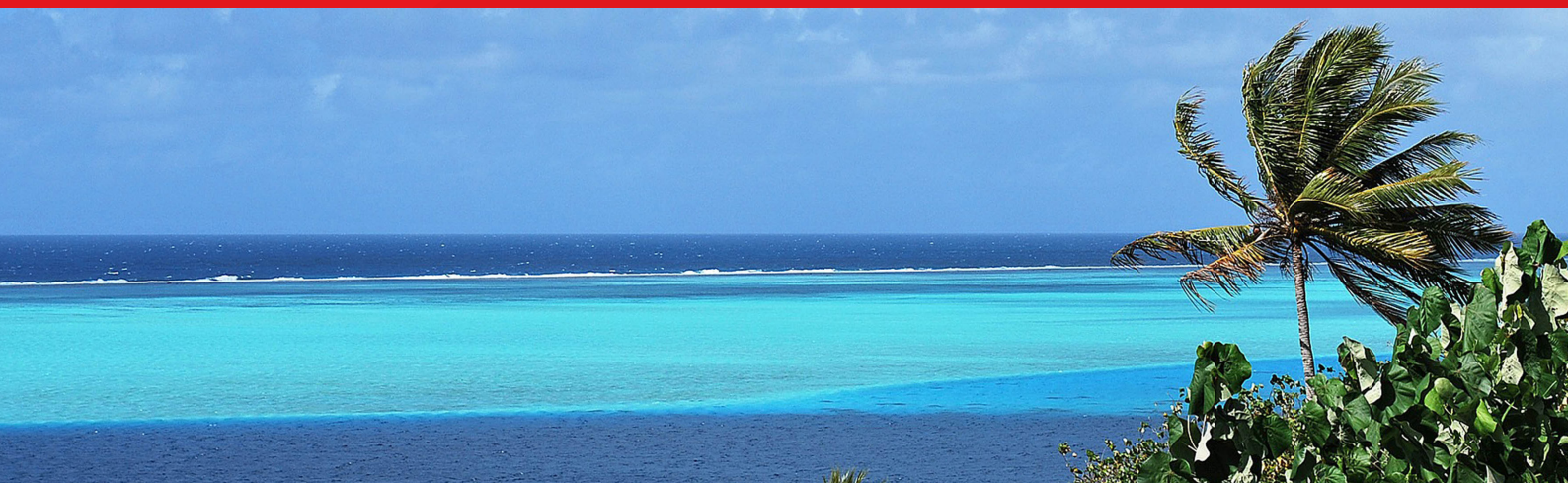


Trade and poverty: Some considerations for Pacific island countries

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Trade and poverty: Some considerations
for Pacific island countries

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Abstract



This study provides an analysis on trade and poverty in selected Pacific Island Countries (PICs) namely, Papua New Guinea, Fiji, Samoa, Solomon Islands and Vanuatu. Literature suggests that trade integration of developing economies into the global trade arena helps reduce poverty, lower income inequality and promote economic growth. In this study, data for Fiji, Samoa and Vanuatu show that extreme poverty has declined, but it remains high in Papua New Guinea and Solomon Islands. Papua New Guinea and Solomon Islands are resource rich countries with fewer resources concentrated on the services sector while Fiji, Samoa and Vanuatu have had persistent trade deficits but gained from favourable net services. This indicates that PICs can expand on services trade, possibly by employing unskilled labourers and produce goods concentrated mostly in rural areas, untwine resources for tourism-related services and encourage inclusion of more women in trade to lower poverty. The study also provides some basis for future research and highlights the need to address the lack of robust data on PICs social indicators.

Keywords: Poverty, Trade, Inequality.

1. Introduction

In September 2015, the United Nations (UN) general assembly adopted 17 Sustainable Development Goals (SDGs) targeted to be achieved by 2030. One goal is to eradicate extreme poverty for all people everywhere and to reduce the share of people of all ages living in poverty to almost fifty percent. For developing economies, reducing incidence of poverty is indeed a great challenge, especially in the presence of unclear progress towards eliminating extreme poverty. This is not a standalone issue for developing economies and many depend heavily on international organisations—such as World Bank, Asian Development Bank (ADB), World Trade Organization (WTO), United Nations, Sovereign States and other donors—for financial and technical assistance to accomplish development goals. Mobilising resources for vulnerable groups have become a top priority for global economies.

One possible solution to end extreme poverty by 2030 is to integrate developing economies into the global trade arena (World Bank and World Trade Organization, 2018) as evidence from around the world show that trade plays an important role in lowering poverty (World Bank, 2015). While there is significant assistance from international communities to harness the benefits of trade expansion and globalisation, outcomes in different economies are often mixed. This is because, trade liberalisation does not affect every poor household in the same way as host of other country specific factors such as where the poor lives (rural or urban), skills level, trade policies and where they work (industry, firm formal or informal sector) matters.¹ These are important areas that need further investigation to harness full gains for trade.

It is important to understand the relationship between trade and poverty from a theoretical perspective in order to devise effective policies. Many economists argued that an economy must desire to achieve economic growth in order to alleviate poverty.² As an economy expands the income streams of individuals including the poor increases which helps reduce overall poverty. In many economies, trade facilitates economic growth—especially in export-oriented economies, which has eventually helped reduce poverty. Moreover, free trade benefits everyone as it allows efficient allocation of resources to most productive sectors.³ Countries that focus on trade expansion will concentrate their production on goods and services at comparative advantage costs to maximise profits. This can be done if the country concerned, utilises its most abundantly available factor of production in an efficient manner and diverts them towards the production of internationally traded goods and services. In the process of reallocating resources between sectors, there may be some losses but overall, the gains should outweigh these transitional costs. Furthermore, trade expansion can help enhance domestic production through innovation and technological transfers. Trade expansion increases competition and the size of market as well as the range of products and services such as imported intermediate goods which can help improve overall productivity.

Growing trade can have large effects on income distribution. Inequality can either increase or decrease depending on the utilisation of available labour. After the initial cost of adjustment to trade policies the overall income of the country should increase which means that the income levels of poor should increase. This is largely due to the existence of large unskilled labour force in developing and less developed economies. Inequality should reduce as trade expansion results in more use of abundant unskilled workers relative to skilled workers. However, this also means that in economies that tend to use more skilled workers to harness gains from trade expansion may experience high inequality as income of skilled workers are expected to increase compared to unskilled workers. These issues are discussed in more detail in the literature review.

In the Pacific region, the incidences of poverty are high based on national poverty measurement definitions and reducing it is a top priority for most governments. While governments in the PICs and development partners are working on various programs to lower incidence of poverty in the region, trade expansion can be one solution. The PICs also have large share of subsistence (non-monetary) activity in the economy. Even if, farmers produce for the market, they do not maintain accounts, pay taxes or are registered, therefore their output is part of informal sector.⁴ The large subsistence and informal sectors is an important area of focus for many developing countries including the PICs as a means of improving overall living standard. Even though some rural dwellers may earn well below the basic needs poverty line (BNPL) set for rural dwellers, they may be better off when compared to their urban counterparts as they depend on hunting and gathering for food. Nonetheless, an increase in income above the rural BNPL will improve the living standard for these poor rural residents.

While there have been several research studies on various regions around the world on trade and poverty reduction, there has been minimal study on the PICs. One possible reason for this is lack of, and inconsistent, poverty data, coupled with heterogeneous nature of the PICs that limit comparisons. This paper aims to draw from available literature on trade and poverty reduction to understand whether trade expansion could also help reduce poverty in the PICs. The study looks at various trade and poverty indicators to gauge whether the livelihood of Pacific Islanders have improved due to trade. The first part of the paper discusses relevant literature survey on trade and poverty mainly focusing on developing economies. This is followed by discussion on poverty in PICs, its measurement and reasons. The next section provides an analysis of trade in the PICs from previous works, followed by a discussion on ways in which trade can help lower poverty in PICs. The paper concludes with some policy recommendations.

2. Literature review

Several studies have been undertaken to discuss the role of trade in reducing poverty. Most of these studies generally indicate that trade openness has a positive impact on employment and income of poor, and benefits everyone.⁵ The main channel through which trade expansion leads to poverty reduction is the increase in wealth or income of poor due to higher employment as a result of economic growth (see Figure 1). While higher employment plays an important role in poverty reduction, other factors such as worker productivity, real earning and terms of exchange for products produced by poor also play an important role in lowering poverty.⁶ Trade expansion can be more effective if reducing poverty helps increase the income of the most vulnerable in our society such as women in rural areas. However, there are certain preconditions that need to be met such as the presence of an efficiently functioning financial sector to ensure that benefits of trade outweigh the costs/ losses.

Figure 1: Link between trade, economic growth and poverty



Source: Griffith University.

2.1 Trade, economic growth and resource allocation

There is wide agreement that a sustained and inclusive economic growth is the cornerstone of poverty reduction as this can help increase incomes of the poor. While there are many factors that can help an economy to expand, trade openness is an important source of economic growth and there are number of studies across various regions that have found a positive relationship between trade and economic growth.⁷

Trade expansion boosts economic growth as it allows for efficient allocation of factors of production. One important theory that links trade to growth is the Ricardian theory which states that countries should concentrate in the production of those goods and services for trade purposes in which they have comparative advantage. This means that countries should be able to organise its available resources in such a manner that they are able to produce tradeable goods most efficiently with minimum cost in order to be competitive in terms of pricing in the international market. With regards to resource allocation, the Heckscher-Ohlin (HO) theory suggests that exporters should focus on products that can be produced using the resources which are in abundance. Firms that violate the HO model are likely to exit the market due to inefficiency.⁸

Most developing—and less developed—economies have an abundant supply of unskilled labour, particularly in rural areas. They also have high incidence of poverty in rural areas as the income of unskilled workers is relatively low. As more and more of these unskilled workers (who are poor) get utilised in the production process due to trade expansion, overall poverty should decline. Sustained economic growth also enables the poor to improve their income. Income from trade expansion can be saved leading to capital accumulation for own-account activities. It can also help them to get better education to upskill overtime which increases their income and helps the poor move out of poverty.

2.2 Trade expansion, transitional cost, innovation and productivity

As countries open their markets for trade, they have access to more markets which increases the demand for domestic goods abroad and encourage exports. To cater for export markets there are some initial transition costs such as cost of packaging, food standards and quarantine. Who bears the cost of these charges? What is the longevity of the bilateral and multilateral trade agreements? These are important questions that often arise and need to be addressed. Maertens and Swinmen (2014) highlighted that the significance of food standards has increased over the years.⁹ While higher food standards can harm the development of international agriculture, there are success stories of how countries have strategized to harness its benefits—such as small holder contract farming in Madagascar. Given that the poor do not have the capacity to meet the cost of adjustment to satisfy the criterion set by export markets, they may lose out. However, this should not be used as an excuse to avoid trade reforms for trade expansion but rather as stimulus to cushion the poor from the negative impact of trade expansion. Trade reforms need to be designed in such a way that the effect of transitional cost on poor is less.¹⁰ Overall, it has been found that growth in exports also has positive effect on productivity as firms become efficient in their production through innovation.¹¹

Trade openness also helps to raise productivity through technological and technical know-how transfers. At the initial stages of trade expansion, the developing and the less developed countries may not have sufficient investment in research and development to gain from trade immediately but they can build on this overtime as trade expands and they are exposed to better technology. The most immediate effect of trade expansion is the increase in access to imported raw materials, and plant and machinery which support domestic production. A study conducted by Boddin (2018) found there is a positive link between imports and innovation patenting in Germany which shows the important role of imports in facilitating innovation.¹² Imports and innovation also play an important role in facilitating trade expansion.¹³ Furthermore, trade expansion encourages foreign direct investment which enables knowledge transfers and facilitates innovation. This was confirmed in a study conducted by Blind and Jungmittag (2004) who found that both foreign direct investment and imports have highly significant positive effects on product and process innovations in Germany.¹⁴

Trade openness also affects local industries through overall tariff reduction. Lower tariffs on imported products means that local firms have to compete with foreign firms. In order to be competitive, firms have to improve their production processes through innovation so that they are more efficient. Studies show that trade encourages competition, which promotes innovation and enhances efficiency. With increased competition, there may be some losses as inefficient plants are likely to exit but in the long-run everyone gains.¹⁵ Foreign competition affects local industry as they must compete with cheap imported products. As a result of this, only the firms that are efficient in their production process will survive. If these firms do not exit, then the inefficiency present in these industries will affect efficiency of other sectors like the fiscal sector as governments generally provide subsidies to support these inefficient industries. If the majority of the population—particularly in rural areas—are dependent on a commodity, then the overall economy gains from trade liberalization if there is an overall improvement in productivity in that industry. In Bangladesh, expanding trade in irrigation equipment and fertilizer markets led to a rise in rice productivity and a contraction in producer and consumer rice prices.¹⁶

Some papers also found that there is a weak link between trade and innovation, or there may not be any direct link. There are also suggestions that it is innovation that drives exports and productivity is underpinned by capital intensity and labour input.¹⁷

2.3 Trade, poverty and women

Women in rural settings are most vulnerable to extreme poverty due to lack of opportunities to engage in trade. In recent years, women empowerment through trade has gained prominence as it is now agreed that women can play an important role in helping lower poverty as the women-headed households are generally poorer compared to those headed by males in many poor countries. Many donor agencies such as The World Bank and Asian Development Bank have started various initiatives to integrate women with trade.

Trade can help lower poverty if it affects the way decisions are made in a household and on how gains from trade (higher income) are utilised. Women empowerment through trade can help lower poverty in two ways. Firstly, given that most women in poor households are engaged in household chores or subsistence agriculture, trade expansion can help increase income of the household if it creates opportunities for women. Secondly, women empowerment helps overall welfare of a household because it enhances nutrition and education of children which raises overall productivity over time.¹⁸ With trade supported higher income, women are in better position to support their family financially and help them emerge from poverty.

In the Pacific region, the services sector—specifically tourism—is identified as one of the potential areas that can be tapped for trade expansion and economic growth. In this regard, women in the Pacific could benefit from the gradual economic transition toward higher value-added services. Promotion of tourism could help women take advantage of employment and entrepreneurial opportunities.¹⁹ Rural women can use their cultural talents to manufacture handicrafts as well as taking part in cultural performance groups or support rural homestay initiatives. However, tradition and cultural barriers that hinder women from participating in trade and commerce or from undertaking leadership roles need to be removed. This can be done through education and training which helps change the way women are viewed in our society. If women—particularly those in rural areas—are given equal opportunity to participate in economic activity, there is higher chance of reducing incidence of poverty at a much faster rate, particularly in rural areas. Financial inclusion, use of modern technologies to link producers and buyers, enhancement of legal frameworks to promote women rights and land ownership and promotion of extension services to promote rural agricultural initiatives particularly those suited for women groups, can help women play a more active role in reducing overall poverty.²⁰

2.4 Trade and inequality

Growing trade can have an enormous effect on income distribution. Inequality should reduce as trade expansion results in more use of abundant unskilled workers relative to skilled workers in developing countries. However, earlier studies that tested HO and specific-factor models show that inequality has risen as countries have many factors of production and do not have comparative advantage in producing low-skill goods.²¹

The main reason for the rise inequality is the increase in demand for skilled workers which shows that over time, the wage premia of skilled workers increases.²² There is also a strong link between exporting and increase in technological input and skill upgrading. Destination of export markets also matters when it comes to employment and wages. Firms exporting to high income markets tend to hire larger percentage of skilled workers and pay higher wages compared to firms that export to low income countries or sell in the domestic market. This is because the price paid by high income countries for their imports are higher and timeliness of payments are better compared to low income countries.

Trade expansion also promotes offshoring whereby firms outsource production outside their national boundary to take advantage of cheap labour. However, there is strong evidence that

offshoring generally increases inequality. This largely because offshoring increases demand for skilled workers (which increases the wages of skilled workers. In recent years, in-shoring has become common due to inward looking policies by many large economies as well as due to technological progress resulting in automation which has lowered the demand for workers. It has been found that there is positive effect of in-shoring on workers earning and employment. This is largely due to increase in employment of skilled workers which was previously lost to other countries as a result of outsourcing.

2.5 Impact of trade on environment and health

Most developing countries rely on extraction of primary products for exports which potentially harm the environment. The PICs have mostly involved the exploitation of natural resources or agricultural products and trade is affected by cultural and traditional beliefs and structural constraints.²³ In developing countries crop development can lead to loss of biodiversity and indigenous plants and animals as production is suited towards export market.²⁴ In this regard, trade policies need to be accompanied by appropriate environment policies.

Another important consideration is the harmful effect of trade expansion on lifestyle diseases. With increased access to processed food, there is a danger that developing countries can become a dumping ground for low quality unhealthy products. However, many Pacific countries have come up with innovative trade policies that restrict the importation of unhealthy goods such as taxation—high tax on high-sugar products, monosodium glutamate and palm oil etc, and low taxes on fruit and vegetables—labelling and controlling supply of meat with high fat.²⁵

3. Poverty from the PICs' perspective

In the Pacific, poverty can be viewed in so many ways and can also include the islanders' culture, traditions, customs, and ideologies. Robert Chambers (2006) has raised five main classes of poverty: the income-poverty; material lack or want; capability deprivation; and multi-dimensional view of deprivation. He also agreed to the fact that poverty is multifaceted and can be ambiguous, depending on key elements; who is asking, how it is understood, and who response to it.²⁶

Today, government ministries, non-profit organisations, lenders, scholars, researchers, and businesses and even most corporate social responsibilities are centred on reducing any form of extreme poverty. The Millennium Development Goals (MDG) target of reducing by half the proportion of people living in extreme poverty was achieved in 2010, well ahead of the 2015 deadline. Beyond 2015, the SDGs goal was to eradicate extreme poverty for all people everywhere and to reduce to almost 50.0 percent the share of people of all ages that are living in poverty. This reflects worldwide collaborative efforts in reducing extreme poverty across the globe. The other series question is how extreme poverty was defined in development goals. The poor are identified as the proportion of the population earning less than the current poverty line of US\$1.90 per day at the 2011 purchasing power parity (PPP) exchange rate. This somewhat considered by most as the only traditional and most important measure of extreme poverty. All reference to poverty in this paper refers to extreme poverty based on definition mentioned above, unless specified otherwise.

In this research paper, both monetary measures of poverty (income-poverty) and non-monetary measures of poverty (Human Development Index—HDI and global Multidimensional Poverty Index—MPI) are considered in the poverty discussions to some extent. For most PICs, poverty measure based on multi-dimensional of deprivation is yet to be established by the World Bank. Some of the PICs lack resources and are deprived from conducting their own poverty studies on regular intervals resulting in data gaps. Thus, making it more difficult to access poverty data for most parts of the PICs.

For uniformity and consistency, this study has sourced a selection of monetary measures of poverty from the World Development Indicators (WDI) online data source which is maintained by the World Bank. The poverty indicators have clearly established the cut-off points separating the poor from non-poor. Poverty lines are available for specific Pacific regions studied; Fiji, Papua New Guinea, Samoa, Solomon Islands and Vanuatu. In terms of non-monetary measures, the United Nations Development Programme (UNDP) produces the HDI as a guide to 181 countries including the underlined PICs, measuring deprivations of development progress. In terms of other non-monetary measures of poverty, the MPI which is also produced by the UNDP identifies how people are being left behind across three key dimensions—health, education and standard of living—beyond income. However, the MPI is seen as an uncommon tool for the PICs. The MPI as an advanced measure of non-monetary poverty remains a challenge for the PICs. Hence, further work on measuring poverty still requires the inclusion of other PICs, so that appropriate intervention and support programs can be designed and implemented.

3.1 The poverty measures

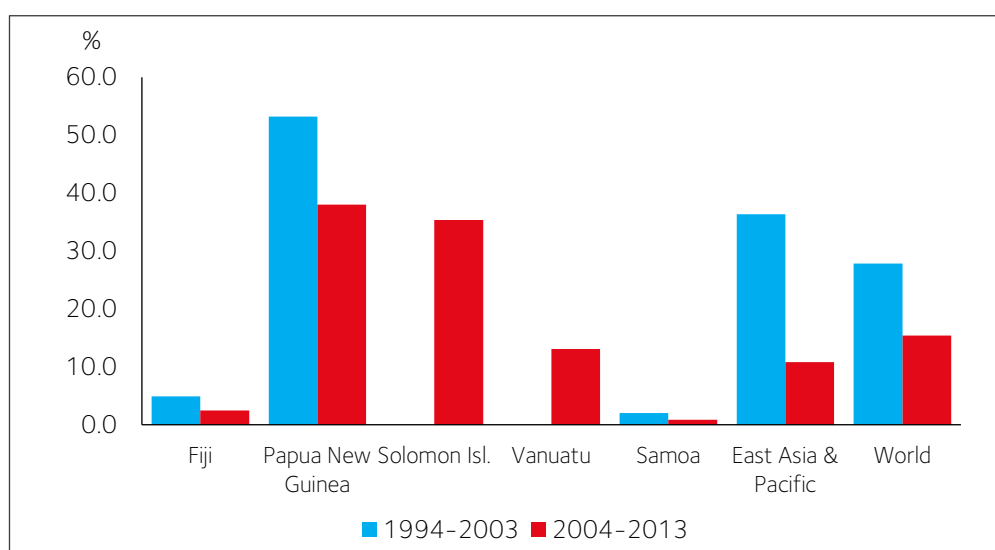
Poverty can be defined in so many ways. Various literatures have used different indicators to define poverty with different methods to derive poverty lines.²⁷ For instance, Wan and Sebastian (2011) made a remarkable attempt using three different approaches.²⁸ These approaches included the direct counting survey, estimation using grouped data and

estimation using poverty elasticity of growth to understand poverty using broad categories of selected Asian and Pacific regions. For the PICs, data access and methods used to gauge poverty levels are different, depending on policymakers' needs. Nonetheless, this research attempts to employ the most commonly used and consistent measure of poverty by the World Bank—the poverty lines. This research aims to establish whether there is a relationship between trade and poverty in PICs through inter-PICs comparison.

The poverty line is an absolute measure of poverty, which measures the minimum income that is needed for essential living requirements, food, housing, clothing, water, sanitation, energy, transport, health and education. The common method of measuring and reporting poverty is called headcount poverty ratio which is given as the percentage of the population below the poverty line. The following sections discuss extreme poverty headcount in PICs.

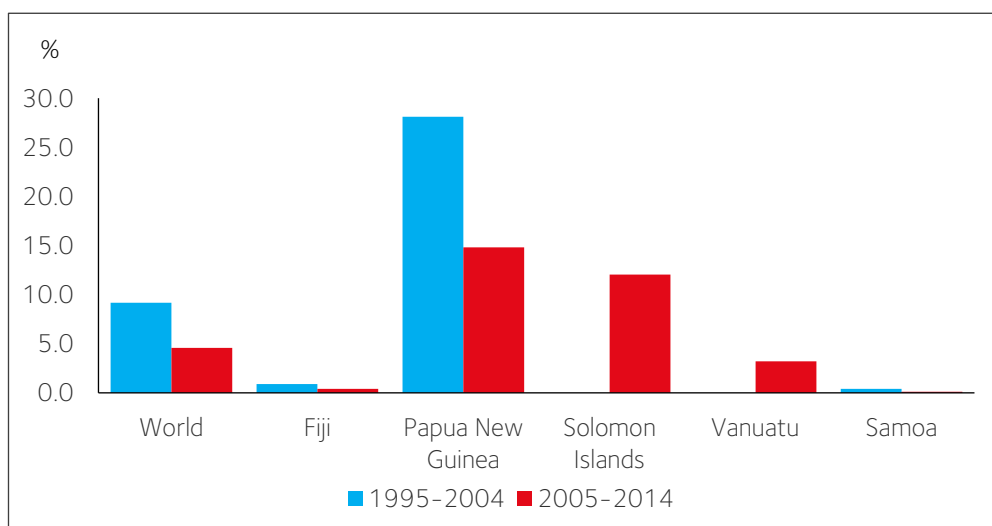
It is clear that the percentage of people living under absolute extreme poverty has reduced over the years, although the pace of extreme poverty reduction is uneven across the PICs. The headcount poverty ratio has declined slightly in the most recent decade (2004–2013) compared to the previous period but remain high in larger PICs like Papua New Guinea (38 percent) followed by Solomon Islands (35.0 percent) when compared to the World (15.4 percent) and East Asia and Pacific (10.8 percent) and the remaining selected PICs (see Figure 2). Fiji has improved in headcount ratio to 2.5 percent of the population (from 4.9 percent) living in poverty. Samoa records the lowest poor living which improved from 2.0 percent to 0.9 percent.

Figure 2: Extreme poverty headcount ratio at poverty lines for selected PICs (per cent of population)



Source: World Development Indicators—World Bank.

Another measure is the poverty gap which is the mean income of poor that falls below the poverty line. Broadly, extreme poverty (US\$1.90 per day) has reduced for all the five countries but the poverty gap of 14.8 percent and 12.1 percent for Papua New Guinea and Solomon Islands are relatively higher compared to Samoa, Fiji and Vanuatu (see Figure 3). Extreme poverty or poverty gap at US\$1.90 per day for Fiji and Samoa are close to zero. Services trade plays an important role in non-resource rich PICs (Fiji, Samoa and Vanuatu) which could be attributed to extreme poverty reduction. It can be an area of improvement for all the PICs. Countries that are resource rich like Papua New Guinea and Solomon Islands have deficits in service trade which can be improved.

Figure 3: Poverty gap at US\$1.90 a day for selected PICs (2011 PPP %)

Source: *World Development Indicators—World Bank*.

3.2 The human development progress

Many have argued that important aspects of poverty cannot be measured in monetary terms only and there is a need to consider the non-monetary aspects of it too. In many settings especially in the Pacific, access to proper public services such as health, education, markets, access to basic infrastructure, and other public services are some capability derivatives that are only measured beyond traditional monetary measure of poverty. The Human Development Report 2019) prepared by the UNDP measures HDI in three main dimensions: long and healthy living, knowledge, and a decent standard of living (see Figure 4). A measure of wellbeing deprivation using a multidimensional approach or MPI, also serves as the ultimate criteria of development of a country, not economic growth alone.

The Poverty and Shared Prosperity Report (2018) has related the World Bank's first attempt in measuring multidimensional poverty at a global level. Other dimensions of human development were included in this global exercise, are deprivations in education and in basic infrastructure (water, sanitation and electricity). For this, statistics were made available for 119 countries including Vanuatu. The remaining Pacific regions (Papua New Guinea, Fiji, Solomon Islands, and Samoa) were not part of the multidimensional poverty measure.

Figure 4: Components of Human Development Index

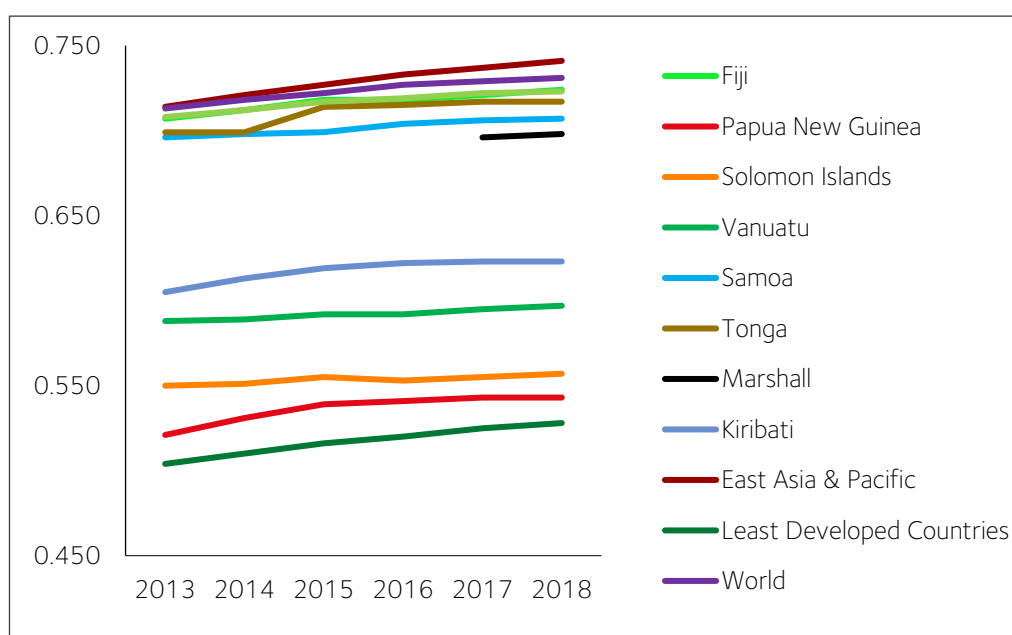
	Long & Healthy Life	Knowledge		A Decent Standard of Living
DIMENSION INDICATORS	<i>Life expectancy at birth</i> ↓	<i>Mean years of schooling</i> ↓	<i>Expected years of schooling</i>	<i>GNI per capita (PPPUS\$)</i> ↓
DIMENSION INDEX	<i>Life expectancy index</i>	<i>Education index</i>		<i>GNI index</i>
HUMAN DEVELOPMENT INDEX				

Source: *United Nations Development Programme—Human Development Report 2019*.

In the high human development category, Fiji has a score of 0.723 and placed the highest rank since 1990, however slightly lower than the East Asia and Pacific regions (0.741) and World (0.731) scores (see Figure 5). Tonga is in second place with a score of 0.717, followed by Samoa with 0.707. The Marshall Islands (0.698), Kiribati (0.623), Vanuatu (0.597) and the Solomon Islands (0.557) are ranked as medium human development while Papua New

Guinea (0.543) is positioned as low human development (see Figure 5). The two resource rich countries—Papua New Guinea and Solomon Islands' HDI scores are still lower relative to the other selected PICs.

Figure 5: Human Development Index

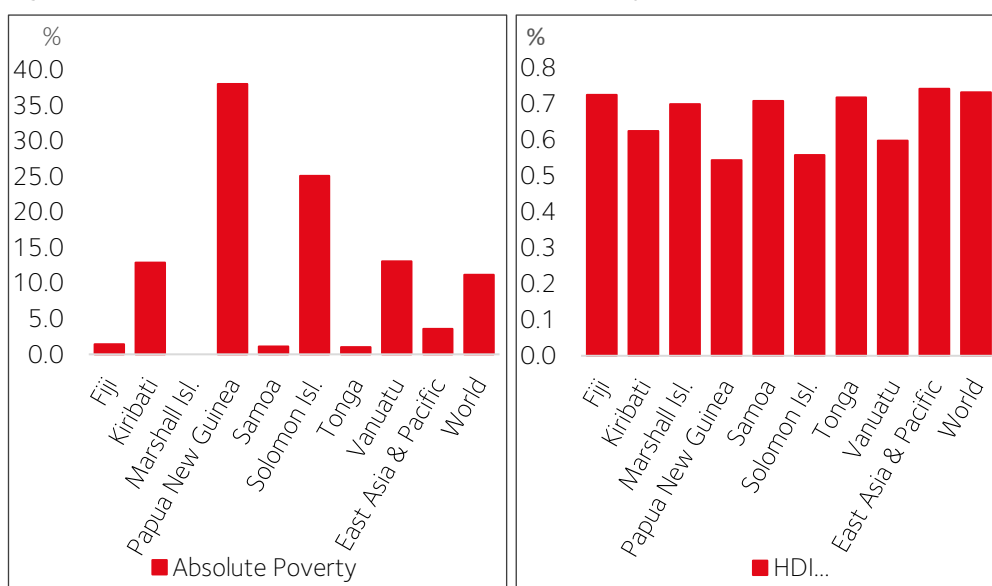


Source: United Nations Development Programme —Human Development Report 2019.

Relating to the Maslow's hierarchy of needs theory, most PICs have economic growth below potential—unproductive in many areas and innovations. The theory clearly points out that unless people in the PICs at the bottom of the hierarchy progress, greater economic productivity cannot be achieved. The first emphasis is to help the PICs attain their physiological needs like food, shelter, clothing and the right to other basic needs as these are crucial parts of human development. Following this, safety, love, belongings, esteem, and self-actualization can be fulfilled. In this era, policy makers are pushing for inclusive growth, many PICs are generally in economic transitions whereby people are forced to know the value of money beyond their traditional or subsistence ways of living. Almost every PIC, is now calling for job creation so that people are able to buy their own necessities and to achieve a sense of belonging. The poor are now perceived to have an ideology of trade or to find paid employment in order to live. Creating nationwide employment opportunities is not only a sign that an economy is growing, transforming economic growth to human development is vital so that the poor are able to sustain their livelihoods.

The fact that when absolute poverty (income measure of poverty) is reduced, the level of HDI increases (see Figure 6). Fiji and Tonga's absolute poverty are relatively low compared to the World, East Asia and Pacific, and other selected PICs. On the development side, Fiji and Tonga are doing remarkably well in the HDI scores. However, comparing Tonga and Fiji's absolute poverty, Tonga has done better than Fiji. However, Tonga's HDI score is lower than Fiji's. This is an indication that Tonga's productive resources remain underutilised compared to Fiji's due to structural issues, lack of good governance and political influences. Papua New Guinea and Solomon Islands have the highest rate of absolute poverty compared to the World, East Asia, and other selected PICs, hence, they reflect the lowest HDI scores.

Figure 6: Comparison between absolute extreme poverty and HDI scores



Source: World Development Indicators—World Bank, United Nation Development Programme—Human Development Report 2019.

3.3 Inequality of income distribution

Concurrent views have existed in finding the relationships between growth, inequality and poverty reduction.²⁹ The relationship between growth and poverty is complex and depends, to a larger extent, upon the relationship between growth and inequality.³⁰

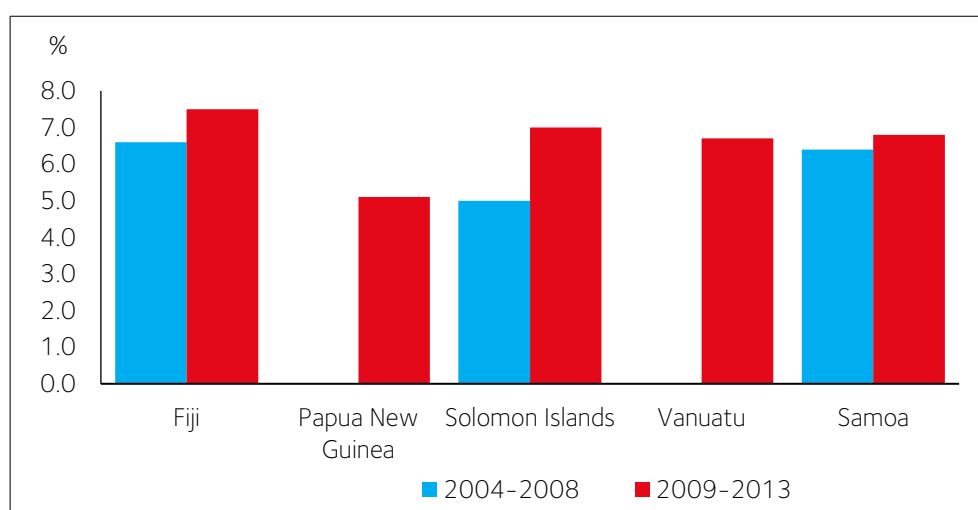
According to Kuznets (1955), growth and inequality are related in an inverted U-shaped curve representing two stages of economic development. In an early stage, inequality increases due to the shift of the poor from the agricultural sector to the industrial sector. In the latter stage, a bulk of the population shifts to the urban sector, thus there is an increase in the relative wages of the poorer working in the poor both urban and rural sectors. In many countries, like most developing countries including the PICs, agriculture is the most important pro-poor growth strategy, given that the incidence of poverty tends to be much higher among households involving in farming than among other groups.³¹

On common measure of income inequality is income poverty lines that many countries have adopted to monitor progress in reducing percentage of people below the poverty line. The cut-off poverty line generally indicates a person's possession of adequate income for a specified amount of food needed. This is ranking all households by income, from lowest to highest, and then dividing all households into five groups with equal numbers of people, known as 'quintiles'. Whether income inequality has widened or narrowed can be observed from the ratio of the incomes of the richest 20.0 percent to those of the poorest 20.0 percent using the World Bank data. For the PICs, measuring whether income inequality has widened or narrowed is difficult to ascertain as there were no data available by the World Bank for the income of the richest 20.0 percent to the income share held by the fourth 20.0 percent.

Comparison between the two periods, 2009–2013 and 2004–2008, income inequality earned by the poorest 20.0 percent of population has improved for Fiji, Solomon Islands and Samoa. For Vanuatu and Papua New Guinea, income share of the lowest 20.0 percent can only be compared across the other selected PICs due to data constraints (see Figure 7). Overall, the causes of growing inequality in the PICs could be due to higher earnings of skilled-labour relative to low-skilled labour. This is due to reduced efforts being practised in developing the agriculture sector.

In the case of Fiji, economic policies were more focused on promoting diversification of locally produced goods and services via inward looking import substitutions. In the 1970s, the Fijian Government was more focused on developing agriculture-based industries and mobilised resources to the Fiji Sugar Corporation Limited, Fiji Pine Scheme and the Pacific Fishing Corporation Limited. The agriculture sugar-led industry benefited the Fijian economy in the same period. In the 1980s, other new policies were in place that promoted economic diversification, employment and growth. Corporate tax holiday of 13 years and duty-free concessions on imported goods for export production was not only an enhancement to the garment industry but also on Fiji's overall manufacturing sector and created more jobs. The changes in the composition of household earnings were particularly profound in the urban areas. In the 1990s, the tourism-related sectors, wholesales and retail sales, transport and storage and the financial and insurance sectors were major drivers of the services sector. Besides, Fiji has gradually liberalised its trade, reduced import restrictions to promote exports and created more opportunities for other tourist-related activities and secondary industry. The noticeable shift brought to the forefront the prominence of the manufacturing/industrial and services sectors. Since 2000, the size of the services industry in Fiji has continued to grow remarkably, creating more employment and providing economic and welfare stabilities, despite the effects of Fiji's political instability, natural disasters, and the global financial crisis.

Figure 7: Income share held by lowest 20.0 percent



Source: World Development Indicators—World Bank.

The Gini coefficient is another approach to measuring income inequality, and its outcome is generally mixed across the globe (see Figure 8). However, the level of inequality remains higher for Emerging Markets Developing Economies (EMDE) than Advanced Economies. Amongst EMDE inequality trends are mixed, some experiencing decline in equality while some inequality in access to education, health care and finance.³²

For the PICs, Gini coefficient has not changed significantly but it has increased slightly (see Table 1). Fiji's inequality has declined in recent years. In 2013, Fiji's income inequality decreased from the 2008 level as inequality in the rural and urban areas decreased. The Gini index decreased to 36.7 in 2013, from 40.4 in 2008 and 38.1 in 2002. The increase in the Gini index in 2008 from 2002 level was due to the rise in inequality between rural and urban areas and within urban areas. Vanuatu's income inequality is moderate to high, with Gini index at 37.6 reflecting a greater level of inequality, most likely related to rural–urban drift and the increased number of settlers in the peri-urban and squatter areas. For the Solomon Islands inequality of income have declined from 46.1 percent in 2005 to 37.1 percent in 2013, underpinned by the lowest degree of inequality in Malaita in the Central province. The Gini index for Papua New Guinea was reported at 41.9 in 2009 from a high of 55.4 in 1996. However, Papua New Guinea has faced one of the highest levels of inequality, if not the

highest in the Asia-Pacific region. A substantial increase in the Gini inequality is noted for Samoa. Gini index in 2002 was 40.7 in 2008 was 42.0, and 38.7 in, 2013 despite the decline in food and basic needs poverty inequality in Samoa.

Table 1: Income Gini coefficient

Selected Pacific Region	Gini Index	Global Rank	Reporting Year
Fiji	36.7	85	2013
Papua New Guinea	41.9	48	2009
Solomon Islands	37.1	83	2013
Vanuatu	37.1	78	2010
Samoa	38.7	67	2013

Source: *World Development Indicators—World Bank*.

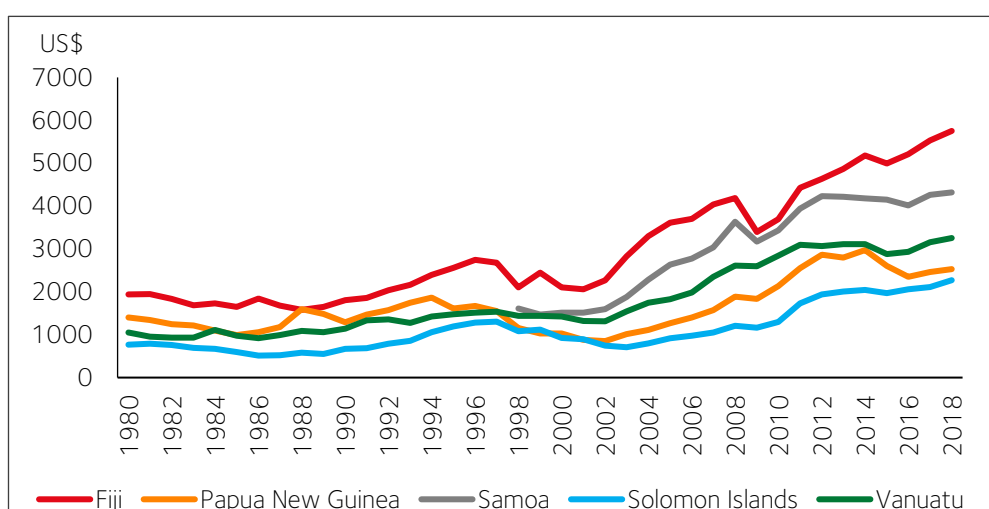
4. Trade from the PICs' perspective

Trade is recognised as an engine for inclusive economic growth and poverty reduction in the 2030 Agenda for SDGs. Distribution of income and allocation of wealth and resources are not even across countries. This is seen as a precondition to trade and inclusive economic growth. The effects of trade will also depend on geographical location, individual characteristics, type of trade policy change and the type of economic activities people in the PICs are engaged in.

4.1 Trade and growth

Gross Domestic Product (GDP) as a measure of economic activity indicated that the PICs economies generally grew from 1980 to 2018. There is a strong increase in GDP at current prices for PICs from 2002 onwards. Higher economic activity reflects higher aggregate domestic demand, consumption, investment, Government, trade and also tendency for trade openness widens. Sectors underlining economic growth is not mentioned due to unavailability and inconsistency of macroeconomic data, it was difficult to make an assessment across the selected PICs. However, increase in GDP does not indicate whether there is an improvement in the lives of people. To some extent GDP per capita indicates the increase in income levels. In the Pacific, Fiji has the highest GDP per capita followed by Papua New Guinea (see Figure 8).

Figure 8: Gross domestic product per capita for selected PICs at current prices (US\$)



Source: International Monetary Funds—World Economic Outlook, April 2019.

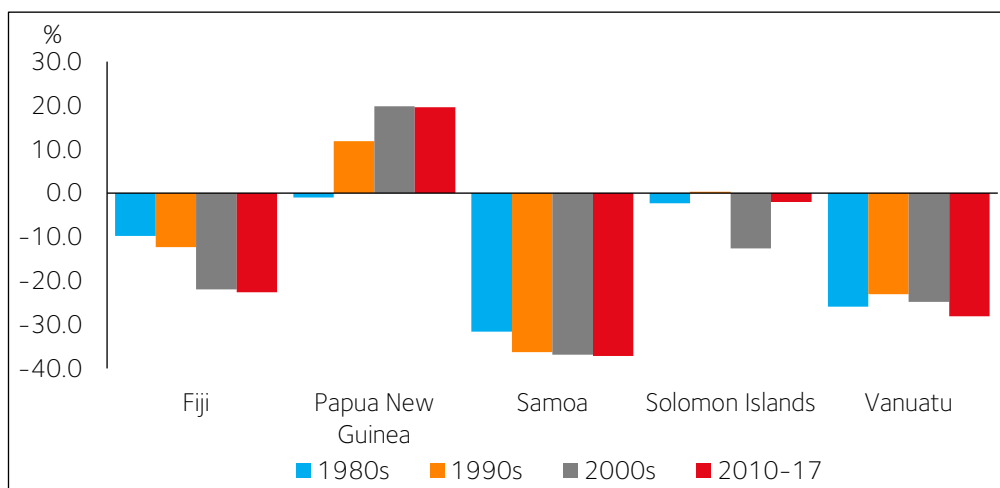
4.2 The tradable sectors

Two-thirds of the PICs exports are primary products, agricultural products and other natural resources products, fisheries, forestry and extracted minerals which are dominated mostly by resource rich countries, Papua New Guinea and Solomon Islands. For the non-resource rich PICs, agriculture still makes up around 60.0 percent of their total exports, however exports of manufactured products are also large, particularly in the case of Fiji.³³ In terms of tradable imports, fuel account for a significant share of imported items for both resources and non-resources rich PICs. Moreover, imports of plant and machinery into resource rich PICs is also large. The non-resource rich PICs dependence on imported agriculture are large, apart from fuel imports.

Fiji, Samoa, Solomon Islands and Vanuatu maintained a trade deficit in merchandised goods over the years from 1980 to 2017 (see Figure 9). Papua New Guinea improved to a trade

surplus in the 1990 decade from a deficit in the last decade and maintained a trade surplus up to 2017. Unlike the Solomon Islands, it has a trade deficit, despite of its resource rich tradable goods, particularly rough wood, processed fish and palm oil. Weak export performance and increase in imported goods over the years which also worsened trade deficit for Fiji, Samoa and Vanuatu over the years.

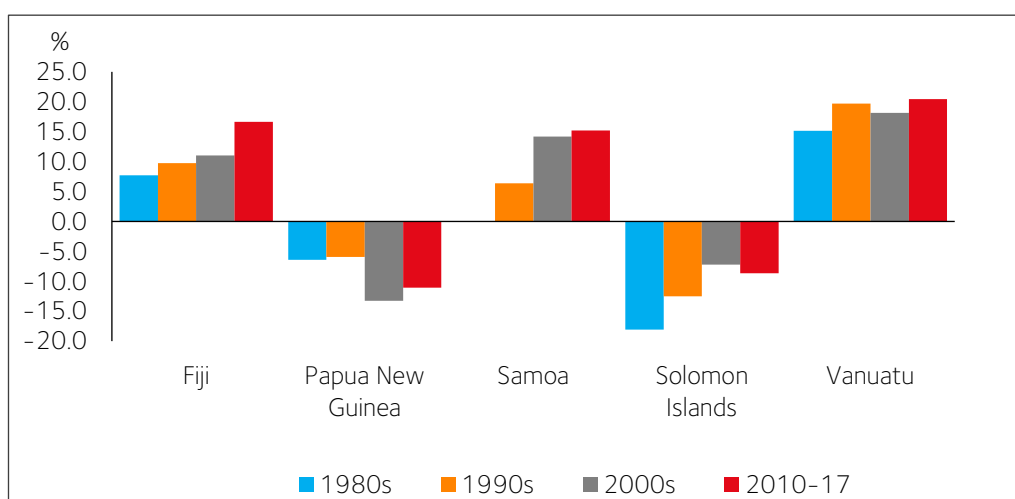
Figure 9: Balance of trade for selected PICs (% of GDP)



Source: International Monetary Fund—Balance of Payment and International Investment Position Statistics, April 2019.

Alternatively, surplus in net services were noted for non-resource countries (Vanuatu, Fiji and Samoa), mainly supported by the tourism industry (see Figure 10). The importance of the tourism industry is growing in the PICs. Tourist to the PICs are mostly from Australia, New Zealand and the United States which account for the larger market shares of visitor arrivals and even from emerging Asian economies (Chen et al., 2014). Papua New Guinea and Solomon Islands positions continue to show negative net services. The Solomon Islands has the potential to improve its balance of trade and net services positions.

Figure 10: Trade in net services for selected PICs (% of GDP)



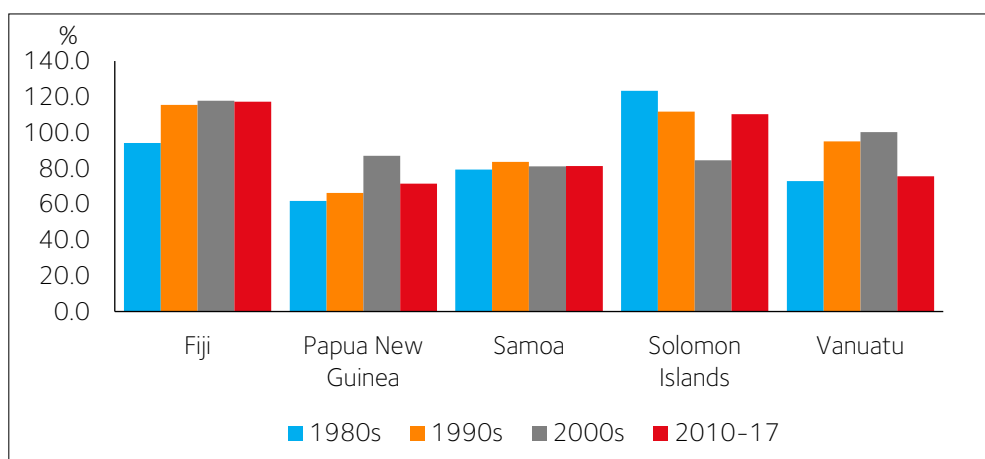
Source: International Monetary Fund—Balance of Payment and International Investment Position Statistics, April 2019.

4.3 Trade openness

Given the importance of the services sector, trade openness is the sum of both trade in goods (imports and exports) as well as services (service credit and service debit) expressed as a percentage of nominal GDP.

Except for Papua New Guinea and the Solomon Islands, trade openness in the PICs has not significantly changed over the years.³⁴ In the period 2010–2017, trade openness continued to remain stable for Fiji and Samoa while Solomon Islands trade openness rose significantly compared to the 2000 decade (see Figure 11). Papua New Guinea experienced narrowing of trade openness in the 2010–2017 period. Prevalence of natural disasters, political instabilities, economic uncertainties, poor governance and corruptions were some major underlining factors affecting trade openness in the PICs in the review periods.

Figure 11: Trade openness in goods and services for selected PICs (% of GDP)



Source: International Monetary Fund—Balance of Payment and International Investment Position Statistics, April 2019.

Fiji has noted consistent increase in trade openness over the years, but it has not changed significantly. For Fiji trade openness has generally remained the same as trade-to-GDP ratio stood at around 70.0 percent in 2018 compared to 66.0 percent in 1980. Trade fell in most part of 1980s and started to pick-up after 1986 till 1990. It generally trended upwards from 1992 to 2008 when trade openness ratio reached 80.0 percent. Trade fell 2009 due to the Global Financial Crisis (GFC) and after the crisis. After 2013, trade has started to trend downwards with a pick-up noted from 2016. For Papua New Guinea's overall trade has trended upwards since 1980 (48.0 percent) to a significant increase in 2008 (77.0 percent). Following the GFC it has declined to 66.0 percent in 2017. The Solomon Islands trade openness rose from 1982 to 1988 (109 percent). It noted consistent decline from thereon to 2002 (32.0 percent). From 2003 onwards, trade openness has generally trended upwards and stood at 75.0 percent in 2018. Samoa's trade accounted for less than 50.0 percent of GDP and remained fairly constant. Vanuatu's trade openness rose over the last three decades and suddenly declined in the period 2010–2017.

4.4 Trade openness and diversification

Trade is undiversified in most of the PICs region which affects development of productive capacity and economic transformation which is critical to poverty reduction among other things because it helps move unemployed and underemployed into productive and expanding economic activities.³⁵

Most PICs rely on tourism for economic and social development and improvement to lower poverty, given the limited opportunities for trade in goods. The Asia-Pacific region has

emerged as the second largest source of global tourist departures.³⁶ Expanding tourism industry can also support the agriculture sector if supply chain between these two industries are improved. For Vanuatu, the tourism sector and agriculture sector are not strongly linked and a stronger link should be made between the two sectors.³⁷ However, in order to gain fully from this, the PICs may need to work together to market the unique culture present in the PICs and Government policies should be geared towards increasing investment in the tourism sector and promoting agriculture-tourism linkages. However, with the expanding tourism/services industries demand of skilled workers in the PICs have also increased with most workers switching from primary industries/ subsistence to services sectors especially tourism related. This can significantly impact on income inequality. Moreover, dominance of a major export commodity such as the logging industry in the Solomon Islands have risen, yet incentives to value add or diversify timber and timber products are not noticeable.

4.5 Access and affordability of goods and services

The PICs are geographically disadvantaged as they are located far from major trade hubs. Introduction of supply-chain partnership models can help build partnerships between the private and public sectors and these programs leverage technical and financial resources can potentially expand the possibilities for cost sharing on service delivery and provide rural villagers with access to markets.

Connecting the poor/rural produce to global markets and exposure of farmers to international competition remain an issue. Fiji—as with other PICs—continues to improve infrastructure and facilitation of access to information technology. The government is committed to building public utilities—upgrade of roads (including farm roads), bridges, electricity and water supply, market stalls—to improve market access for both urban and rural areas. Poor transport infrastructure affects Papua New Guinea and limits market access and marketing services coupled with poor delivery of fresh food products, limited financial services and general lack of law and order.³⁸ In Vanuatu, it is estimated that more than 60.0 percent of local farmers sell market produce on a commercial or irregular basis.³⁹ Irregular or inconsistency supply of fruits and vegetables to the market is a common challenge and also difficulties arise in meeting the quality or standards for overseas markets produce due to primary requirement of the agriculture sector.

Furthermore, larger PICs have more trade with large industrialised countries which limits trade within the region. According to Chen et al (2014), the large and resource rich PICs mainly export to Australia and New Zealand followed by North America and the Euro zone. The resource exporting small PICs and other small states mostly export to North America and the Euro zone. Interestingly, exports to China from resource rich large and small economies have also increased in recent years.

Goods consumed by poor in the PICs should be affordable. Suppose that goods consumed by poor should be non-tariff items. On another note, Government depends on tariff to increase Government revenues. Given the alarm increase in non-communicable disease in the PICs, related consumable goods are also subject to relatively high trade barriers. On the other hand, tariff reductions reduce costs of imports and exports and increase trade expansion.

Involvement of the PICs in the extraction of tradable natural resources were often being an issue due to exploitation of natural resources, given the smallness size or scope of land in most PICs. On another issue is that trade capacity is often limited by cultural and traditional beliefs and structural constraints.⁴⁰ This suggests that trade policies need to be designed in such a way that enables a more sustainable use of environment.

4.6 Access to finance

Goff and Singh (2014) suggested that benefits of freer trade seem to bypass the poor and conclude that trade openness only tend to reduce poverty in countries where financial sectors are deep, education levels are high and institutions are strong.⁴¹ In Solomon Islands around 45.0 percent of the population are unbanked according to the Pacific Finance Sector Brief (2019) due to lack of school, low income and lower progress of financial inclusion. For Samoa, almost 49.0 percent of Samoa's adult population are excluded from the formal finance sector.

On the other hand, Papua New Guinea, Solomon Islands and Fiji are pacing their export diversification on natural resources such as gold, pearls, crude petroleum, and garments, and that makes it attractive for each underline economy to find alternative financing options.⁴² For the PICs, the provisions of government welfare funds, concessional loans from official donors, and funding for climate change are in place for sustainable pathways, as they strive to achieve SDGs on poverty, hunger, housing, education, and health.

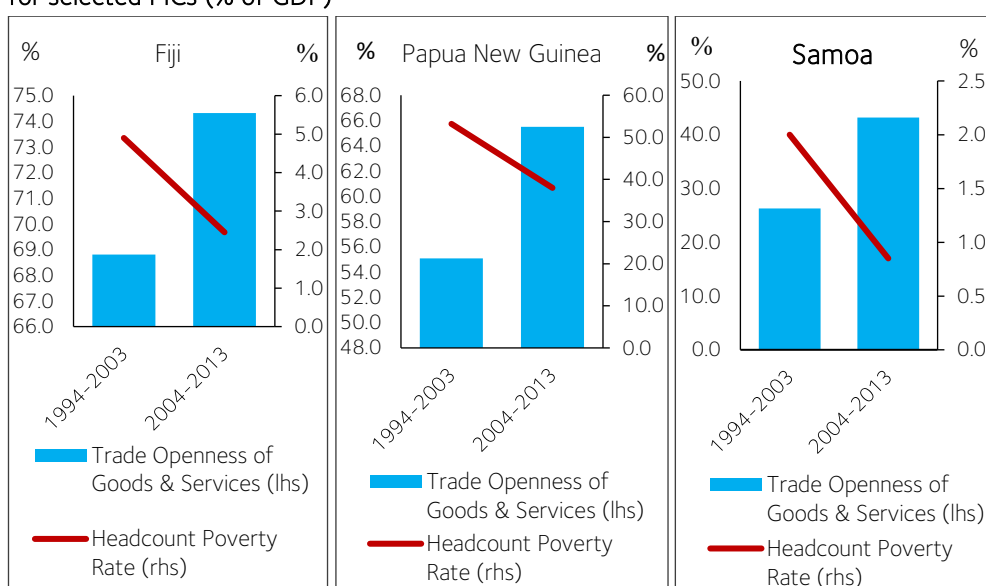
Financial sector in the PICs plays an important role in development of infrastructure to facilitate expansion of trade. This includes funds for expansion of production plants, improving existing facilities to meet the export market requirements and enabling remote and rural dwellers to play more active role in trade and commerce through financial inclusion and e-commerce. Consequently, the ADB Pacific Finance Sector Brief (2019) also stated some challenges that were common to Solomon Islands and Vanuatu. This includes the lack of access to affordable capital and related support infrastructure, constraining development of domestic private sectors, and heavy reliance on foreign direct investment. Even a well-developed banking sector can only boost sectors that have comparative advantages and use domestic resources effectively.⁴³

5. Trade openness outcome and poverty reduction

In enhancing trade openness so that barriers to trade are lessened and that more trade integration within and out of the PICs region to take place, the PICs have entered into a number of trade agreements since 1976. The number of ratifications of international economic cooperation by the PICs have had a greater impact not only on economic trade openness but also on poverty reductions. Some major bilateral and multilateral trade agreements were the Australia-Papua New Guinea (1976), South Pacific Regional Trade and Economic Cooperation (SPARTECA, 1980), Melanesian Spearhead Group (MSG, 1993), Fiji-Papua New Guinea-EU (2009), Pacific Island Countries Trade Agreement (PICTA, 2001), Pacific Agreement On Closer Economic Relations (PACER PLUS, 2017), and the Pacific Islands-EU (Pacific-EU-CEPA, 2017).

Figure 12, shows the trends of trade openness in goods and services and poverty rate in Fiji between the periods, 1994–2003 and 2004–2013. The trend for Fiji, Samoa and Papua New Guinea is relatively the same. Trade openness has increased for the period 2004–2013 compared to 1994–2003. On the other hand, the poverty rates for Fiji, Samoa and Papua New Guinea for the period 2004–2013 have decreased compared to 1994–2003. Nonetheless, the magnitude of poverty reduction has varied across these regions. It was found that improvement in trade openness in the two decades (1994–2003, 2004–2013) somewhat contributed to extreme poverty reduction. Due to data limitations for trade openness and poverty rates, comparison between the periods 1994–2003 and 2004–2013 for Solomon Islands and Vanuatu were impossible. Given there are major common economic characteristics among all the PICs, Solomon Islands and Vanuatu apparently have showed signs of progress towards trade openness leading to reduce poverty.

Figure 12: Trade openness in goods and services vs extreme poverty headcount rate for selected PICs (% of GDP)



Source: World Development Indicators—World Bank and International Monetary Fund – Balance of Payment and International Investment Position Statistics, April 2019.

6. Conclusion

Overall, poverty have declined in the selected PICs but it remains high in the larger PICs like Papua New Guinea and Solomon Islands. Extreme poverty based on US\$1.90 per day income remains very low at close to zero for PICs like Fiji and Samoa. It remains high for Papua New Guinea, Solomon Islands and Vanuatu which means that more commitment is needed to eliminate extreme poverty by 2030. Due to lack of data on poverty for PICs, this research was only able to provide limited evidence of the link between trade and poverty reduction in the Pacific. If data on poverty is available in the future, this research would be expanded further to test the contribution of trade expansion on poverty using quantitative techniques. Nevertheless, some important observations were noted which are discussed in the following paragraph which could assist in policy formulation.

It has been noted that services trade is in deficit in Papua New Guinea and Solomon Islands compared to Fiji, Samoa and Vanuatu. In this regard, collaboration efforts are needed to grow services trade. Countries that lack resources generally have trade deficits. These countries need to focus more on developing the tourism sector. Papua New Guinea and Solomon Islands have lots of resources for trade and perhaps as a result, they have not focused so much on tourism. These two countries should start working towards trying to expand the tourism sector so that they can better economic growths and to lower overall poverty.

Literature shows that emphasis on the production of goods concentrated in rural areas can help reduce poverty. The PICs need to identify the important tradable export commodities in rural areas which they need to develop. Generally, rural dwellers are engaged in subsistence agriculture and should be encouraged to trade for a living. There needs to be a wholesome change in mindset in the PICs that is the transition from subsistence living into a cash-based economy and engage more and more rural dwellers towards trade and commerce. Women empowerment can also play a very important role in poverty reduction. Many women, especially in rural areas lack the support to pursue commercial trade. In this regard, training and awareness as well as the development of appropriate laws are needed to promote gender quality.

Concerns on damages to environment needs to be taken seriously to ensure sustainability of trade. There is a need to strengthen environmental laws. Trade negotiates need to consider the harmful effect of trade expansion on environment and impose penalties on those who do not follow environment laws.

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