..	..	..
Micronesia (Fed. Sts.)	..	..	..	..	..	..
Nauru	..	..	..	..	..	..
Niue	..	..	..	..	..	..
Palau	..	96.59	..	..	..	..
Papua New Guinea	..	..	..	..	..	..
Samoa	..	..	..	..	99.10	..
Solomon Islands	..	..	..	..	..	..
Tonga	..	..	..	..	99.41	..
Tuvalu	..	..	..	..	..	..
Vanuatu	84.70	..	..	..	87.51	..

Source: UNESCO Institute for Statistics, at http://data.uis.unesco.org. Data extracted on 23 September 2020

PILNA 2018 identified **shortages of instructional materials, as well as shortages of teachers, underqualified teachers, and teacher absenteeism as the major barriers to student achievement.**

In terms of trained and qualified teachers, some FICs face serious gaps both at primary and secondary levels. Data is very limited and this it is difficult to have a full picture of the region.

As far as the qualification of teachers is concerned, the rate of qualified teachers in primary education is at or below 80 percent in Kiribati, FSM and Solomon Islands. Significant qualification gaps also exist in secondary education in Solomon Islands, Tonga and Tuvalu where qualified teachers are less than 80 percent.

Table 39: Percentage of teachers in primary education who are qualified, both sexes (%)

Country	2014	2015	2016	2017	2018	2019
Cook Islands	89.18	100	95.32	..	..	100
Fiji	..	..	..	..	..	..
Kiribati	..	..	72.71	..	..	..
Marshall Islands	..	..	..	..	..	..
Micronesia (Fed. Sts.)	..	..	..	..	..	34.80
Nauru	..	..	100	..	..	..
Niue	..	100	92.30	..	..	..
Palau	..	..	..	..	..	..
Papua New Guinea	..	..	..	..	..	..
Samoa	..	..	..	..	..	..
Solomon Islands	64.61	59.19	65.57	74.14	76.06	..
Tonga	97.05	92.48	..	..	..	..
Tuvalu	..	..	76.62	..	80	78.30
Vanuatu	..	..	..	..	..	..

Source: UNESCO Institute for Statistics, at http://data.uis.unesco.org. Data extracted on 21 November 2020

Table 40: Percentage of teachers in secondary education who are qualified, both sexes (%)

Country	2014	2015	2016	2017	2018	2019
Cook Islands	93.55	98.39	..	..	..	100.00
Fiji	..	..	..	..	..	..
Kiribati	..	..	..	..	..	..
Marshall Islands	..	..	..	..	..	..
Micronesia (Fed. Sts.)	..	..	..	..	..	..
Nauru	..	..	..	..	..	..
Niue	..	100.00	..	..	..	..
Palau	..	..	..	..	..	..
Papua New Guinea	..	..	..	..	..	..
Samoa	..	..	..	..	..	..
Solomon Islands	..	76.48	..	..	..	..
Tonga	57.44	58.66	..	..	..	..
Tuvalu	..	..	45.52	..	65.08	60.71
Vanuatu	..	..	..	..	..	..

Source: UNESCO Institute for Statistics, at http://data.uis.unesco.org. Data extracted on 21 November 2020

Current trainings for teachers do not typically include ICT-related competencies, and therefore teachers are not trained to use ICT resources in their classroom practices. As identified by the ADB:

"preservice teacher training programs provide limited to no ICT exposure. Only computer studies teachers are required to study ICT in their preservice programs. Currently, most ICT training for teachers is provided through short, in-service programs. Although school administrative staff (such as principals) are expected to submit Education Management Information Systems (EMIS) data electronically, they only receive project-led, short-term training. There is an urgent need to review and modernize staff development programs in the education sector to include ICT competencies. Training programs should also build the capacity of teachers and other education sector stakeholders to maintain the ICT system. Doing so can increase the sustainability of e-learning investments. Although some work has been done to increase the sustainability of Information and Communication Technology for Education (ICT4E) initiatives through training and human resource campaigns, further developments are needed to produce results. Staff development programs for university staff in the Pacific are limited, and there is typically no e-learning instructional design support to assist academic staff in adopting e-learning into their teaching models." [cxxvii]

Lack of ICT mainstreaming in school and university curricula also hinders the development of ICT capabilities both as a discrete subject, and as a subject applicable to other disciplines.

7.3 Availability of tertiary education, professional training

For a given curriculum, E-commerce participation increases with the level of education. Years of school attendance play a key role in internet diffusion. A high school degree is often seen as a necessary condition to make professional use of computers.[cxxviii] A recent study by OECD has revealed that individuals with high educational attainment are about 33 percent more likely to participate in E-commerce than those with a medium level of educational attainment. For example, in Brazil, 67 percent of individuals with high educational attainment participated in E-commerce, as compared to only 33 percent of individuals with medium educational attainment and 6 percent of individuals with low levels of educational attainment.[cxxix] In PNG, access to digital skills is limited with the exception of tertiary-educated graduates.[cxxx]

The region's post-secondary education system is composed of a regional university headquartered in Fiji – University of South Pacific (USP), a few small national universities, and a large number of TVET programmes, the majority of which operate in Fiji and PNG (Table 41). Most of the national universities are small, and rely on partnerships and financial support from foreign universities. The University of South Pacific (USP) is the FICs' regional university, with a hub in Fiji and campuses in 11 other FICs. It is owned by 12 member countries, with more than 1,500 staff.[40] Finally, mention should be made of the Virtual University of the Small States of the Commonwealth (VUSSC) which is available to all FICs.[cxxxi]

Table 41: Universities in FICs

Country	University name	Weblink
Cook Islands	University of South Pacific Cook Islands Campus	http://www.usp.ac.fj/cookcampus
Fiji	University of South Pacific	https://www.usp.ac.fj/
	Fiji National University	https://www.fnu.ac.fj/
	The University of Fiji	https://www.unifiji.ac.fj/
FSM	Pacific Islands University	http://www.piu.edu/
Kiribati	University of South Pacific Kiribati Campus	http://www.usp.ac.fj/kiribaticampus
Marshall Islands	University of South Pacific Marshall Islands Campus	http://www.usp.ac.fj/marshallscampus
Nauru Islands	University of South Pacific Nauru Campus	http://www.usp.ac.fj/naurucampus

40 The USP is jointly owned by the governments of 12 member countries: Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu and Samoa. The University has campuses in all member countries -see: https://www.usp.ac.fj/index.php?id=campuses.

Niue	University of South Pacific Niue Campus	https://www.usp.ac.fj/niuecampus
	St Clements University Higher Education School – Niue (via distance learning)	http://www.stclements.edu.nu/niuehome.htm
PNG	The University of Papua New Guinea (UPNG)	http://www.upng.ac.pg/
	Divine Word University	https://www.dwu.ac.pg/
	Lutheran University of Papua New Guinea (LUPNG)	
	University of Goroka	http://www.unigoroka.ac.pg/
	Pacific Adventist University (PAU)	https://www.pau.ac.pg/
	The Papua New Guinea University of Natural Resources and Environment (PNG UNRE)	http://www.unre.ac.pg/
	The Papua New Guinea University of Technology (Unitech)	http://www.unitech.ac.pg/
Samoa	University of South Pacific Alafua Campus	https://www.usp.ac.fj/alafua
	National University of Samoa (NUS)	https://nus.edu.ws/
Solomon Islands	University of South Pacific Solomon Island Campus	https://www.usp.ac.fj/index.php?id=3649
	Solomon Islands National University (SINU)	http://www.sinu.edu.sb/
Tonga	King's International University	http://www.kingsuniversity.edu.to/
	University of South Pacific Solomon Tonga Campus	https://www.usp.ac.fj/tongacampus
Tuvalu	University of South Pacific Tuvalu Campus	https://www.usp.ac.fj/tuvalucampus
Vanuatu	University of South Pacific Emalus Campus	https://www.vanuatu.usp.ac.fj/
	National University of Vanuatu (NUV)	https://www.univ.edu.vu/en/

Source: author's compilation

ICT-related courses are provided by USP and a by few national universities. USP employs ICT to deliver many of its programmes to regional campuses, and has acquired vast experience in using ICT to develop human resources and provides quality, internationally-recognised higher education qualifications.

TVET providers have a weak focus on ICT, and even weaker on skills (website, application programming interface (API) development and the like) relevant to E-commerce. Even when ICT forms part of the TVET curricula, the content is not updated on a regular basis and fails to respond adequately to changing labour market needs and technological trends.[cxxxii]

TVET systems face a number of challenges hampering their quality. TVET suppliers in particular lack the capacity, funding, quality and relevance to respond adequately to the shortage of ICT skills in the region and struggle to respond to growing labour market demand in this sector.[cxxxiii] In the absence of reliable labour market data, industry input, or tracer studies, training is not sufficiently targeted to labour market needs. There exist cases of private sector involvement in planning, including through presence in the boards of National Quality Authorities.[cxxxiv, 41] Private sector delivery of accredited TVET also exists, for example in Vanuatu.[cxxxv] Enterprise-based training is rare and where formal apprenticeship schemes exist, such as in Fiji and PNG, trainee numbers are small and the systems not particularly efficient.[cxxxvi]

41 For example, the participation of private sector representatives in the Industry Skills Councils that are established by the Vanuatu Qualifications Authority. See https://vqa.edu.vu/index.php/the-vqa-board-side and https://vqa.edu.vu/index.php/industry-skills-councils-side.

TVETs in the Pacific region tend to be under-resourced.[cxxxvii] Overall public spending on TVET as a percent of GDP in the FICs accounts for about 1-2 percent of combined GDP.[42] TVET funding typically comes from three main sources: government budgets, student fees, and the private sector. In addition, other sources might include employee contributions, private donations, income-generating activities and external assistance (e.g. Official Development Assistance (ODA) and official loans). In the FICs, with the exclusion of resources from the Australian Pacific Training College (APTC), government funding makes up 38 percent of funding, followed by tuition fees (35 percent), ODA (17 percent) and private resources (10 percent). ODA to Pacific TVETs has increased in importance. Between 2002 and 2014, ODA to Pacific TVET increased by 278 percent from USD 14.3 million in 2002 to USD 39.8 million in 2014,[cxxxviii] thus signalling an increased donor recognition about the role of TVET in promoting economic development by favouring productive upskilling.

There is an urgent need to meet growing labour market demand in both private and public sectors for ICT related skills from basic to an advanced level. Redden et al (2020) suggests that a range of ICT skills and qualifications from basic to professional qualifications are required including in software competencies, equipment set up and maintenance, networking skills, web publishing and social media publishing and ICT related management skills. TVET providers are encouraged to provide more relevant and additional ICT related training courses and activities and wherever possible to remote communities where there is online access. However, it is recognised that telecommunications infrastructure and TVET providers will require additional support from government, donors and industry wherever possible.[cxxxix]

7.4 Business incubators and business accelerators

Box 11: Key Concepts: Incubators and Accelerators

A **business incubator** is a facility that provides shared resources for young businesses, such as office space, consultants, and personnel. It may also provide access to financing and technical support. For new businesses, these services provide a more protected environment in which to grow before they become self-sustaining. The ultimate goal of any business incubator is to produce viable businesses, called "graduates" of the incubator.[cxl]

A **business accelerator** is a programme that gives developing companies access to mentorship, investors and other support that help them become stable, self-sufficient businesses.

Companies that use business accelerators are typically start-ups that have moved beyond the earliest stages of getting established. They have basically entered their "adolescence," meaning they can stand on their own two feet but need guidance and peer support to gain strength. Less developed companies not ready for an accelerator would instead use a business incubator for support. In addition to mentorship and investment opportunities, a business accelerator gives growing companies access to logistical and technical resources as well as shared office space. An accelerator will also connect companies to networks of peers whose experience they can learn from. An accelerator programme can last anywhere from two to six months. The goal is for companies to emerge ready to run on their own, with strong positioning to claim a share of their target markets.[cxli]

Establishing ICT business incubators and accelerators is one way of enhancing E-commerce. Whilst there are a number of business incubators in some FICs, in the absence of a tech start-up community, most of their support goes primarily to the farm, tourism and retail sectors as well as various trades. Therefore, the ICT and E-commerce sectors appear to be neglected. Incubator programmes in the Pacific are typically donor-funded, mostly by Australia and New Zealand, although PNG has locally funded incubators.

The following **national business incubators and accelerators** have been identified in the FICs. With two exceptions, they are all operating outside the ICT and ICT-related world.

42 For example, public spending for TVET as percentage of combine GDP is 1.5 - 1.6 percent for Fiji, 1.6 percent for Kiribati, 0.6-1.4 percent for PNG, 2.0-2.5 for Samoa, 1.3 percent for Solomon Islands and Tonga, and 0.6 percent for Vanuatu. See Palmer (2017).

Box 12: Incubators and Accelerators in the Pacific

Cook Islands:

- The Cook Islands Museum of Cultural Enterprise (TE ARA - CIMCE), a Virtual Cohort Partner of the DFAT-funded Frontier Incubators,[cxliii] is a business incubator that fosters greater economic self-determination for Cook Islands people.[43]

Fiji:

- Japan-Pacific ICT Centre Business/Project Incubation Space, located at the premises of USP, was established in 2012 by USP and the Japan International Cooperation Agency (JICA). It provides office accommodation for businesses requiring a physical location. It aims to encourage and support ICT-based pre-start and early start businesses/researches during the formative stages of their development.[cxliii]
- Fiji Commerce and Employers Federation (FCEF) is a Cohort Partner of the of the DFAT-funded Frontier Incubators.[cxliv]
- The National Centre for Small and Micro Enterprises Development (NCSMED), which has now been brought under the MSME Fiji division of the MCTTT, has extensive MSME focused initiatives, which include business incubators providing training, mentoring, counselling, and advisory services - e.g. on business clustering, supply chain development and market support.[cxlv,cxlvi]

Kiribati:

- The Kiribati Chamber of Commerce & Industry is supposed to also function as business incubator,[cxlvii] however no such institution is currently active in Kiribati.[cxlviii]
- Kiribati Institute of Technology (KIT)'s Business Incubator Group (BIG) provides KIT graduates with courses in construction, plumbing, and electro-technology.[cxlix]

FSM:

- The College of Micronesia (COM)'s Centre for Entrepreneurship is a Virtual Cohort Partner of the DFAT-funded Frontier Incubators.[cl] It supports students to collaborate on entrepreneurial ventures, including by leveraging ICT-related expertise.

Nauru:

- The National Sustainable Development Strategy 2005-2025 (as revised in 2009) foresaw a small business incubator and start-up fund. There is no evidence that this incubator was in fact established.

Papua New Guinea:

- National Development Bank Investment Ltd (NDBI) currently operates two Business Incubation Centres (in Port Moresby and Goroka) consisting of office spaces rented out to SMEs on affordable rates.
- GO Products Limited is a Virtual Cohort Partner of the DFAT-funded Frontier Incubators.[cli]
- Entrev8, which is both an accelerator and an incubator, is a Virtual Cohort Partner of the DFAT-funded Frontier Incubators.[clii]

43 The Frontier Incubators, initiated by DFAT innovationXchange, is a capacity-building program for young impact-focused business incubators and accelerators working in South Asia, Southeast Asia, and the Pacific Islands. It focuses on different but interdependent parts of the entrepreneurial ecosystem, including entrepreneurs, incubators and accelerators, intermediaries, brokers and capital providers. The cohort comprises of 31 accomplished organisations from 17 countries ranging from those running their first programs, to established groups looking to expand. Some are housed in universities, some have spun out of development programs, while others have grown from investment funds or even from scratch. Frontier Incubators involves Program Partners, Cohort Members, and Virtual Cohort organisations. Program Partners – mature incubators and accelerators with valuable skills and experience, and a willingness to assist with the development of other organisations. Cohort Partners – emerging incubators and accelerators, ranging from co-working hubs and education-based accelerator platforms to private sector organisations and gender-specific business incubators. Virtual Cohort Partners – organisations that had not yet run cohort-based incubation and acceleration programs or had more unique business models, receiving remotely delivered, capacity building and mentoring program. Sources: Frontier Incubators (2020). Interim Results and Learning, February 2020; https://scalingfrontierinnovation.org/wp-content/uploads/2020/02/7_Frontier-Incubators-Program-Flyer-v2.pdf; https://ixc.dfat.gov.au/incubating-the-incubators-promoting-entrepreneurship-in-frontier-markets/.

Samoa:

- Samoa Business Hub (SBH), local partner of the DFAT-funded Frontier Incubators, and successor to the Small Business Enterprises Centre (SBEC) that was funded by the Governments of New Zealand and Samoa, will operate from 2020 both as a business incubator and accelerator. The business growth incubator programme will provide business advisory support over a 10-month period to established, growth-stage SMEs and particularly those with the ambition to export their products or services. The accelerator component will provide intensive, advanced-level business training programme.[cliii]
- Samoa Chamber of Commerce, a Virtual Cohort Partner of the DFAT-funded Frontier Incubators,[cliv] operates the Samoa In-Country Training Programme (SICTP) funded by the governments of New Zealand and Australia and with in-kind support by the Government of Samoa, providing capacity building to members in such areas as basic marketing and communication, advanced marketing and communication, internet marketing, and basic computer and IT skills, among others.

Solomon Islands:

- The Solomon Islands Chamber of Commerce & Industry (SICCI) intended to "initiate some form of incubator process to support young people".[clv] However, no evidence could be found that this endeavour has succeeded.

Tonga:

- CoCoNew Tonga, the local partner of the DFAT funded Frontier Incubators, is primarily a for-profit brand development and marketing communications agency. It also provides consultancy services to small to medium businesses in strategy, planning, recruitment and development. According to Frontier Incubators, CoCoNew Tonga provides professional consultancy services on business planning, structure, financial/budget analysis, marketing and communications strategy, mentoring and training of staff, coaching of senior executives, and opportunities for overseas events and networking.[clvi]

Vanuatu:[clvii]

- Business Incubator Programme coordinated and implemented by the Vanuatu Chamber of Commerce and Industry (VCCI) with the financial assistance from the New Zealand Aid. Its aim is to assist business owners and operators in improving their businesses, through training and mentoring.[clviii]
- V-LAB, a charitable Association established in October 2019 with the support of the Government of New Zealand, has been created to support innovation and social entrepreneurship in Vanuatu. Working hand-in-hand with Yumiwork, Port Vila's first co-working space, V-LAB seeks to provide access to facilities, services and mentoring to the young entrepreneurs in Vanuatu with a view to enable them to develop and grow their businesses as well as to promote entrepreneurship in the country.[clix]

Table 42: Business incubators and accelerators in the Pacific

Country	Name of the incubator/accelerator	Weblink
Cook Islands	Te Ara - The Cook Islands Museum of Cultural Enterprise (TE ARA CIMCE)	www.tearacimce.com
Fiji	Japan-Pacific ICT Centre Business/Project Incubation Space	www.usp.ac.fj/index.php?id=11621
	Fiji Commerce and Employers Federation (FCEF)	www.fcef.com.fj/
	National Centre for Small and Micro Enterprises Development (NCSMED)	www.ncsmed.org.fj/

Kiribati	Kiribati Chamber of Commerce & Industry	https://kcci.org.ki
	Kiribati Institute of Technology (KIT)	https://kit.edu.ki/
FSM	College of Micronesia – Center for Entrepreneurship	www.comfsm.fm
Nauru	Small Business Incubator*	..
Papua New Guinea	National Development Bank Investments – Stret Pasin Business Incubation Program	http://www.ndb.com.pg/
	National Development Bank Investments – Youth in Business Program	http://www.ndb.com.pg/
	GO Products Limited	www.linkedin.com/company/go-products-limited/
	Entrev8	http://www.entrev8.com/
Samoa	Samoa Business Hub (SBH)	www.samoabusinesshub.ws
	Samoa Chamber of Commerce	www.samoachamber.ws
Solomon Islands	Solomon Islands Chamber of Commerce & Industry (SICCI)*	www.solomonchamber.com.sb
Tonga	CoCoNew Tonga	http://coconewtonga.com
Vanuatu	Business Incubator Program (VCCI)	https://vcci.vu/
	V-LAB	www.v-lab.org

Notes: * planned
Source: Author's compilation

At the regional level, the Pacific Business Investment Facility (BIF), co-financed by the ADB and Australia, provides business advisory services to SMEs in Fiji, Solomon Islands, Vanuatu, PNG, Tonga, Samoa and Kiribati. To date, BIF has provided business advice to 277 businesses.

Another relevant initiative is the Pacific Trade Invest (PTI) Digital Tourism programme, which works to build access to platforms that allow Pacific businesses to participate in E-commerce. Since its establishment in 2012, the PTI Digital Tourism Programme has supported over 300 tourism operators in the Pacific. Partnerships with platforms such Booking.com, TripAdvisor and Airbnb have added further value in the programme and commercial outcomes for participants. In 2019, the PTI Digital Tourism Programme alone helped Pacific tourism operators facilitate over AUD 13 million in online bookings.

Despite this success, it is acknowledged that there is more to do to empower Pacific businesses to generate sales through digital channels.[clx] The PTI Australia's Social Media Business Accelerator Programme tries to fill this gap by offering an accessible, practical, tailored course for businesses, entrepreneurs, and professionals in the Pacific to learn how to use social media and digital channels as business tools to drive their E-commerce sales.

7.5 Summary of recommendations from country assessments

Table 43: Recommendations on E-Commerce Skills Development

Recommendations	Timeline
1. **Upgrade education and Technical and Vocational Education and Training (TVET) curriculum** to include relevant skills to support digital trade, in line with private sector needs.	Short-Medium

2. **Assess the skills gaps** to accelerate the development digital trade in line with private sector needs.	Short-Medium
3. **Develop consultative mechanisms** between private sector, public sector and skills providers to discuss required post-secondary digital skills competencies.	Short
4. **Establish business incubation and acceleration schemes for innovative businesses** to serve as a forum for networking, creation of linkages between local SMEs and foreign corporations, and transfer of knowledge.	Medium-Long
5. **Develop short training and awareness programs** helping SMEs and consumers to buy and sell goods and services online.	Medium
6. **Assess the availability of local ICT and E-commerce support services,** and evaluate their suitability	Short

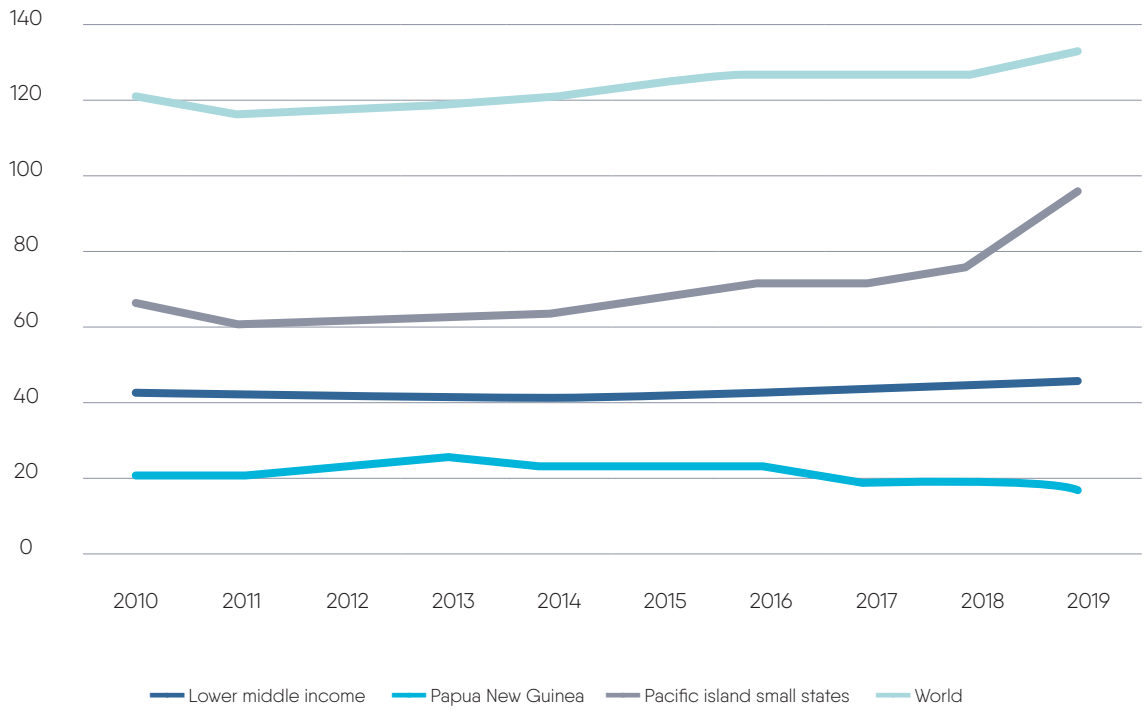
8 ACCESS TO FINANCING INITIATIVES FOR E-COMMERCE

8.1 Financing by banks and microfinance Institutions

The overall banking penetration in the Pacific region is low, as shown by the recent National Demand Side Surveys, with only about 41 percent of the population, on average, having access to formal financial services, which is considerably lower than the world average (69 percent)[clxi] and the developing country average (63 percent). This hinders access to financial services, including but not limited to credit.

As a percent of GDP, credit to private sector in Pacific Islands Small States[44] is below world averages but above the average of lower middle-income countries. In PNG, which features a particularly low banking penetration and high interest rates, domestic credit to private sector is **very low**.

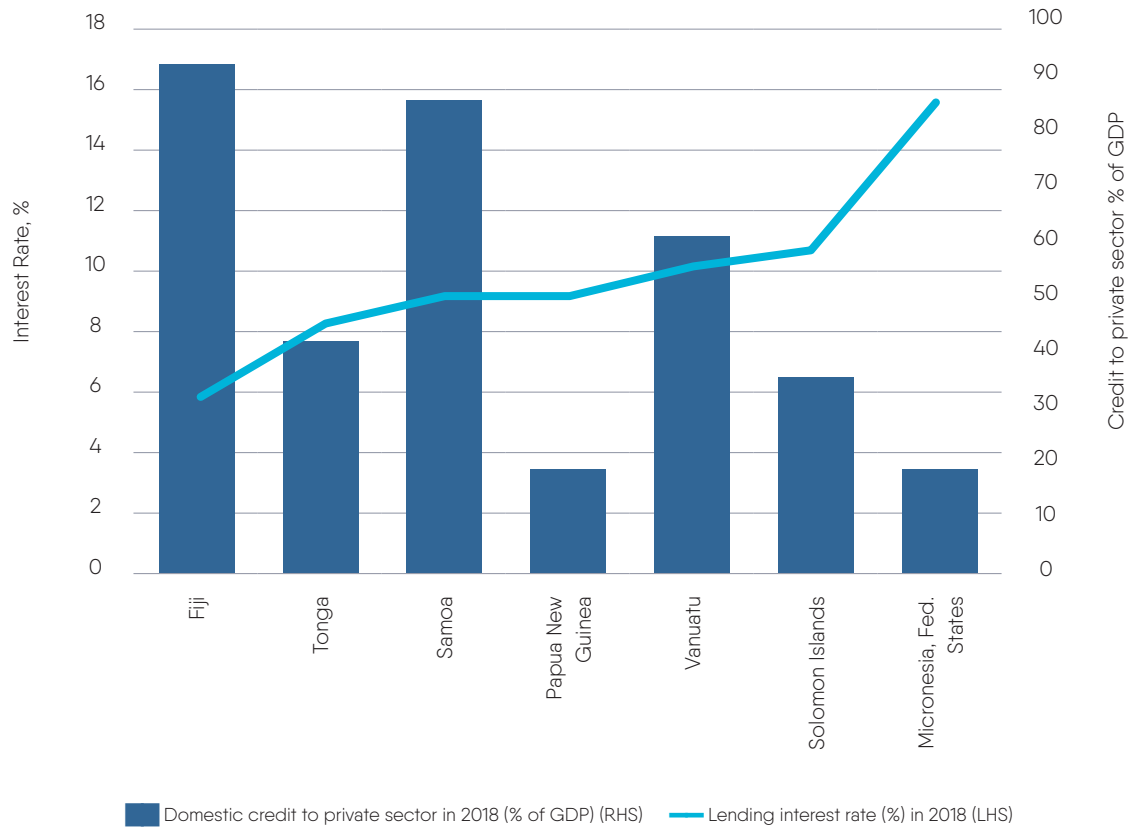
Figure 19: Domestic credit to private sector (% of GDP)



Source: World Bank

44 The category including FIC World Bank Members less PNG.

Figure 20: Lending rates Vs Domestic credit to the private sector in select FICs (2018)

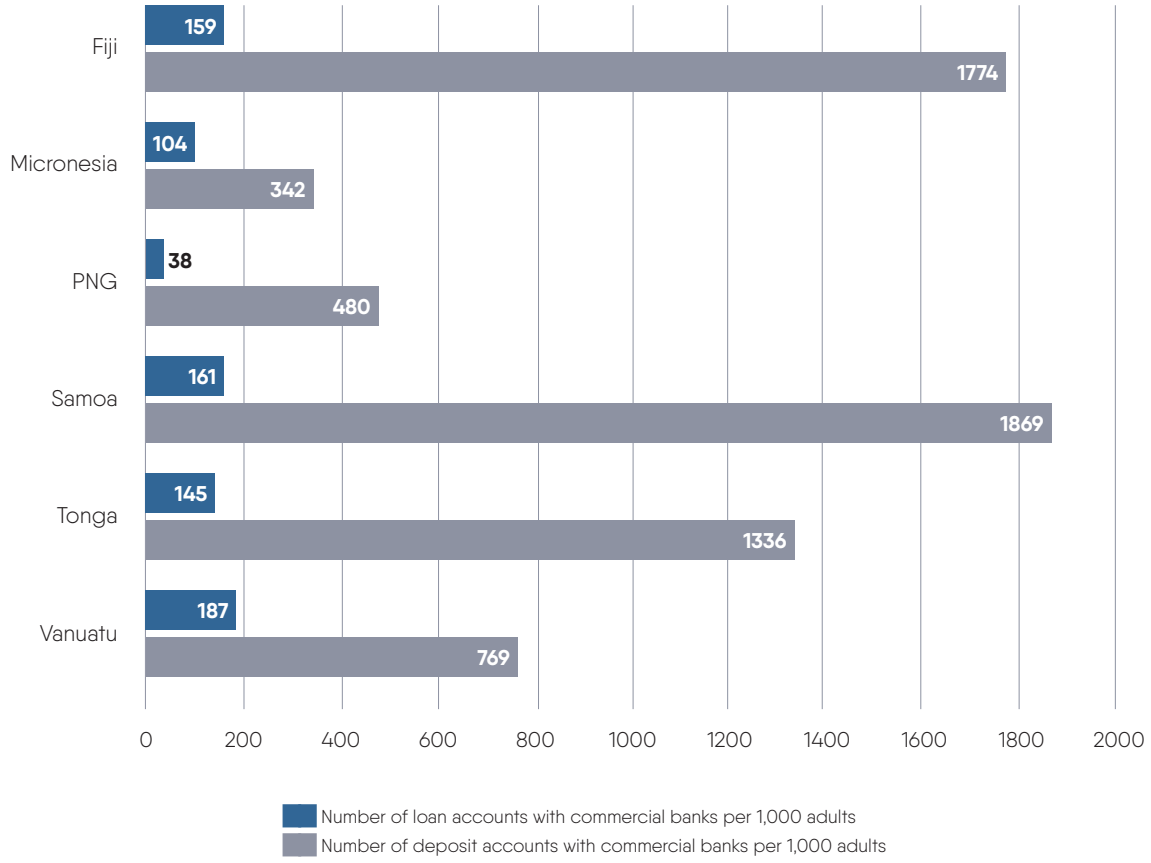


Source: Financial Access Survey, IMF (2018). Note: Data for Vanuatu's interest rate provided by the Reserve Bank of Vanuatu

Domestic credit extended towards the private sector varies greatly, mainly depending upon their lending interest rates. The countries which had high lending interest rates in 2018, had the lowest percentage of lending to the private sector (of GDP), whereas, countries with lower lending interest rates had higher distributions to the private sector.

In line with the rest of the world, each country in the Pacific has a higher number of deposit accounts than loan accounts. However, for some countries (Fiji, Samoa, and PNG), the ratio between deposit and loan accounts is higher than the global average, indicating either a low penetration of credit lending facilities or more stringent credit requirements through the formal banking system.

Figure 21: Number of accounts per 1,000 adults with commercial banks in select FICs in 2018



Source: Financial Access Survey, IMF (2018)

Due to high interest rates of formal financial institutions, which are themselves dependent on the high level of perceived credit risk, private businesses are often forced to depend on informal and community lending solutions. There are difficulties in complying with large paper-work requirements and high collateral demands within contexts of low financial literacy and inability to use land as collateral. Despite valuable attempts to introduce and regulate forms of movable collateral, access to formal credit institution remains an issue.[45] The Pacific Financial Inclusion Programme (PFIP) noted that credit was highly demanded by MSMEs in all the FICs, but FICs exhibit high credit market deficiencies and need to expand their financial services by adapting banking models, especially covering rural areas.[clxii]

Apart from interest rates, high collateral requirements and lengthy procedures, **challenges in access to finance for businesses also lie in the financial ecosystem of FICs**. For example, Personal Property Securities Registers which are essential for recording security interests in personal property are still under development in many FICs. Credit bureaus, allowing lenders to accurately assess a borrower's risk, in terms of potential for defaulting on a loan, are also missing in many FICs.

With some exceptions, FICs score relatively poorly in the World Bank's Doing Business Ranking for the 'Getting Credit', a measure of legal rights of lenders and borrowers protected by relevant laws, as well the availably of information of borrowers. Only Vanuatu, PNG and Tonga are included between the top 50 positions. Other FICs are ranked below the 100th position, with Fiji and Kiribati ranking particularly poorly.[clxiii] The different intensity of reforms undertaken during the past decade in areas such as protecting secured creditors, prioritising security interests, providing for the possibility of using movable collateral, establishing credit bureaus, etc. explain the difference in country scores. It is important to note that these efforts are not necessarily correlated with the actual amount of credit extended to borrowers.

45 Adapted from UNCTAD's eTrade Readiness Assessments of Vanuatu, Solomon Islands, Tuvalu, Kiribati and Samoa and from the Vanuatu Trade Policy Framework Update 2019.

Table 44: Getting Credit ranking in FICs

Economy	Getting credit rank (out of 190)	Getting credit score
Vanuatu	37	75
PNG	48	70
Tonga	48	70
Marshall Is.	104	50
FSM	104	50
Palau	104	50
Solomon Is.	104	50
Samoa	119	45
Fiji	165	25
Kiribati	173	20

Source: World Bank Doing Business 2020

To deal with the challenges of accessing credit, FIC government-guaranteed loans and schemes have been established that transfer risk from banks/financial institutions to the government.[clxiv] The table below from the ADB summarises all credit guarantee schemes available in the Pacific.

Table 45: Access to credit facilities by businesses in the Pacific

Country	Scheme Name	Year	Total funds (in USD)	Coverage ratio	Maximum Loan Amount
Fiji	Small and Medium Enterprises Credit Guarantee Scheme	2012	F$4 million seed capital; additional F$1.5 million allocated in 2016 National Budget	50% of principal, up to F$50,000 per business	F$50,000 ($23,400)
Kiribati	Small Enterprise Guarantee Corporation	2012	A$1 million	-	-
Papua New Guinea	Risk Share Facility (RSF)- Funded by the World Bank Group	2011	-	50% of principal losses	K1.5 million
	Risk Share Facility -Funded by the ADB and Government of PNG through Microfinance Expansion Project	2014	-	50% of final losses of principal	K100,000
	Small Business Credit Guarantee Scheme	Since 1970s	K8 million	80%	K60,000
Samoa	Small Business Enterprise Centre (SBEC)	2002	$3.5 million	80%	ST50,000 ($19,300)

Solomon Islands	Small Business Finance Scheme	2007	SI$10 million seed capital	90% of the unsecured portion of a bank loan	SI$1 million
	SME Credit Guarantee Scheme	2019	-	90% of the unsecured portion of a bank loan	-

Source: ADB (2016)[clxv]

8.2 Financing through other initiatives

Access to finance does not only depend upon traditional financial institutions, but also various initiatives promoted by business accelerators, business incubators, venture capitalists, and angel investors. Such financing initiatives in the Pacific are rare, although examples exist.

For example, the Fiji's National Centre for Small and Micro Enterprises Development (NCSMED) discussed in the skills chapter supervises a development programme providing grants to new and existing enterprises. Besides, the Fijian government operates a Micro and Small Business Grant (MSBG) scheme to provide reosurces to start-ups.[clxvi]

Several countries resort to donor partners for direct financial support to their private sector businesses. In Niue, the government of New Zealand collaborates with the Ministry of Commerce in extending grants and loans to start-ups and existing businesses. FSM is supported by the government of the United States of America through its Rural Development Programme that works in partnership with the private sector to provide financial assistance to existing and new businesses.

Regional agencies and development programmes play a role matching Pacific business with interested private investors. In this area, PTI, the trade promotion agency of the PIFS, acts as a prime source of support. The PFIP has also developed platforms for businesses in the region to connect with investors.

8.3 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. ODA committed to PIFS in 2018 was USD 1.4 billion. Amongst those, some specific donor programmes worth mentioning for their relevance to the E-commerce landscape are:

- **E-commerce Aid for Trade Fund** (Australian Aid: AUD 4.5 million), extending grants up to AUD 500,000 to public and private entities supporting enabling environment, capacity building, training, and micro-infrastructure for E-commerce development.[clxvii]

  Pacific Financial Inclusion Programme (Australia, New Zealand, EU and UNDP/UNCDF: USD 35.7 million), supporting expansion of greater financial inclusion among one of the least banked regions in the world: the Pacific Islands.[clxviii]

  Pacific Regional Connectivity Programme (World Bank, ADB and other donors: USD 499 million), focusing on the deployment of underwater sea cables, and related regulatory reform.[clxix]

- **Asia-Pacific Remote Broadband Internet Satellite Project** (ADB: USD 50 million). A project financing the construction, launch and operation of a high-bandwidth satellite providing e affordable satellite-based, high-speed broadband internet connection to remote and rural areas of small island nations in the Pacific.[clxx]

- **Pacific Information and Communication Technology Investment Planning and Capacity Development Facility** (ADB: USD 1.4 million),[clxxi] mainly supporting FICs to negotiate internet sea cable solutions.[clxxii]

- **PACER Plus - Development Assistance Package** (DFAT, AUD 19 million and MFAT, NZD 7 million), lists a number of future options for priority assistance that can improve E-commerce readiness, including assistance in the areas of regulatory reforms, trade facilitation, payment systems, E-commerce skills development, and payment solutions for E-commerce).[clxxiii]

Tracking the level of ODA devoted to E-commerce enablers is possible. Mbise *et al* (2018) highlighted that the global amount for concessional support reached for the period 2006-2016 is USD 54.7 billion. Tracking of E-commerce support can usefully be undertaken at both national and regional level, although further disaggregation would be needed to determine how much of the support in each category is actually devoted to E-commerce.[clxxiv]

Table 46: Aid for Trade in E-commerce areas

E-commerce area	CRS code and description	Concessional (ODA) Disbursements in billion US$ (2006-2016)	Non-concessional (OOF) Disbursements in billion US$ (2006-2016)
• National policies • Legal and regulatory frameworks	• Communication policy and administrative management	1.1	0.2
• ICT infrastructure and services	• Telecommunications	2.2	0.9
	• Information Communications Technology	1.6	0.4
• Trade logistics and trade facilitation	• Trade facilitation	3.2	2.3
• Payment solutions	• Formal sector financial intermediaries	25.4	25.3
• Access to finance	• Informal/formal financial intermediaries	4.0	4.4
• E-commerce skills development	• Business support services and institutions	17.0	7.2
Totals (in US$ billon, 2016 constant)		**54.7**	**40.6**

Source: Mbise et al (2018)

8.4 Summary of recommendations from country assessments

Table 47: Recommendations on Access to Financing Initiatives for E-Commerce

Recommendations	Timeline
1. **Provide training to develop business skills and business proposal drafting skills** as a precondition to acquire external financing from banks, grant schemes, venture capitalists and angel investors.	Short
2. **Establish credit guarantees schemes for innovative SMEs** to facilitate access to bank financing.	Medium-Long
3. **Promote financial inclusion** through development of national strategies, national multi-stakeholder committees, and adoption of innovative solutions to increase the access to financial (banking) services to the wider population.	Medium-Long
4. **Establish government-funded business support schemes (grants, subsidized loans, etc.)** to address financial access and other capacity-building needs for innovative start-ups, young ventures, and SMEs in general.	Short

5. **Expand knowledge of existing financing programmes,** such as incubators, accelerators, venture capitalists and angel investors, both locally and internationally, through business associations and targeted information campaigns.	Medium
6. **Promote alignment of donor funding with E-commerce needs** (and related Creditor Reporting System codes).	Medium-Long

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Annex 1: Key financial regulatory aspects in the Forum Islands Countries

Country	Law on payment systems	Regulatory sandbox	Law on AML/ CTF	APG/FATF* membership	Regulator	General Financial Regulation	Strategy
Cook Islands	n/a	n/a	Financial Transactions Reporting Act 2017 & its regulations Terrorism Suppression Amendment Act 2017[clxxv]	Member	Financial Supervisory Commission (FSC)	Banking Act 2011, amended 2012, 2013, 2015	n/a
Fiji	Fiji Interchange Network (Payments) Act 2017[clxxvi]	FinTech Regulatory Sandbox 2020[clxxvii] PIRI Regional Regulatory Sandbox (pending)	Financial Transactions Reporting Act of 2004, amended 2017[clxxviii]	Member	The Reserve Bank of Fiji (Central bank)	The Banking Act	National Financial Inclusion Strategic Plan (2016-2020)
Kiribati[46]	n/a	n/a	Proceeds of Crime Act 2003 Proceed of Crime (Amendment) Act 2005	Observer	Ministry of Finance and Economic Development	n/a	n/a
Marshall Islands	n/a	n/a	Anti-money Laundering Regulations, 2002 (Revised 2019)[clxxix] Banking Act 1987, Chapter XIII	Member	Ministry of Finance, Banking and Postal	Banking Act 1987[clxxx]	n/a
FSM	n/a[47]	n/a	FSMC, Title 11 Anti-money Laundering and Proceeds of Crime Act[clxxxi]	Observer	The Banking Board & The US Federal Deposit Insurance Corporation (FDIC)	Financial Management Regulations (February 2019)[clxxxii]	n/a

46 The PFTAC Annual Report 2020 refers to work programme the PFTAC's Baking Regulatory Reform Project will be expanded in 2021 to assist Kiribati in developing second draft of Banking Legislation and Prudential Standards to be in line with international standards. See PFTAC (2020).
47 The PFTAC Annual Report refers to work programme to assist FSM in finalizing draft Banking Laws and Regulations in FY2021. See PFTAC (2020).

Country	Law on payment systems	Regulatory sandbox	Law on AML/ CTF	APG/FATF* membership	Regulator	General Financial Regulation	Strategy
Nauru	n/a	n/a	Anti-Money Laundering Act 2008 Counter-Terrorism and Transnational Organised Crime (Amendment) Act 2008[48]	Member	Ministry of Finance	Banking (Amendment) Act 2013	n/a
Niue	n/a	n/a	Financial Transaction Reporting Act 2006	Member	Board of Directors of the Niue Bank[49]	Niue Bank Act 1994, amended 2013	n/a
Palau	n/a[50]	n/a	AML/CFT regulations for Financial Institutions (FI) 2017[clxxxiii]	Member	Financial Institutions Commission (FIC)[51]	Palau National Code, Title 26 - Financial Institutions	n/a
Papua New Guinea	National Payment System Act 2013 Directive on Electronic Funds Transfer 2019 Directive on Payment Instrument 2019 Retail Electronic Payments System (REPS) (July 2019)	BPNG's Regulatory Sandbox (December 2019)[clxxxiv] PIRI Regional Regulatory Sandbox (pending)	Anti-Money Laundering and Counter-Terrorist Financing Act 2015 Criminal Code (Money Laundering and Terrorist Financing) (Amendment) 2015 Mutual Assistance in Criminal Matters (Amendment) Act 2015 Proceeds of Crime (Amendment) Act 2015 United Nations Financial Sanctions Act 2015	Member	Bank of Papua New Guinea (Central Bank)	Central Banking Act 2000 Banks & Financial Institutions Act 2000	Financial Sector Development Strategy 2018-2030

48 Bendigo agency, the only bank operating in Nauru, indicated that it also operates in accordance with the Australian financial regulation and adheres to Australian-standard AML/CFT requirements. See IMF (2017).
49 According to APG (2018) the Monetary Board, which is also established by the Niue Bank Act, is the Board of Directors of the Niue Bank, has been set up and meets on an as needed basis.
50 The PFTAC Annual Report refers to work programme to assist Palau in finalizing draft Banking Laws and Regulations in FY2021. See PFTAC (2020).
51 According to ADB (2019), the Financial Institutions Commission supervises the commercial banks and the NDBP. However, insurance providers, micro-lending facilities, pension funds, and credit unions with assets of less than $500,000 are exempt from regulatory oversight.

Country	Law on payment systems	Regulatory sandbox	Law on AML/ CTF	APG/FATF* membership	Regulator	General Financial Regulation	Strategy
Samoa	National Payment System Act 2014	PIRI Regional Regulatory Sandbox (pending)	Money Laundering Prevention Act 2007, amended 2018 Counter-Terrorism Act 2014	Member	The Central Bank of Samoa	Central Bank of Samoa Act 2015 Financial Institution Act 1996	National Financial Inclusion Strategy for Samoa (NFIS 2017-2020)
Solomon Islands	Payment Systems Bill 2020[clxxxv]	PIRI Regional Regulatory Sandbox (pending)	Crime Amendment Act of 2010 Money Laundering and Proceeds of Crime (Amendment) Act 2010[clxxxvi]	Member	Central Bank of Solomon Islands	Central Bank of Solomon Islands Act 2012 Financial Institutions Act 1998	Solomon Islands Integrated Financing Framework (SIIFF) Solomon Islands National Financial Inclusion Strategy 2016-2020
Tonga	n/a	PIRI Regional Regulatory Sandbox (pending)	Money Laundering and Proceeds of Crime Act 2000 Counter-Terrorism and Transnational Organised Crime Act 2013	Member	National Reserve Bank of Tonga (Central Bank)	National Reserve Bank of Tonga Act 1988, amended 2014 Financial Institutions Act 2004	n/a
Tuvalu	n/a	n/a	Penal Code Proceeds of Crime Act [Cap 10.25]	Observer	Ministry of Finance	Banking Commission Amendment Act 2015	n/a
Vanuatu	National Payment System Bill (Pending)52	PIRI Regional Regulatory Sandbox (pending)	Anti-Money Laundering and Counter-Terrorism Financing Act No. 13 of 2014, amended 201753	Member	The Reserve Bank of Vanuatu (Central Bank)	Banking Act Cap 63 Reserve Bank of Vanuatu Act Cap 125	Vanuatu National Financial Inclusion Strategy 2018 – 2023

Source: Author's compilation, based on various sources. * Based on (FATF, n.d.) for APG/FATF membership. APG: Asia/Pacific Group on Money Laundering; FATF: Financial Action Task Force. The APG is a regional affiliate of the FATF

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