

Agriculture and the Economies of Pacific Islands : Trends, Issues and Challenges

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Agriculture and the Economies of Pacific Islands: Trends, Issues and Challenges

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Abstract

This paper will provide an overview of the role played by the agriculture sector in the growth and development of Pacific Island economies. It will examine the key agricultural areas which could provide sources of growth for the Pacific Island economies. While examining these sources of growth, the challenges these islands countries will face with respect to harnessing these sources of growth will also be examined. The eminent threat of globalization and the rapidly changing global economy is also placing lot of pressure on these island nations to respond with changes in domestic policies. Results from the research reveal that PICs have a very narrow resource base and thus could be vulnerable to external shocks. There are a number of problems that are faced by the PICs which are similar in nature and could have major impact on the performance of PICs agriculture sector. These problems are highlighted and policy measures are suggested to turn these challenges into opportunities.

Introduction

The South Pacific islands are found in an area roughly bounded by the tropics and lying between 130°E and 125°W. The islands within the Pacific are group into three cultural grouping, namely Melanesia, Micronesia and Polynesia. The Melanesian islands are all relatively large archipelagos and include Papua New Guinea, the Solomon Islands, Vanuatu, Fiji and New Caledonia. Polynesia includes American Samoa, the Cook Islands, French Polynesia, Niue, Pitcairn, Tokelau, Tonga, Tuvalu, Wallis and Futuna and Western Samoa while Micronesian islands lie mainly north of the equator and include the Federated States of Micronesia includes Yap, Chuuk, Pohnpei, Kosrae, Guam, the Northern Mariana Islands, Marshall Islands, Nauru, Palau, and Kiribati. A common bonding between these groupings is the reliance of a large proportion of their populations livelihood on the agricultural sector.

While the stylised facts of growth for developing country states that they should grow at a rate 7 to 8% in real terms, PICs growth rate has been far too low. The economies have been characterized by low to negative GDP growth, low levels of investment, in particular private sector investment, low levels of savings, low foreign reserve, widening budget deficit and escalating public debt levels.

The poor growth performance and pressure from external forces led to PICs re-examining their growth strategies. However, this still did not lead to a major growth surge in the island economies. While at the global level, the era of state dominance in the areas of employment, investment, provision of goods and services is gradually declining, in the PICs, the state continues to play an important and dominant role.

The primary reason for state to continue its dominant role is the peculiar problems these island nations face arising out of their size in particular. The smallness of the island nation exposes them to a number of problems including:

- Terms of Trade;
- Economies of Scale; and,
- Domestic Market limitations.

The small size of the Pacific island countries renders the countries unable to influence their own terms of trade. Therefore, they are virtually a price taker in the export and import market.

The size also has an effect on the ability of the industries in these countries to achieve scale economies, indivisibilities, efficiency and competitiveness (Scitovsky, 1960) and scope economies (Streeten, 1996). Inability to achieve the minimum critical mass of economic activities has a direct bearing on the competitiveness of these countries. The small size of domestic market also results in domestic demand below the minimum required for efficient production (Armstrong, *et. al*, 1993).

Small island nations also generally tend to have narrow and limited resource base. These limited opportunities from resources which most of the developed nations have an edge on is quite serious and thus the most likely source of growth is investment in human capital (Table 1).

The lack of investment opportunities arising out of lack of non-labor resources is what Milner and Westaway (1993) refer to as capital shallowing. The narrow resource base and the other limitations outlined above makes these small countries specialize in a limited number of export goods. This makes them more vulnerable to natural disasters and price shocks. The case of small states vulnerability has been discussed widely by Brigiglio (1995) who developed a vulnerability index.

The narrow resource base and low levels of export have a significant effect on the country's ability to mobilise savings for investment and growth. The process of globalisation and resulting economic intergration could provide a means to bring in Foreign Direct Investment (FDI) to bridge the savings and investment gap. However, the move towards a more market-oriented growth is embedded in the notion of competition. Competition is the key pillar of surplus creation, investment and rapid growth. Even if the Pacific island countries move towards a more market oriented economy based on open market policies, they still cannot afford to ignore the agriculture sector. The agriculture sector has played a very important role in the growth and development of the Pacific island nations and it will continue to do so in the near future due its apparent lack of diseconomies of scale in the non-agr sector which makes it difficult to compete in the open market. Therefore, in this paper, we will examine in detail the agriculture sector of the Pacific Island economies and identify the areas in which sources of growth for PICs could be extracted.

Table 1 Basic Economic Indicators for Selected Pacific Island Countries

Country	Year	Variable GDP	Inflation	Growth rate of Exports	Growth rate of Imports	Budget Deficit as % of GDP	CA balance as % of GDP
Fiji	1999	9.5	2.0	19.4	25.3	-5.4	-4.5
	2000	-3.2	1.1	-6.8	-11.2	-6.6	-6.3
	2001	4.3	4.2	-6.8	-2.6	-6.9	-3.6
	2002	4.4	2.5	2.0	7.1	-6.9	-3.1
Papua New Guinea	1999	7.6	14.9	9.1	-0.1	-2.7	2.7
	2000	-1.2	15.6	7.3	-7.0	-2.0	9.9
	2001	-3.4	9.3	-13.7	-6.4	-3.6	9.4
	2002	-0.5	12.0	-23.7	2.1	-3.5	1.1
Samoa	1999	2.6	0.2	-2.3	20.8	0.3	-8.1
	2000	6.9	1.0	-25.6	-8.5	-0.7	-5.0
	2001	6.5	4.0	3.3	12.7	-2.3	-11.2
	2002	1.1	6.0	-10.3	9.2	-2.0	-12.3
Solomons	1999	-1.4	8.3	3.8	-15.5	-3.7	..
	2000	-16.0	4.8	-53.2	-14.8	2.9	-18.1
	2001	-13.0	1.8	-31.9	-11.5	-8.0	-13.3
	2002	3.0	11.0	6.5	-15.3	-3.0	-6.8
Tonga	1999	3.1	3.9	1.6	-28.9	-0.3	-12.8
	2000	6.7	4.9	-9.5	12.8	-0.4	-10.8
	2001	3.0	6.3	9.5	-1.6	-2.6	-10.7
	2002	3.0	4.0	76.9	18.6	-4.0	-9.7
Vanuatu	1999	-2.5	2.2	-24.3	9.3	-3.1	-5.4
	2000	3.7	2.7	6.0	-7.3	-7.4	2.1
	2001	-0.5	3.2	-27.0	0.5	-4.0	0.8
	2002	-0.4	2.5	5.6	-0.7	-3.0	1.7

Source: As cited in ESCAP 2003 report based on ADB, Key Indicators of Developing Asian and Pacific Countries 2002, vol. XXXIII (ADB, 2002), Asian Development Outlook 2002 (Oxford University Press, 2002) and Asian Development Outlook 2002.

Agriculture and the Pacific Island Economies

The growth trend of PICs could be explained by using the contemporary “modernization” theory introduced by Walter Rostow in 1960. Rostow, based upon his observations of the European nations, postulated that countries proceed sequentially through five stages of development (Fig. 1).

The first stage is characterized by a traditional society, an economy oriented around subsistence activities. Family labour is used to produce for household consumption and any excess produced is exchanged with others in the community. This has been typical description of the traditional Pacific island societies. The second stage, “preconditioning”, comes about when a society favours to move into the commercial arena. There are efforts made to make investment. The third stage, “take-off”, is marked by increased investment and a move towards a increased production and commercial activity. There is a shift in emphasis on activities which are labour intensive. The fourth stage involves diversification of the countries production and export base. There is emphasis on capital intensive industries and surplus extracted by

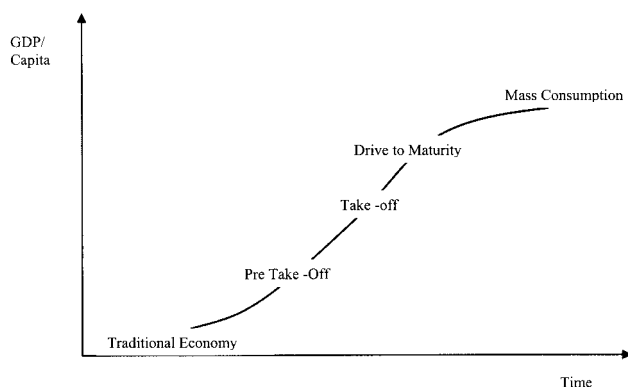


Fig. 1 Rostows Economic Stages of Growth

government is used raise welfare of the poor in the society. The benefits of economic growth starts to spread to the entire economy. The last stage involves move away from manufacturing towards service industries. High technology is used by consumer and producers and spending in public and privates sector escalates.

The PICs have small masses of land but are endowed with a large area of sea which provides them with a range of marine products. The land area size ranges from 26 km² for Tuvalu to 462,243 km² for PNG. PNG is the largest country with respect to land area. It has vast potential for agricultural production. PNG also has a good source of mineral sources, in particular gold and copper. However, the country has been torn apart due to two decades of civil war. The smaller countries are severely limited not only because of a smaller land mass, but also due to nature of these islands. Countries like Tuvalu, Tokelau, Kiribati, Niue are all atoll countries and therefore has very limited potential for agriculture. Instead, these countries have been heavily relying on the sea for sources of growth. They also are recipients of large amounts of aid and remittances which tends to raise their consumption much beyond their capacity to produce. Given the importance of the agriculture sector to Pacific Islands economy, the agricultural component in most of the PICs are very high, the highest is for FSM, 73% (Table 2).

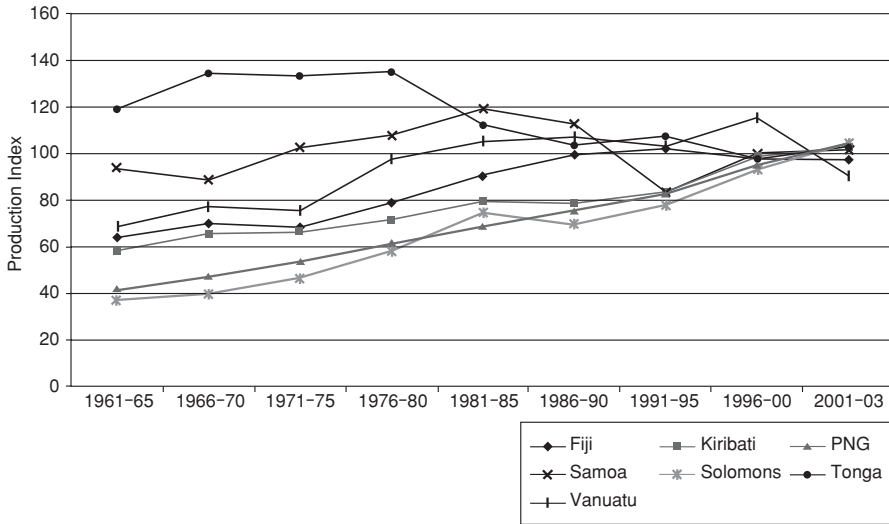
Table 2 Key Socio-Economic Profile of Pacific Island Countries.

Country	Population	Sea Area (km ²)	Agriculture as % of GDP	Land Area(km ²)
Fiji	819,000	1290	16	18,272
Cook Islands	18,000	1830	14	237
FSM	107,000	2978	73.2	701
Kiribati	87,000	3550	14.2	810
Marshalls	56,000	2131	13.8	181
PNG	5,500,000	3120	26.9	462,243
Samoa	177,700	120	14.3	2,935
Solomons	490,000	1340	43.5	27,556
Tonga	101,000	700	28.6	747
Tuvalu	10,880	900	16.8	26
Vanuatu	202,200	680	16.3	12,190

Source: ADB Statistics, 2004.

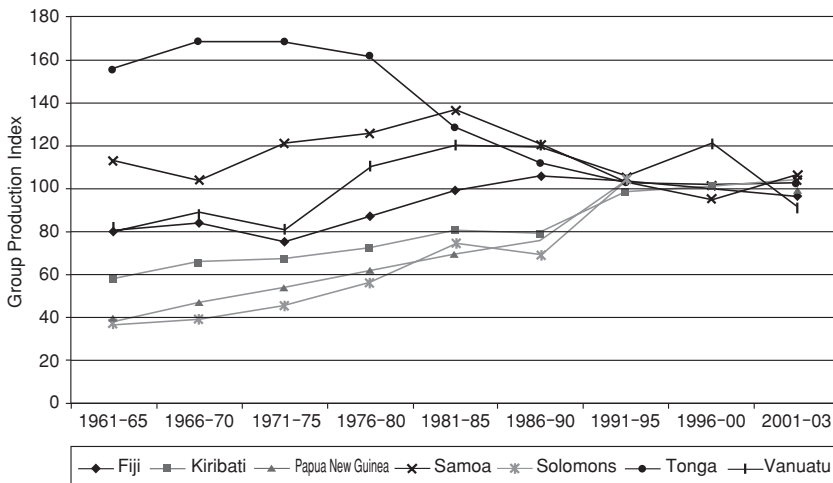
1)Trend in Agricultural Production

The FAO data base reveals that apart for Tonga, all the other agricultural production has increased (Fig. 2). Samoa’s agricultural sector was declining in the 1980’s but started to increase again from 1990. Fiji and PNGs agriculture sector output has been increasing steadily since 1960’s. Vanuatu also had a increasing trend but output started to decline since mid 1980’s.



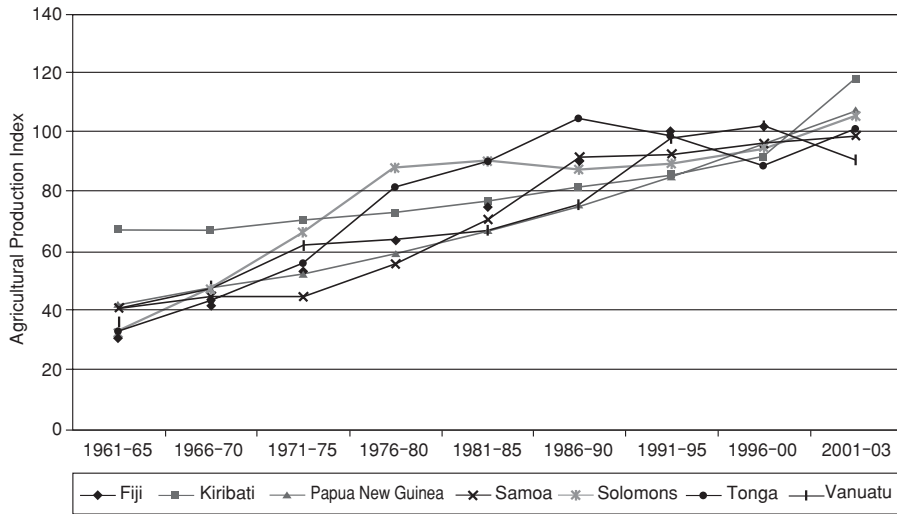
Source: FAO Statistics, 2004.

Fig. 2 Trend in Agricultural Production Index of PICs (1999-01 base year)



Source: FAO Statistics, 2004.

Fig. 3 Trend in Crop Production Index (1999-01 as the Base year)



Source: FAO Statistics, 2004.

Fig. 4 Trend in Livestock Production Index for PICs (199-01 as base year)

The trend in crop production is similar to the trend in overall agricultural production (Fig. 3). Samoa's crop production has declined along with that of Tonga. However, for the other countries, crop production has increased over the years.

An examination of the livestock production index reveals that it has increased for all the countries (Fig. 4). So what this implies is that the fall in agricultural output for Tonga and Samoa is primarily due to a fall in crop production and not in livestock production. Therefore, if policy makers want to raise agricultural production in these two countries, then they must examine the crop sector as the decline in agricultural output is due to a fall in crop production and not livestock production.

2) Production of Agricultural Commodities by Country

Most of the crops produced across the Pacific island countries are similar. The main agricultural products that Fiji produces are sugarcane, rice, copra and fish. However, due to opening up of the economies, rice production has declined over the years. Fiji is nearly self sufficient in poultry products, even in a competitive market. However, Fiji's agricultural sector is affected by the issue of Land Tenure system. Over 90% of the land is leased out and leases have began to expire since 1997. A large number of leases, which have expired, have been pulled out of agriculture thus leading to a decline in total agricultural produce. Fiji has also produced two mineral, Gold and Silver. Both of these have provided a steady source of revenue for Fiji and have created employment.

The other large agricultural producer in the Pacific is PNG. PNG has a potential to produce much more than what is being produced currently. However, due to civil war in the country for the last two decades, PNG has lost a great deal of its resources. The major crops produced by

PNG is Coconut, Copra, Sweet Potatoes and coffee. PNG also is the second country to have large deposits of Copper and Gold. Solomons, apart from producing copra and other agricultural crops listed in Table 3, produces a large volume of timber products. Tonga produces copra, coconuts and bananas in large volumes. However, there are two commodities that cuts across all island agricultural production and that is Copra and Fish. Copra is a commodity that is common to all Pacific island countries. It is produced and exported thus serving as a source of foreign exchange. Fish is a commodity that Pacific island countries have a natural advantage given such large EEZ's that they have.

Table 3 Production of Major Agricultural and Mineral Commodities by Pacific Island Countries (Metric Tons '000).

Commodities	1986-90	1991-95	1996-00	2-01
<i>Fiji</i>				
1. Sugarcane ^d	3674	3758	3454	3188
2. Paddy rice	29	22	14	15
3. Fish	12	15	17	15
4. Copra	16	12	13	17
5. Chicken	4	7	9	8
1. Gold, <i>kg.</i>	3666	3452	4214	3274
2. Silver, <i>kg.</i>	887	1286	1962	1635
3. Sugar ^d	427	446	355	305
7. Coconut oil	10	7	7	7
<i>Vanuatu</i>				
1. Bananas	10	12	13	13
2. Cocoa	2	2	1	1
3. Coconut	317	263	313	190
4. Copra	35	29	34	27
5. Maize	1	1	1	1
<i>Solomons</i>				
1. Cocoa	3	4	3	3
2. Coconut oil	3	4	7	0
3. Copra	31	26	24	2
4. Fish	36	44	40	18
5. Palm oil and kernels	20	35	31	0
6. Timber, '000 cu. m.	370	448	641	542
<i>Samoa</i>				
1. Coconut	164	118	130	140
2. Copra	20	9	6	0
<i>Tonga</i>				
1. Coconut	40	35	52	58
2. Copra	4	2	3	4
3. Bananas	3	1	1	1

Source: ADB Statistics, 2004.

Table 3 Table: Production of Major Agricultural and Mineral Commodities by Pacific Island Countries (Metric Tons '000)(Cont...)

Commodity	1986-90	1991-95	1996-00	2001-02
Tuvalu				
1. Copra	7	10	10	0
FSM				
1. Copra	1	1	1	1
Kiribati				
1. Copra	8374	10390	8693	6322
Marshalls				
Copra	5732	5375	4564	
PNG				
1. Coconuts	864	731	955	637
2. Sweet potatoes	474	467	466	490
3. Copra	139	110	148	172
4. Coffee	59	58	75	63
5. Cocoa	37	33	38	42
6. Rubber	4	5	7	7
7. Peanuts	1	1	1	1
8. Sorghum	1	2	3	4
9. Rice	1	1	1	1
1. Copper metal	204	199	117	154
2. Gold, m.t. ^e	34	59	57	64

Source: ADB Statistics, 2004.

3) Exports of Agricultural Commodities by Country

3.1) Value and Composition of Exports

The Pacific island countries export potential is very narrow and limited. Most of the countries export primary agricultural products and some do transform these primary products into secondary product. Fiji's main primary agricultural products are sugar, gold, fish and coconut oil. Fiji sugar industry has been receiving price which were three times higher than the world free market price and thus, this higher price than the market price, has led to a major expansion of the sugar industry. However, as world economies are changing and along with it the trading rules, Fiji's sugar producers will have to adjust their cost and productivity to remain competitive in a falling output price scenario. Cook islands has been exporting fresh fruits, copra and pearls. Fiji has also ventured into pearl production, but to a limited extent. The FSM has been exporting 4 major commodities, Fish and Shell meat and Banana and Copra. All these products show a declining trend in exports.

Smaller atoll countries have very few export commodities and these include, copra and fish

products for Marshalls, Copra and Handicrafts for Tuvalu. These narrow export based makes the country vulnerable to shocks. The relatively larger countries like Vanuatau, has slightly diverse export base and these include Beef, Cocoa, Copra and Timber. However, the export value of all these has been fluctuating over the last two decades. PNG probably has the largest range of products for export and these include Copper, Gold, Coffee, Cocoa, petroleum and palm oil. All these provides a very strong economic base for PNG. Samoa and Solomon's has a limited range of products for exports, mostly agricultural products. However, Solomon's has timber exports which Samoa and most other PICs do not have at their disposal.

So in summary, apart from PNG, the other countries have a very narrow range of products that are exported. The smaller countries like Tuvalu, Marshalls, Kiribati all these have great potential to harvest and export marine products in their EEZ. However, lack of technology, capital and skills have prevented them from exploiting these resource.

3.2) Direction of Trade for Pacific Island Countries

Direction of Exports: Table 4 & 5 provides the five major trading partner countries where PICs export their products. The five most important countries include Australia, USA, Japan, and Germany for most of the country in PIs. Japan was the only country which appeared the most number of times in the top five lists. Japan is a major destination of export products from Fiji, Cooks, FSM, Kiribati, PNG, Solomon's, Tonga, and Vanuatu. USA and Australia follows Japan in order of importance.

Table 4 Five Top Export Destination Countries for PICs (%).

Country	Fiji	Cooks	FSM	Kiribati	Marshalls	PNG	Samoa	Solomons	Tonga	Tuvalu	Vanuatu
Australia	19.7	26.3				24.3	60.3		1.5		
USA	27.2	11.6	18.3	3.2			10.1		37.9		
UK	10.7									43.8	
Japan	5.4	40.2	78.9	52.4		10.2		21.1	47.4		6.59
Samoa	5.2										
New Zealand		10.8							4.0		
Hong Kong		7.9									
Marshalls			0.2								
Thailand				21.5				8.9			
Bangladesh				4.31							
Korea				12.2		3.1		20.2			
China						3.9		7.5			
Germany						3.4	2.1			17.6	22.8
Indonesia							11.0				1.9
Philippines								9.96			
Italy										11.4	
Fiji									1.5	10.9	
Belgium											31.0
Chile											15.0

Source : ADB Statistics, 2004.

Table 5 Five Top Export Destination Countries for PICs (US\$m).

Country	Fiji	Cooks (NZ)	FSM	Kiribati	Marshalls	PNG	Samoa	Solomons	Tonga	Tuvalu	Vanuatu
Australia	121.9	2.3				645.9	47.4		0.4		
USA	167.9	0.9	1.9	1.1			7.9		9.2		
UK	66.3									0.5	
Japan	33.4	3.6	8.2	18.4		270.9		17.1	11.5		5.3
Samoa	32.3										
New Zealand		0.9							0.9		
Hong Kong		0.6									
Marshalls			0.02								
Thailand				7.6				7.1			
Bangladesh				1.5							
Korea				4.3		81.7		16.1			
Taiwan											
China						105.3		5.9			
Germany						90.7	1.6			0.2	18.2
Indonesia							8.7				1.6
Philippines								7.7			
Italy										0.1	
Fiji									0.4	0.1	
Belgium											24.7
Chile											12.0

Source: ADB Statistics, 2004.

Direction of Imports: In terms of imports for PICs, Australia appears in all countries top five import countries list (Table 6 & 7). Japan is second with USA followed by New Zealand. The close proximity of Australia and New Zealand gives them an edge over the other countries in terms of transportation. Its quite interesting to see that Fiji is also a preferred import destination for quite a large number of PICs. With the promulgation of free trade areas into the region, there will be a rise in the flow of goods and services within the region.

Table 6 Five Top Import Source Countries for PICs (%).

Country	Fiji	Cooks (NZ)	FSM	Kiribati	Marshalls	PNG	Samoa	Solomons	Tonga	Tuvalu	Vanuatu
Australia	40.6	6.5	3.5	30.4	2.8	50.3	14.2	30.4	12.5	5.1	19.1
USA		1.8	72.1	7.8	82.2	2.2	18.8	4.7	11.2	2.2	
Japan	4.0	1.2	12.0	7.6	6.9	4.4	11.1			10.9	23.3
New Zealand	15.9	76.9				4.2	19.9	5.0	32.2		8.3
Hong Kong					2.6						
France				18.6							
Thailand									4.4		
China	4.4				1.8						
Germany										0.9	6.2
Indonesia						3.0					
Singapore	12.5							19.2			11.8
Fiji		8.8		15.6			15.7	4.2	21.8	20.8	

Source: FAO Statistics, 2004.

Table 7 Five Top Import Source Countries for PICs (\$).

Country	Fiji	Cooks (NZ)	FSM	Kiribati	Marshalls	PNG	Samoa	Solomons	Tonga	Tuvalu	Vanuatu
Australia	322.9	6.9	2.9	20.7	1.4	581.6	31.9	32.3	9.9	2.4	28.3
USA		1.9	60.6	5.3	41.8	25.1	42.4	5.1	8.8	1.0	
Japan	31.6	1.3	10.1	5.1	3.5	50.5	24.9			5.1	34.6
New Zealand	126.7	82.1				48.8	44.8	5.4	25.4		12.3
Hong Kong					1.3						
France				12.6							
Thailand									3.5		
China	35.1				0.9						
Germany										0.4	9.2
Indonesia						34.9					
Singapore	99.0							20.5			17.6
Fiji		9.4		10.6			35.4	4.4	17.2	9.7	

Source: FAO Statistics, 2004.

Problems facing Pacific Islands Agriculture

The Pacific island countries are facing a number of challenges that affect its performance. These challenges include:

- 1) Dependence on a narrow range of exports;
- 2) Smallness and remoteness;
- 3) Susceptibility to Natural disasters.
- 4) Lack of Technology

1) Dependence on a Narrow Range of Exports

Small island nations tend to depend on a narrow range of exports. This high dependence on a narrow range of exports, coupled with a high degree of openness, renders the economies of small islands very vulnerable to changes in external demand for these products. Interestingly, while the theory of trade suggests that countries should specialize in goods and services in which they have a comparative advantage, in the case of small states such specialization exacerbates their vulnerability to conditions outside its control.

2) Insularity and Remoteness

Cost of doing business are also affected by the high cost transportation arising from the remoteness feature of small island states. Furthermore, not only importation costs contributes to high production costs and thus its impact on the competitive edge of exports, the Pacific island producers also face lack of available transport to freight produce to external markets. These problems could remain for sometime as the feature of remoteness is one which cannot be overcome by easily.

3) Susceptibility to Natural Disasters

The Pacific island economies, has been subjected to a range of natural disasters on a periodic

basis. Natural disasters affects the economy in two ways, one by destroying a significant proportion of the capital stock and secondly by its direct effect on output (Reddy, 2000). The capital stock loss affects has an effect on the economy over a longer run period.

Between the periods 1961 to 1999, Fiji was subjected to 35 natural disasters (see Reddy, 2000, for detail description of these disasters). The three major types of natural disasters are cyclones or hurricanes, flooding and droughts. The immediate cost of these natural disasters run into millions of dollars with the highest one in 1993 incurring a loss of F\$154m, approximately 18.8% of the total government expenditure (Reddy, 2000). The narrow resources based coupled with a limited number of primary export base could be crippled by natural disasters and thus lead to a collapse of the economy.

Self Inflicted Vulnerabilities

1) Political Instability and Role of Armed Forces

Some of the Pacific island countries have faced internal political unrest which has result in loss of property and life. It has also led to a fall in investor confidence and withdrawal of investment. Some of these countries which has faced such problems are Fiji, PNG and Solomons. Fiji has been experiencing political instability since 1987. One of the main causes of such instability could be the relatively large size of its armed force, which total just over 5000. The military has mixed allegiance, to the chiefs and to the Head of State.

In 1987, the military took over the government and abrogated the constitution. This led to massive economic and social problems in the country. Economic growth was negative in the same year and low in the following years. The country witnessed massive financial and human capital loss during these years. In 2000, just when the economy rebounded with high growth rate, a unit within the forces took over the government again pushing the economy and the nation into another crisis.

2) Loss of Human Capital

Political unrest and instability followed by discrimination and marginalization has led to loss of significant human capital from the island nations. Fiji has been losing a significant proportion of its human capital from the early days of independence. However, the number has increased since 1987 following the military coups (Fig. 1). The two key human capital sectors i.e. education and health have both been greatly affected due to the continued loss of professionals. During 1987-1999, teachers were the single most dominant professional group that Fiji has been losing. Of the total professionals, teachers accounted for about 31% and architects, engineers and related technicians nearly 21%. An average of about 164 teachers left Fiji every year during the same period. In addition, there has been a loss on an average of nearly 69 medical, dental, veterinary and related workers annually. More than 500 professionals left Fiji annually during this time (see Table 5).

Prior to the military coups in 1987, the only pull factor was the wage differential between Fiji and metropolitan countries. However, the military coups provided the push factors which resulted in an exodus of migrants from Fiji. The expiry of land leases and the resulting eviction of farmers has further added to this push factor.

Loss of human capital affects agricultural growth in a number of ways. One is its direct impact from lack of skilled personal which has arisen due to emigration. The second is the loss of personnel from other sections will lead to a rise of wage rates in this sector and will pull labor from agricultural sector into these sector. This will lead to a rise in wage rates in the agricultural sector and thus make its product less competitive in the export market.

3) Land Tenure Issues

The Pacific island countries have at least one issue in common which could turn out to be the only obstacle for a purely market based economy. This is with relations to land, which, in almost all PICs, are communally owned (Table 8). Those land that is used by the communal group, could end up in poor condition given the nature of commons, where all wants to maximize its benefit, without any concern for the rest or the next generation. Those land which are not required by the communal groups, it is leased out. However, the leasing conditions has often been not very conducive for major productivity enhancing investments. A current example is the land tenure system in Fiji where most of the land in Fiji is communally owned and is leased to tenants for agricultural or non agricultural use. The Land tenure system has become more complex since a large number tenants are of Indo-Fijians which are embroiled in a political struggle with the ruling indigenous Fijian government. As the leases began to expire, the Fijian leaders were reluctant to renew the leases and for those that they were willing to renew, they wanted to renew it under a new legislation which would further safeguard their interest and raise the returns to land. However, the Indo-Fijian leaders has rejected the new

Table 8 Communal Land in the Pacific.

Country	% Land in Communal Ownership
Solomons	83
Niue	100
Fiji	89
Tokelau	100
Tonga	74
Vanuatu	92
Tuvalu	100
Kiribati	89
Nauru	--
Marshalls	--
Western Samoa	80
Papua New Guinea	97
Cooks	15

Source: As cited in ESCAP 2003 report based on ADB, Key Indicators of Developing Asian and Pacific Countries 2002, vol. XXXIII (ADB, 2002), Asian Development Outlook 2002 (Oxford University Press, 2002) and Asian Development Outlook 2002.

proposed legislation on grounds that it does not protect the interest of the tenants adequately and may in fact exploit them. This battle has led to a large proportion of land, which was leased to the Indo-Fijian farmers, reverting to the Native Land Trust Board (NLTB), the trustee of the landowners, thus moving out of production. The fall in agricultural output, in particular, sugarcane, has led rise to major social and economic problem in Fiji. Land will continue to play a central role in the growth and development of Fiji as it has done in the past and unless an appropriate legislation is adopted with the consensus of the stakeholders, it will continue to weaken the economy.

4) Bad Governance and Its Impact on Public Expenditure

The small island states of the Pacific are relying a lot on the state to provide back up support, particularly in terms of marketing, infrastructural development and finance. However, bad governance has led to loss of a significant proportion of the public sector resources which has affected the ability of government to undertake such activities. As such, agricultural development are affected.

Policy Measures to Address the Challenges

Given the inherent problems and challenges faced by the PICs needs to be turned into opportunities. This could be done by:

- Improving competitiveness;
- Building sound macroeconomic environment;
- Strengthening the transport and communications infrastructure;
- Diversification of the economy;
- Improving the capacity of SIDS to manage their ocean resources; and,
- Improving governance.

1) Improving competitiveness

The conduct of business in the global market has changed markedly and developing countries are gradually responding to these changes by adopting appropriate policies. The PICs has begun the reform process, but much remains to be done to have a competitive market. The labor market is heavily protected, most of the land is communally owned with property rights governing its use under dispute. In addition, the financial market is very small and behaves oligopolistically (in most countries) in terms of interest rates and lending. Unless these anomalies are corrected, PICs will have difficulty in fostering a competitive environment to promote stable growth.

2) Building sound macroeconomic environment

A sound macroeconomic environment should deliver low inflation rates, low levels of budget deficit, low levels of debt, improvements in trade and current account balances and stable exchange rate regime. If PICs can achieve and maintain this, then it will be in a strong position to recover from any shock. While this objective is on PICs agenda, progress in this regard in

PICs has been slow.

3) Strengthening the transport and communications infrastructure

Transport and communications infrastructures are very important for PICs due to the fact that the countries are remotely located. Infrastructure development in PICs are lagging behind and is a major impediment to business development. PICs have to re-examine its budgetary expenditure allocation to ensure that resource allocation for infrastructural development takes priority. The PICs currently spend a large proportion of their annual resources on administrative expenditure. The long-term strategy should be to cut operating budget, raise capital component of the infrastructure budget and aim for 7-8% real growth of the economy on an annual basis. Such growth should deliver increased revenues to government coffers and thus reduce the debt burden over the longer run period, releasing funds for infrastructural development.

4) Diversification Possibilities

PICs have relied to a large extent on a narrow range of products for its export, which renders it quite vulnerable to shocks to these industries. Furthermore, under the current growth strategy, there is excessive reliance on tourism earnings, which are highly volatile. On the other hand, the agriculture sector has not received as much attention. In Fiji, this sector plays a very crucial role in distribution of income to the rural dwellers and has a very strong multiplier effect.

Given the narrow resource base and small size, Fiji tends to import most of its industrial supplies. While the theory of comparative advantage suggests that a country should produce only that commodity in which it has a comparative advantage, there are other areas products that could be developed with equally good efficiency to hedge against potential shocks that specific to products or product types. Fiji has potential in cash crop agriculture, which has market both locally and externally (particularly New Zealand, Australia and Hawaii). There is also lot of potential for export of marine resources from Fiji to Australia, New Zealand, Japan and USA. More work needs to be done to explore the timber industries for export purposes. If Fiji strengthens these areas, then it could be better placed to withstand shocks in any particular industry.

5) Improving the capacity of SIDS to manage their ocean resources

PICs enjoys jurisdiction over a 200 mile Exclusive Economic Zone. Ocean resources are therefore major potential source of wealth for the country. Unfortunately, ocean resource management is a serious problem in Fiji and the other Pacific Islands. This problem is found at both commercial and subsistence levels. At the commercial level, there are concerns raised that licenses given to fishing vessels which has exceeded the maximum number allowable, thus raising issue of unsustainability. At the semi-subsistence levels, there are also concerns that the open access system of property rights can lead to depletion of Fish stock. Under this system, fisherman pays a fixed amount fee to harvest unlimited amount of stock. There has to be some means of levying fee on stock, which would discourage fishing beyond a certain amount. Also based on an estimate of the stock the number licenses should be limited unlike the current

practices. At the commercial level, the maximum number of allowable vessels should be strictly adhered to.

The University of the South Pacific's Marine studies program should re-examine its courses and training in technologies that would lead to the sustainable use of the resources of the ocean. The marine resources should be further explored for potential energy sources.

6) Improving governance

Bad governance is leading to the unproductive use of a large proportion of public sector resources. Most importantly it is leading to bad management of the islands resources. Cases of bad governance are more evident during periods of political instability and lawlessness. Fiji, Solomons and PNG has witnessed massive loss of state resources during periods of political crisis and also years following the coups and political crisis. In order to curb such cases of abuse of public sector resources, the Auditor Generals report must be taken seriously and those implicated must be charged and punished according to law. This would send positive signals to others as well. Furthermore, proper accounting procedures must be put in place and strictly adhered to all times.

7) Improving the Land Tenure System

While land may continue to be under communal ownership, an appropriate legislation which provide long term, secure leases to the tenant community while providing a market based rent to the land owners may provide the required incentive for competitive growth.

Summary and Conclusion

This paper has examined challenges and opportunities for Pacific Island countries have to pursue a agricultural sector led growth. These countries are at the cross roads, struggling to achieve rapid growth amid challenges from both the domestic and the external fronts. The challenges need to be transformed into opportunities and to do so, major reforms needs to be implemented. For these reforms to deliver the ultimate objective, certain fundamental prerequisites needs to be in place.

These fundamentals include well-defined property rights, political stability, good governance of public sector resources, macroeconomic stability and confidence in the country. At the moment, all these requirements are lacking. Some governments have launched reforms to change the economy into a more market oriented one. Unless the countries are adequately prepared to meet the challenges of a free market, growth will not be promoted, and unemployment and poverty could increase. In addition, the economy will become more vulnerable financially to external shocks. Therefore, the long-term strategy to make an economy more resilient is to ensure that the fundamentals required for a market-based ideology are in place first before allowing market to allocate resources.

PICs also have to examine ways in which it could partner with larger countries both within the region and outside the region to gain access to capital and technology to assist them in harvesting their resources. The Pacific Island Forum could assist them in accessing the funds and also provide a framework for forming partnership in resource extraction, production and export. In this day and age, working in partnership with countries of similar interest will allow for the pooling of resources, ideas and skills which could alleviate some of the major constraints. Such pooling which would create supply will also create demand, much larger than what would have been for a single country. So the longer term strategy for PICs would be to forge not only agreements in trading, but also in production and resource extraction.

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Appendix 1 Value of Primary Commodity Exports from Pacific Island Countries.

Country	1986-90	1991-95	1996-00	2001-02
<i>Cook Island (NZ\$,000)</i>				
2. Fruit - fresh and canned	1213.5	851.0	368.8	133.4
3. Copra	87.4	1.3	0.0	0.0
4. Pearls	1607.2	2789.7	4310.9	6799.5
<i>Fiji (F\$m)</i>				
1. Sugar	109726.9	135795.1	142522.8	129214.7
2. Gold	36501.5	33396.8	42770.2	46231.8
3. Molasses	5209.8	6730.0	7625.3	6189.4
4. Coconut oil	2352.0	2194.5	3812.3	2345.4
6. Fish	20987.5	28147.7	34676.1	53229.1
<i>FSM (US\$'000)</i>				
1. Trochus shells/meat	420.0	294.4	115.0	
2. Copra	393.2	239.25	58.0	
3. Fish	595.8	32170.2	4815.0	
4. Banana	68.6	404.4	55.0	
<i>Kiribati (AUS\$,000)</i>				
1. Copra	1292.1	2732.7	3362.1	
2. Fish	1107.4	239.7	268.7	
3. Seaweed	159.3	235.3	596.3	
4. Shark fins	18.1	156.6	146.9	
<i>Marshalls (US\$,000)</i>				
1. Crude coconut oil	1439.6	1954.8	1947.0	
2. Chilled and frozen fish	226.8	9712	13169.0	
3. Pet fish	78.75	444.2	294.0	
4. Copra cake	73.0	131.8	789.0	
5. Handicraft	15.0	10.4	4.0	
6. Trochus shells	235.0	70.4	188.0	
<i>PNG (US\$,m)</i>				
1. Copper	315.8	403.0	442.0	929.0
2. Gold	387.4	727.4	1243.0	2281.0
3. Coffee beans	140.2	131.3	341.0	220.0
4. Forest products	92	318.3	332.0	316.0
5. Cocoa	46.6	35.3	78.0	159.0
6. Crude petroleum		662.4	1209.0	1660.0
7. Palm oil	31.22	83.12	261.0	352.0

Appendix 1 Value of Primary Commodity Exports from Pacific Island Countries (cont..).

Country	1986-90	1991-95	1996-00	2001-02
<i>Samoa (WST,000)</i>				
1. Banana	14	99.7	218.9	81.75
3. Cocoa	971.2	3.0	0	0
4. Coconut cream	2047	2294.0	2137.0	1735.0
5. Copra	742.2	562.75	2484.7	390.0
6. Fresh fish	0	125.0	9743.0	16257.5
8. Taro	2396.4	2140.3	145.8	453.5
9. Timber	222.8	43.4	100.6	6.0
<i>Solomons (US\$m)</i>				
1. Cocoa	8546.6	14174.6	25234.0	16132.0
2. Copra	12754.6	20563.6	31718.0	1325.0
3. Fish (fresh, frozen, smoked and canned)	62333.2	104366.6	146793	54044
4. Palm oil and kernels	12203.8	38901.6	58745	119
5. Timber	40215.8	182377.2	269446	222303
<i>Tonga (US\$m)</i>				
1. Squash	3410.5	10251.5	6274.0	3000.0
2. Fish	1087.0	2494.0	3468.0	250.0
3. Banana	736.6	265.0		
4. Coconut oil	1195.4	325.0		
5. Desiccated coconut	419.5			
6. Vanilla beans	1825.4	2628.6	632.0	150.0
<i>Tuvalu (US\$m)</i>				
2. Copra	34.2	15.0	4.0	
3. Handicrafts	4.8			
<i>Vanuatu (V\$m)</i>				
1. Beef	254.8	402.4	391.0	217.0
2. Cocoa	188.4	185.8	175.0	104.0
3. Copra	682.2	811.4	1486.0	249.0
4. Timber	134.4	210.8	434.0	266.0

Source: ADB Statistics, 2004.