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**FOREIGN AID AND ECONOMIC GROWTH OF  
THE SOUTH PACIFIC MICROSTATES:  
SELECTED CASE STUDIES OF THE COOK  
ISLANDS, KIRIBATI, SAMOA AND THE  
SOLOMON ISLANDS  
(1970 – 1995)**

A Research Thesis submitted in fulfilment of the requirements for the  
degree of Masters of Applied Economics at Massey University

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# ABSTRACT

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The purpose of foreign aid has traditionally been to assist developing countries to progress through the transition period from economic stagnation to self-sustaining economic growth. For most island economies foreign aid is a key factor in their economic growth and development. It provides a source for foreign exchange, fills the investment-savings gap and meets the shortfall in resource needs. This study presents an empirical analysis of the relationship between foreign aid and economic growth for the South Pacific Microstates (SPMs) of the Cook Islands, Kiribati, Samoa, and the Solomon Islands. A neoclassical production function is employed to evaluate the aid-growth nexus. The Auto-Regressive Distributed Lag (ARDL) method to cointegration regression is applied to time series data for the period 1970 to 1995 for each of the selected case studies. The various components of foreign aid such as bilateral, multilateral, grant, loan, and technical co-operation aid are utilised to evaluate the disaggregated effects of foreign aid on economic growth. Other determinants of growth such as investment, domestic savings, government consumption and exports are also included in this analysis.

Empirical evidence indicates that foreign aid and its various components i.e. bilateral, multilateral, loan, grant, and technical co-operation aid, has not contributed positively or significantly to the Cook Islands and Kiribati's economic growth. The poor performance of government authorities in these South Pacific Microstates is the best explanation for such an outcome. The results for the larger SPMs of Samoa and the Solomon Islands show positive aid-growth relationships. As such, bilateral, grant, and loan aid contributes to economic growth for Samoa. In the case of the Solomon Islands the results are more interesting with various components of foreign aid having a stronger influence on economic growth than the aggregated form of foreign aid. That is, the impact of bilateral, grant, and technical co-operation aid on economic growth is positive and significant in the long-run.

As for other determinants of economic growth it is apparent that exports is the only factor that significantly contributes to the economic performance of all these SPMs. Government consumption and the labour force has been productive for Samoa, however, the Cook Islands, Kiribati and the Solomon Islands display negative or insignificant results for these variables. Investment provides strong support for the economic growth of both Samoa and the Solomon Islands, however, in the case of the later it is a short term impact. Domestic savings in these two SPMs are well below investment levels and do not contribute to their country's growth performance.

Overall, it is seen that domestic resources (i.e. exports) have a stronger influence on the economic performance of the Cook Islands and Kiribati compared to foreign resources (i.e foreign aid). However, with limited growth of the domestic resources in these SPMs it is difficult to maintain sustained economic growth while relying on exports only. The challenge for the Cook Islands and Kiribati is to improve the productiveness of foreign resources and reduce large and inefficient government sectors. As for Samoa and the Solomon Islands the performance of domestic resources contributes more to the economies of these countries than foreign resources. Moreover, foreign resources also contribute to economic growth. For Samoa and the Solomon Islands to benefit and sustain economic growth and development, it is important to implement policies that encourage private sector development and also have a stable economic environment.

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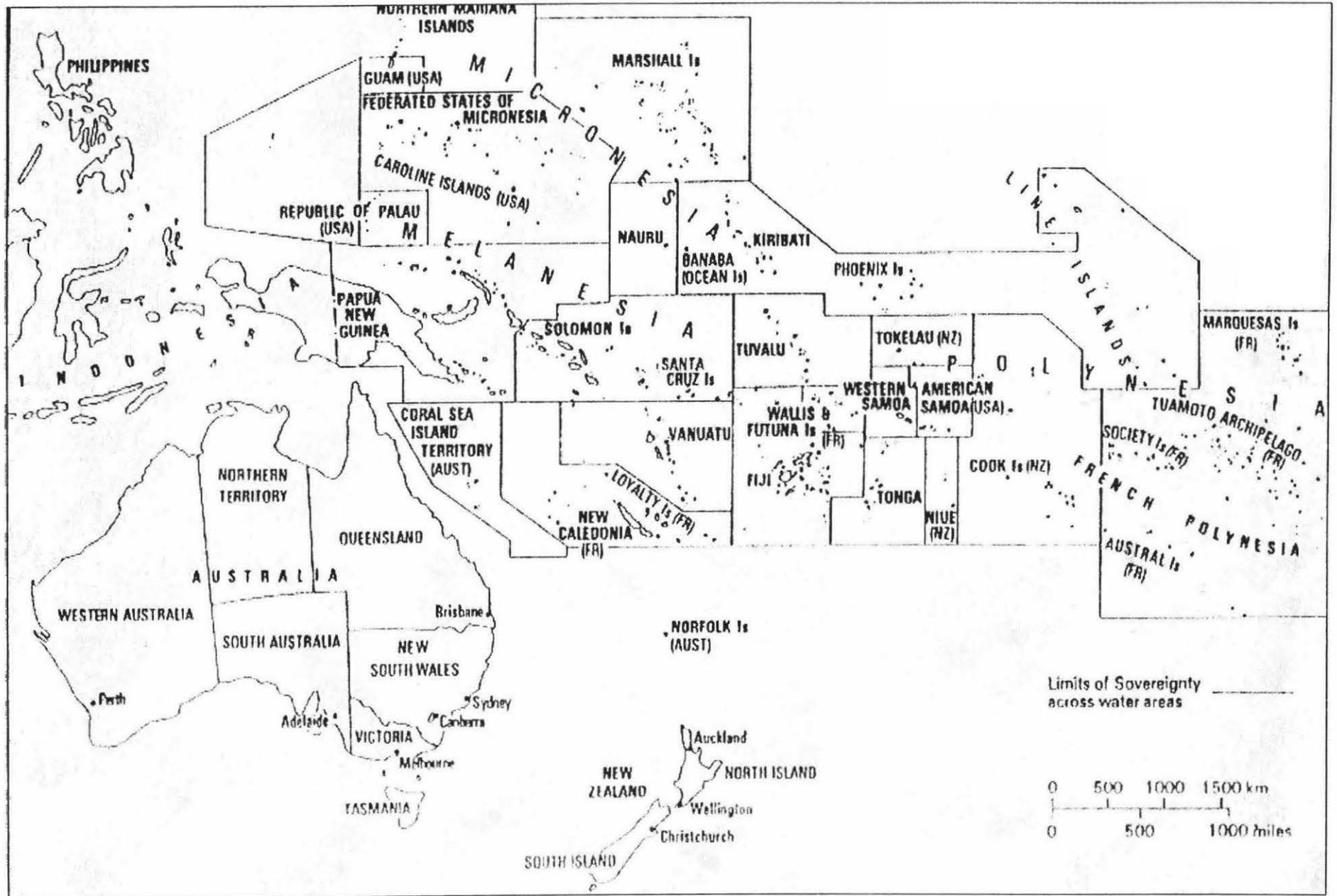
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## LIST OF ABBREVIATIONS

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ADB	Asian Development Bank
AIDB	Australian International Development Bureau
ARDL	Auto-Regressive Distributed Lag
CPI	Consumer Price Index
EU	European Union
GDP	Gross Domestic Product
GNP	Gross National Product
IMF	International Monetary Fund
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PMCs	Pacific Member Countries
RERF	Revenue Equalisation Reserve Fund
SIDS	Small Island Developing States
SINS	Small Island Developing Nations
SPESS	Selected Pacific Economies Statistical Summary
SPMs	South Pacific Microstates
UK	United Kingdom
UN	United Nations
USA	United States of America

# MAP OF THE SOUTH PACIFIC REGION



# CHAPTER ONE

## Introduction

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*The possessor of integrity is ready to defend the dignity of his own lifestyle against all physical and economic threats.*

*Erik Erikson (Psychologist)*

As the world enters the new millennium the island nations of the South Pacific are faced by a constant battle to improve the lives and welfare of their people. After decades of self-rule and the generosity of former colonial powers, the struggle for self-sustained growth and becoming viable economic entities for most of these nations is a cause for real concern. The road towards development for most nations of the South Pacific has been a slow and arduous one. The changing directions of development has not been helpful to these island economies due to the limited resources, thus leading to higher dependence on external sectors. Academics and researchers in the past have pointed out that most of these island states are behind in terms of development and face grave difficulties in further attempts to develop (Fairbairn, 1985: Knapman, 1986: and Cole, 1993). The South Pacific economies have implemented various development projects and programs assisted by donor countries and organisations that have aimed to create a sustainable standard of living for the local population, however the results have been mixed. This, however, is no surprise as the history of world development clearly illustrates that such results are not uncommon (Nihal, 1988: Rondinelli, 1993: and Chambers, 1993).

The failure of industrialisation in the 1950s and the confusing outcomes of the green revolution technologies in the 1960s are some examples that provide support to this view. The problems and hardships of development are not only confined to the South Pacific region but are common all over the developing world. Thus failure of development programmes is a common

occurrence and it is more a matter of learning from past mistakes and determining a clear direction forward. This requires a good understanding of development and how it can create a better life for all concerned, that may eventually bring improvement to the standard of living of the people and children of the South Pacific. There is also a note of caution: Lewis T. Preston, former president of the World Bank, warns that 'development theory by itself has little value unless it is applied, unless it translate into results, and unless it improves peoples lives' (cited by Todaro, 1997, p.69). The challenge is, therefore, to effectively implement theories of development to alleviate poverty, malnutrition, diseases, unemployment and inequality.

## **1.0 Background of the Study**

The island states of the South Pacific are scattered over a vast stretch of ocean. The total land area of all the island states put together is a mere 551,000 square kilometres. However, the sea area under its jurisdiction is estimated to be 28 million square kilometres (Bauer, Siwatibau and Kasper, 1991). Refer to the map of the South Pacific region on page XI. These island states display a wide diversity of physical and economic characteristics. For instance, the large mountainous land mass of Papua New Guinea (PNG) with a population of 4.3 million in 1997 and a land area of 462,243 square kilometres - contrasts sharply the small atoll countries such as Tuvalu with a population of only 9,630 in 1997 and a land area of 26 square kilometres (Ministry of Foreign Affairs and Trade, 1998). The many islands of the South Pacific can be categorised into three main groups. The Melanesian group includes the large rugged islands of Papua New Guinea, Vanuatu, the Solomon Islands and Fiji. These islands are mainly volcanic, rich in natural resources, minerals, and fertile land. Similarly, these islands have larger populations with high rates of growth. The Micronesian group consists of groups of smaller islands scattered in the north east region of the South Pacific Ocean. It includes the Federated States of Micronesia (FSM), Tuvalu, Kiribati and the Marshall Islands. Some of these islands are endowed with rich soils, but most of them are isolated atolls with poor soil. Sea resources

are plentiful in these islands but it is yet to be fully developed. The Polynesian group includes Tonga, Samoa, Cook Islands and Niue. These islands, like those of Micronesia consists of groups of smaller atoll islands with the exception of Niue. Tonga, Samoa and the Cook Islands to some extent have good soils but relatively limited natural resources.

For the larger and resource rich islands of the Melanesian group there is great potential and opportunities to achieve economic independence and a reasonably level of self-sufficiency. These countries also include Tonga, Samoa and the FSM. Bauer, Siwatibau and Kasper (1991, p.21) note economic independence and self-sufficiency 'will depend on a number of preconditions being fulfilled, including sound macroeconomic management and enlightened commercial policies that help release the initiative and energies of the private sector'. Thus, the prospect of economic growth and development for these larger islands are good. The concern lies more on smaller, resource poor and isolated island atolls. The Cook Islands, Niue, Tuvalu, and Kiribati all face difficulties and share almost all common problems of development. These island states are not only lacking in natural resources but have scarce and poor quality land. All of them have a high dependence on external aid for development projects and programs. The existing levels of consumption and welfare can only be sustained through continuing foreign aid. The population growth rates for the Marshall Islands and Kiribati are rather high but for Niue, Cook Islands and Tuvalu it is relatively low. For the Cook Islands and Niue it is more a case of unrestricted migration to New Zealand. The economies of these island states revolve around 'the external prices of copra and other minor crops; the inflow of remittances and aid; rent on the use of fishing rights, and, in the Cook Islands, earnings from the sale of commemorative stamps' (Bauer, Siwatibau, and Kasper, 1991, p.23). Tourism has provided the Cook Islands with much needed revenue and has potential in other islands, yet high transportation costs has been a major obstacle. It is noted that for most of these South Pacific islands the prospects for economic independence and self-sufficiency is hard to reach. The predictions for many of these economies is that of continuing dependency (Fairbairn, 1985; Cole; 1993; Knapman, 1986; Bauer, Siwatibau and Kasper, 1991).

The term 'Pacific Microstates' is a categorisation developed by E.K. Fisk and used by the Australian International Development Assistance Bureau (AIDAB) in its submission to the Joint Committee of Parliament on Foreign Affairs and Defence (AIDAB, 1997). This categorisation refers to island states with small land areas, isolated atolls, lacking natural resources and economies dominated by the public sector. Cole (1993) specifically includes in this categorisation the island states of Niue, Tuvalu, Kiribati and the Cook Islands. This study applies this term with some slight alteration of 'Pacific Microstates' to South Pacific Microstates (SPMs). The term mainly refers to islands that are considered small or very small in terms of population and resource base. The focus of this study is to empirically analyse the relationship between foreign aid and economic growth of these SPMs and suggest some policy recommendations to ease the current level of dependency. Also there are various articles that deal with the broad concepts and difficulties of smallness<sup>1</sup>. This explicitly excludes Papua New Guinea and Fiji. Although initial discussions approach the topic in a general sense, one must note that SPMs are by no means homogeneous. There is a wide diversity amongst SPMs as mentioned earlier, this study mainly includes the minuscule state of Niue and Tuvalu, and the small nations of Cook Islands and Kiribati, Solomon Islands and Samoa. However, the empirical analysis does not include Niue and Tuvalu since the appropriate time-series data are not available for these countries. Therefore, the empirical analysis undertaken here includes the Cook Islands, Kiribati, Samoa and the Solomon Islands.

## **1.1 Objective of the Study**

The economic and physical characteristics of SPMs point out that achieving sustainable growth and becoming an independent economic entity is not easy. Following this view one can also presume that external assistance in the form of foreign aid would remain a significant part of their economies for generations to come. This implies that the future of SPMs depends upon the

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<sup>1</sup> See for example, Sirivasan, 1986; Legarda, 1984; de Varies, 1984; Streeten, 1993; and Butuna, 1995.

commitment and goodwill of the current foreign aid donor countries. The notion that one's development is directly controlled by outside forces and would continue to do so in the foreseeable future is a cause for concern. An issue faced by the donor countries is maintaining the assistance for the development of SPMs without generating a negative view of supporting a welfare dependency. For example, Bertram (1993, p.249) refers to the alterations of United Kingdom (UK) assistance to Kiribati during the 1980's as a result of the 'negative image of welfare dependence'. In this case grant aid was restructured and given as project aid. These changes often solve the donor's dilemma but not necessarily that of the recipient country. The concern for SPMs is that of being cut adrift from this external assistance and forced to fend for themselves. However, this is an unlikely scenario because of political commitments and obligations of some donor countries. For instance, the New Zealand government is bound by the Niue constitution to provide external assistance, this is also similar in the case of the Cook Islands. These agreements are set in stone and difficult to change. Nevertheless, the central feature of these countries is the heavy reliance on foreign aid in varying degrees, but perhaps the most worrying aspect of this is the fact that many researchers and academics agree that these small island economies face an uncertain future of dependency.

Several studies of economic development and growth in the South Pacific has mainly focused on the larger and resource rich nations such as Fiji and Papua New Guinea. This study is concerned with the perspective of development for the smaller island states of the South Pacific. The primary objective is to examine and empirically analyse the foreign aid and economic growth relationships of selected SPMs. Such an analysis would offer greater understanding and insight to a more wider use of foreign aid amongst SPMs and its impact on economic growth. It would also provide policy makers and SPMs leaders a foundation for future economic policy formulation and guidance for an overall effective utilisation of foreign aid. The knowledge gained in this research will further contribute to the current debate on the impact of foreign aid on economic growth and development.

## 1.2 Data and Methodology

The collection of data has been a major difficulty for SPMs, since the non-availability of a consistent and accurate data series. This is a problem most researchers face in gathering data from developing countries and small Island economies. The Organisation for Economic Co-operation and Development (OECD) publishes relatively annual time series data for foreign aid and its various components. Data was collected from a number of sources, mainly from the OECD publication, *Geographical Distribution of Financial Flows to Developing Countries* (various editions). Asian Development Bank's *Key Indicators of Developing Asian and Pacific Countries* (various editions), and the United nation's *UN Statistical Yearbook* (various editions) have been used for other variables evaluated in the models such as exports, imports, and national income. These data series are relatively reliable, although a longer time series data is not available for all SPMs.

The methodology related to the evaluation of these models include time series econometric procedures to determine the foreign aid and growth relationship. First, the data collected for each variable for each of the South Pacific Microstates (i.e. Cook Islands, Kiribati, Samoa, and Solomon Islands) have been converted to constant prices. Based on this each model is analysed for the impact of total aid on growth. Second, the model is analysed by evaluating the effects of various components of foreign aid on growth. These separate effects include bilateral, multilateral, grant, loan, and technical co-operation aid. The separate components of foreign aid gives clear indication of the effect of aid for each of the South Pacific Microstates that leads to whether aid is being effectively utilised or not. The discussion here will be further explained in Chapter 5.

## 1.3 Chapter Outline

This research is organised into of six chapters. The first chapter provides the background and main objectives of the study. The second chapter reviews

the general literature of theories and empirical studies of aid and economic development. It discusses broadly the concept of economic growth and its relevance to SPMs with some emphasis on foreign aid. Key issues of growth and development are highlighted, and reference is made to the island economies performance. The study presents the various development theories applicable to the SPMs and the various sectors that contribute to Gross Domestic Product (GDP). In chapter three the study examines the literature related to economic growth and development of SPMs. The chapter highlights the role of foreign aid in these small island economies of the South Pacific. A general overview and discussion of the selected SPMs country case studies is given in chapter four. Chapter five is the analysis of the data and presentations of the empirical findings. The wider implications of the findings are also discussed. Chapter six is a summary and conclusion of the research.

# CHAPTER TWO

## Theories and Empirical Studies of Aid and Economic Development: Literature Review

---

*It matters little how much information we possess about development if we have not grasped its inner meaning.*

*Denis Coulet, The Cruel Choice.*

### 2.0 Introduction

Theories of economic development emerged in the early 1950's in an attempt to explain how and why development does or does not take place. The subject has been studied and debated on theoretical and empirical grounds with no consensus or agreement on a single theory. In the analysis of the process of economic development Todaro (1997) identifies four major theoretical perspectives: (1) the linear stages of growth model, (2) theories and patterns of structural change, (3) the international dependence revolution, and (4) the neo-classical, free-market counter- revolution. There is also an emerging fifth approach known as the new or endogenous theory of economic growth. Each of these concepts offers valuable insights and a useful perspective on the nature of the development process.

This chapter provides a discussion on the leading theories of economic development and their application or limitations to understanding the economic progress of SPMs. It will identify various factors that contribute to growth and establish the important relationships between these factors. This chapter also includes a discussion on previous studies relating to aid growth nexus. This would introduce the main theoretical and empirical background that this research is based on, in order to examine the relationship between foreign aid and economic growth of South Pacific Microstates (SPMs). The next section provides some discussion on the theory of economic development.

## **2.1 Economic Growth Versus Economic Development: A Conceptual Clarification**

Development is one of the most frequently used terms in the economic literature and may mean different things to different people. For instance the term is used both often and casually: development studies, economic development, developing countries, less developed countries and so on. In some cases economic growth and development are interpreted to mean the same. This part of the discussion makes attempts to define and distinguish the two concepts of growth and development. The intention is to establish from the beginning some clarity on their meaning and it's application to this research.

In strictly economic terms, development and growth are known to represent the same economic phenomenon. It is a process of change and transformation each and every economy must experience to reach what Rostow stated as 'maturity' and the 'age of high mass consumption' (1960: cited by Todaro, 1997, p.71). Todaro (1997, p.13) points out that 'development has traditionally meant the capacity of a national economy, whose initial economic condition has been more or less static for a long time, to generate and sustain an annual increases in it's Gross National Product (GNP) at rates of perhaps 5 percent to 7 percent or more'. In such cases the emphasis is on growth measured by rapid gains in percentage GNP. These indicators are widely used to measure the overall economic wellbeing of a population. It became the key focus of most development policies with the objectives normally targeting higher levels of GNP. Szrimai (1997) has also referred to development as planned alterations of the economy. These are changes that concern the structure of production or the form of employment.

Evidence of such transformation is clear from the experiences of the countries that are now referred to as 'developed countries'. It is described by a shift over a period of time in the economy's reliance from one sector to another in terms of the main source of growth. In most cases it is a movement from agricultural dominated production to highly technological and service orientated industries. On the whole and prior to the 1970's, development was nearly always seen as an economic phenomenon in which the growth of GNP was the

various forms but mainly as employment and social welfare benefits. Other more critical objectives such as poverty alleviation and income distribution took a back seat as growth determined the path of development. Todaro agrees that it is such treatment of development that creates the confusion between the two concepts. He points out that early views of the process of development became so dominated by growth that the term itself 'became synonymous with rapid, aggregate growth' (Todaro, 1997, p.70).

The experience of most underdeveloped nations in the 1950's and 1960's led to an upheaval of the economic development theory as economist and policy makers became disillusioned with these narrow and growth dominated view of development. Szirmai notes that a number of authors such as Dudley Seers, Paul Streeten and Hollis Chenery to name a few, have openly criticised such views of development. They argue that 'in spite of impressive growth figures in the post World War II era the living conditions of the majority of the poor has remained unchanged' (Szirmai, 1997, p.6). Dr Halapua of the Pacific Islands Development Program at the East West Centre in Hawaii express some reservations to the idea of economic growth but resents the straight application of such a concept to the fragile economies of the South Pacific. He states that the concept is 'one dimensional' and only considers economic factors' (Halapua interviewed by Field, 1998, p.50). The implication of such an observation leads one to conclude that development denotes more than just increasing levels of GNP or a timely change in the structure of the economy. The literature appears to agree with Szirmai that although growth is a requirement for development, it is not development per se of a country overall. There is more to development than growth alone, namely, that there should be a 'decrease in poverty and malnutrition, that income distribution should be equalised, and that the employment situation should improve' (Szirmai, 1997, p.6). Furthermore, development has to include such factors as the quality of life, social structures, attitudes, cultural backgrounds, values and national institutions. The phenomenon of development is therefore more than a question of economics.

There is some evidence in the literature that illustrates that growth itself would not lead to development. For instance, Todaro (1997, p.15) states that 'a number of developing countries experienced relatively high rates of growth of

per capita income during the 1960's and 1970's but showed little or no improvement or even an actual decline in employment, equality, and the real incomes of the bottom 40% of their populations'. Thus, development is a multidimensional approach concerning major changes that would lead towards a better life for all of humanity. A more accurate description of development is given by Todaro (1997, p.16) as 'the whole gamut of change by which an entire social system, tuned to the diverse basic needs and desires of individuals and social groups within that system, moves away from a condition of life widely perceived as unsatisfactory toward a situation or condition of life regarded as materially and spiritually better'. This, in some regard, captures a more complete definition of development.

Birkman (1995) offers an interesting analysis of this issue by examining critically the literature that exist on this controversial topic and mainly cites the work of Simon Kuznets (1965 and 1966). Birkman points out that 'Kuznets ...avoided the distinction and placed the process of economic development under the overall rubric of economic growth' (1995, p.1178). Furthermore, Kuznets views economic growth as 'a long term rise in capacity to supply increasingly diverse economic goods to it's population, this growing capacity based on technology and the institutional and ideological adjustments that it demands' (Kuznets, 1973, p.247). According to Birkman, this definition is so much similar to that of economic development given by the current literature. It implies that economic growth should be regarded as a function of development. However, this is where the concepts begin to merge and creates confusion. He also adds that although Kuznets and others avoided the distinction he does acknowledge in theory that development offers a lot more than growth itself. In the end Birkman (1995, p.1180) concedes that ' though growth and development are interrelated, growth by it self as a replication of a given structure, as more and more of the same, does not lead to development. A tepee cannot become a skyscraper simply by growing'. The argument is clear: growth is a process of reproduction whereas development is that of overall transformation. Birkman clarifies that growth although measures the process of development it should not be confused as development.

This research refers to both concepts but the focus is mainly on economic growth. The concept of growth is treated as an indicator that measures development. It needs to be emphasised that this research does not consider the concepts to be synonymous or interchangeable. The term economic expansion refers to both growth and development, which in this study refers to growth that contributes to development of a nation. In the next section a discussion on the theory and empirical literature concerning economic development.

## **2.2 Economic Theory of Development: A Theoretical Background**

The leading theories of economic development are mainly based on the experiences and observations of developing countries. This preoccupation with growth has created some confusion, as discussed in section 2.1. It has been pointed out that development is not purely an economic phenomenon (Birkman, 1995). Although theories of development greatly emphasise growth, it must not be interpreted as such. Todaro states that 'economic progress is an essential component, but it is not the only component' (1997, p.69). Growth is merely treated as one of the indicators or measurements of development. This is essentially how it is perceived in this research. The following discussion looks in some detail at the leading theories of economic development, beginning from the post World War II period.

### **Linear Stages of Growth**

The first models of development to emerge after World War II became known as the linear stages of growth. These models are mainly identified, through Rostow's (1956) theory, that the whole process of development is a series of steps or stages of economic growth, which all developing countries must pass if they are to become a developed nation. This model by Rostow became known as the 'Stages theory' of economic growth and incorporated

some key concepts of the Harrod-Domar growth model. The Harrod-Domar growth model established the existence of a positive relationship between savings or investments and economic growth. Rostow included this as an integral part of the Stages theory. The stages of growth model generally implied that more investment would lead to more growth and that eventually would lead to self-sustaining economic growth. The argument presented by Rostow considered developing countries to be in a 'traditional society' or the 'precondition' stage (Todaro, 1997, p.71). This meant that for developing countries to reach self-sustaining growth, investment is needed to be at 10 percent of Gross National Product (GNP) or more (Rostow, 1971). The economic logic behind this approach is that economies grow in a series of stages, but in order to grow they need to invest and save a proportion of their GNP.

The implications for the role of aid were obvious. This provided foreign aid proponents the ideal opportunity for justifying the transfer of foreign aid from developed nations to developing countries. Rostow (1956) indicated that external capital had an important function in assisting developing countries reach the take off stage. It is also recognised that international capital markets were not providing sufficient amount of capital increasing the need for foreign aid (Bowen, 1998, p.20). The proposition that aid would be required only until self-sustaining growth is achieved has greatly enhanced its political appeal amongst donor countries. The success of the Marshall plan to war ravaged countries have led to establishment of aid programs to developing countries, particularly to South Asia under the Colombo Plan. See Gounder (1995) for a comprehensive discussion on the origins of aid flows.

This ideology, so dominant at the time, appeared to influence the decolonisation policies of the islands in the South Pacific region. Belshaw and Stace (1955) point out that for the Cook Islands, self-governance was obtained with the intentions that given the right encouragement this Microstate would move towards economic self-reliance. Agricultural production of trade-able commodities became the key focus as SPMs experimented with development, leading to large amounts of foreign capital (in the form of foreign aid) and resources (technical assistance) being invested in this area. This is best

described by the rise in agricultural related development projects in the pre-colonial and post-colonial periods. The most common example has been the set up of state funded coconut plantation schemes for copra production. This is now replaced by forestry, livestock and fisheries projects. Bauer, Siwatibau, and Kasper (1991, p.31) point out that 'Agriculture, which supports the bulk of the production in the region, is the sector upon which sound economic development and economic independence will continue to be based'. It is perhaps important to note that this pattern of development reflects the stages of economic growth theory to some extent and suggests that most SPMs are still in the 'precondition stages'. Howard, Plange, Durutalo and Witton (1983, p.170) agree that 'Rostow's stages of growth served as the basis for much of the colonial and post-colonial policy of the 1950s and 1960s'. They go on to state that 'throughout the post-war colonial period, Rostow inspired planners sought to chart the course for the future of various island states in the region' (Howard, Plange, Durutalo and Witton, 1983, p.172). In this case assistance was given in the form of foreign aid to SPMs with the expectation that it provided the necessary investment in order to reach the take off stage. Once this is achieved then the assistance can be removed as the SPMs proceeded into the next stage of self-sufficient growth.

The heavy reliance on foreign aid by all the SPMs suggests that these countries are still further from the self-sufficient stage. It clearly indicates that the theoretical approach embodied in the third stage of Rostow's growth model has not work for the SPMs. Todaro reasons that the failure of this particular approach is found in the 'inappropriateness of some of the implicit assumptions' it holds (Todaro, 1997, p.74). It is understandable, since Rostow and Harrod-Domar type models were conceptualised on the recent experience of the Marshall Plan. Little was known about the developing world – the people and their way of life. Bowen (1998, p.20) points out that the implicit assumption 'that poor countries are in the traditional stage just as development countries used to be is highly incorrect'. It ignores the historical forces that put rich and poor countries on different paths. The simplicity of these models limits and restricts its application to developing countries. One cannot assume that the

success of the Marshall Plan in Europe would automatically achieve the same results wherever it is introduced.

### **Structural Change Models**

Following the same sort of logic, the theoretical and empirical models of structural change emerged in the 1970's adding to the existing mainstream theories of development. Structural change models focussed mainly on the transformation process of a country's domestic economic structures. It examines the structural transformation of an economy from being heavily dependent on traditional subsistence agriculture to a more modern, industrial and service orientated sector. The Lewis two-sector model is the most well known representation of the structural change approach. The Lewis model contends that the under-developed economy consists of two sectors. A traditional and over populated rural sector and a modern, high productivity and urban based industrial sector. With the over-population of the subsistence sector a situation of zero marginal productivity is created. This implies that surplus labour exists and can be withdrawn from the agricultural sector without any loss of output. Simultaneously, labour from the subsistence sector is gradually transferred to the new industrial sector. Todaro (1997) refers to this as a process of modern sector self-sustaining growth and employment expansion. The structural transformation of the economy will have taken place when all surplus labour is absorbed into the modern industrial sector.

The structure of output and employment that exists in some SPM suggests that these economies are still reliant on the traditional agricultural sector. Table 2.2a below illustrates that the share of agricultural output to GDP is on average approximately 25% for the Cook Islands, Kiribati, Tuvalu and the Solomon Islands. This is the second largest contribution apart from the 'Others' sector. It also shows that the contribution of agricultural output to GDP is increasing slightly for the Cook Islands in the period 1991 to 1995 and the Solomon Islands from 1991 to 1993. The increase in agricultural output is related to the inclusion of fisheries and forestry production in the accounting. However, Kiribati and Tuvalu exhibit trends in the opposite direction.

Nevertheless, the agricultural sector remains a major contributor to growth for these islands economies.

**Table 2.2a Percentage Distribution of GDP by Sector**

Country	Year	Agri. and Fisheries	Mining	Manufact. Ind.	Wholesale and Retail Trade
Cook Islands	1991	19.6	0.1	2.3	16.1
	1995	21	-	2.6	14.6
Kiribati	1991	21.5	-	0.6	15.4
	1995	20.5	-	0.7	14.6
Solomon Is.	1991	33.1	0.3	7.5	13.2
	1993	39.9	0.1	6	13.9
Tuvalu	1991	23.2	0.3	7.5	13.2
	1995	19.5	0.1	6	13.9

**Table 2.2a continued**

Country	Year	Transport and Communications	Utilities	Construction	Others
Cook Islands	1991	11.6	1.2	1.9	47.1
	1995	10.4	4.8	1.2	45.3
Kiribati	1991	12.7	1.8	2.9	45.1
	1995	11.8	2.1	2.3	48
Solomon Is.	1991	3.7	0.7	3.3	38.1
	1993	4.7	0.9	1.5	33
Tuvalu	1991	3.7	0.7	3.3	38.1
	1995	4.7	0.9	1.5	33

**Source:** Secretariat of the Pacific Community (various), *Selected Pacific Economies: A Statistical Summary* (SPSS Publications No. 14), New Caledonia.

Employment patterns (given in Table 2.2b) for the SPMs differ and give no clear indication of structural change. The percentage of the economically active population in non-agricultural employment far exceeds that in the agricultural sector. Both the Cook Islands and Niue experienced an increase in non-agricultural employment. However, for the Cook Islands the share of agricultural related output to GDP is increasing. This is because employment patterns do not take into account the heavy migration of the economically active population and may create some distortions. Kiribati reports an increase in employment in the agricultural sector. This is also the case for the Solomon Islands and Tuvalu, but this change is so dramatic that employment in the agricultural sector eventually exceeds that of non-agricultural employment. This phenomenon differs from the proposed modern sector employment expansion denoted by the Lewis model. Both Solomon Islands and Tuvalu rely heavily on agriculture, than the manufacturing or service sector like tourism.

**Table 2.2b Employment Patterns (percentage of economically active population)**

Country	Year	Total Agriculture and Fisheries	Non-agricultural Employment
Cook Islands	1976	22	78
	1996	9	91
Kiribati	1978	1	99
	1995	24	76
Niue	1976	10	90
	1991	6	94
Solomon Islands	1976	45	55
	1986	82	18
Tuvalu	1979	4	96
	1991	68	32

**Source:** Secretariat of the Pacific Community (various), *Selected Pacific Economies: A Statistical Summary* (SPSS Publications No. 14), New Caledonia.

This increase in agricultural employment is also related to the inclusion of the fisheries and forestry sectors within the agricultural sector. Kiribati, Tuvalu, and the Solomon Islands all have strong fisheries sectors, with the latter entering forestry in a big way. The picture that emerges is not so convincing. The Lewis model of development offers little explanation to the economic progress of SPMs due to the lack of capital and other modern sector developments. Thus, it does point out that most of these SPMs economies are still reliant on agricultural output.

The Lewis model gained a wide appeal but it also attracted much criticism due to the lack of domestic infrastructure to support development. Todaro pointed out that the models 'key assumptions do not fit the institutional and economic realities of most contemporary Third World countries' (1997, p.79). For instance the assumption that the transfer of labour and employment is proportional to capital accumulation. It implies that the capital accumulation leads to higher growth rates and faster rates of employment as a result of new job creation. This assumption accepts the notion that capitalist profits are re-invested in current capital rather than modern labour saving technology and equipment (Todaro, 1997). However, in most economies of the South Pacific growth in the labour force is marginal coupled with substantial capital flight. It is perhaps ideal that structural change models are modified in key assumptions to take into account the realities of not only SPM but also developing countries.

## **International Dependence Models**

Growing dissatisfaction with linear stages of growth and structural change models resulted in a more radical and politically orientated perception of the development process. This revolutionary theoretical approach became widely known as International-dependence models. This quiet revolution in development thinking emerged mainly from the intellects of the developing world. The early beginnings of the dependency theory is traced to the arguments of Prebisch (1950) and were referred to as structuralism. Prebisch viewed the world as divided into two main parts; the centre made up of industrialised countries and a periphery of developing countries. He found that together, 'the centre and the periphery formed a world economic system, whereby an international division of labour relegated to the periphery the task of producing food and raw materials for the centre (Bowen, 1998, p.27). This served as the starting point for international dependency models.

The dependency perspective generally contends that developing countries will remain on the periphery as results of imperialism and international capitalism. Todaro (1997, p.82) points out that 'the co-existence of rich and poor nations in an international system dominated by such unequal power relationships between the centre (the developed countries) and the periphery (the developing countries) renders attempts by poor nations to be self reliant and independent, difficult and sometimes even impossible'. Riddell states that poverty is a 'consequence of the penetration of market forces into the peripheral third world from the capitalist centre, which creates and deepens the process of under-development' (1987, p.136). The main thrusts of dependency models explain development as an outside phenomenon controlled by larger and more powerful developed nations. The emphasis is mainly on international power relationships and the existence of a global community. Their ideals of a perfect international community is one that cares and shares, an ideology that runs along Marxist thinking. Dependency theorist call for reform and radical changes in economic political, and institutional frameworks (Todaro, 1997). It is a theoretical perception that go against earlier models of stages of growth and structural change.

The description of development portrayed by dependency theorists appear to resemble the post-independence experience of most SPMs. Howard, Plange, Durutalo, and Witton (1983, p.17) confirm that 'the economic structure that post-independence leaders inherited were generally so closely wedded to international capital (especially those dependent on the export of a single commodity on the one hand and on the importation of a wide range of manufactured goods on the other) that they found themselves drawn into neo-colonial relationships no matter what their ideological orientations'. It is discerning to learn that 'through the promotion of selected leaders, the drafting of appropriate laws and the establishment of supportive administrative and government structure, the way was paved to ensure that the post-colonial states would not differ too much from their former colonial predecessors' (Howard, Plange, Durutalo, and Witton, 1983, p'172). This clearly establishes some validity of the dependence argument in the case of SPMs. It appears that although political independence was given with the blessings of colonial powers, new patterns of control and economic domination was born in the form of neo-colonialism. The current situation of SPMs has not changed much since then. The Cook Islands and Niue still rely heavily on New Zealand for foreign aid and trade. Similarly, Kiribati and Tuvalu still cling to Australia for the same reasons (refer to Chapter 3 for a detailed discussion of foreign aid to SPMs). In one form or another, Island states of the South Pacific are still drawn into this international power relationship described by dependency theorists.

There is, however, a note of caution that one must consider with an open mind. The proponents of the dependency theories rejects the heavy emphasis of mainstream Western economic models on the growth of GNP as the key index of development (Todaro, 1997). Their efforts and focus all centre on the problems of developing nations without providing any clear solutions. This is one of the major weakness of the dependency model. Nevertheless, Dependency theories do offer a lasting contribution to the understanding of development by highlighting the importance of domestic and international power relationships within the process. Moreover, it brings to our attention the external factors that can either promote or hamper the economic growth or development of SPMs.

## Neoclassical Theories of Growth

The reply of western economic theorist to the dependency theory of the developing world became embodied as the neo-classical counter-revolution. The central message of the neo-classical counter-revolution explained underdevelopment as a result of 'poor resource allocation due to incorrect pricing policies and too much state interventions' (Todaro, 1997, p.86). This new orthodoxy 'promotes a development strategy that drastically reduced the role of the state in promoting economic development' (Newark, 1995, p.225). See also Gillis et.al (1996) for an extensive discussion of this theory. One of the key theoretical framework of the neo-classical theory is the world renowned Solow growth model (1956). The Solow model implies that growth is function of capital (K), labour (L) and Knowledge or the effectiveness of Labour (A). The production function takes the form:

$$Y_{(t)} = F(K_{(t)}, A_{(t)}, L_{(t)})$$

where t denotes time. This is an extension of earlier Harrod-Domar growth models. The advocates of this new neo-classical growth approach include competitive free markets, less government intervention and the creation of a market friendly environment. It is based on the notion that the governments and private market systems can successfully accomplish more together by focussing on what they do best. This suggests that a mixture of both ingredients, in the right combination would lead to more economic growth.

The Islands of the South Pacific have not escaped the mantra of the free market. Field (1998, p.50) comments that '...privatisation, competition and deregulation – continue to be hammered into the South Pacific'. The South Pacific Forum, a regional organisation set up to represent the voice of the Pacific Islands on the world stage show great dedication to the neo-classical growth approach. The Forum pushes the theme 'From reform to growth: the private sector and investment as keys to prosperity' to all its members (Field, 1998, p.50). Much of this is driven by Australia and New Zealand, the key supporters of free market philosophy in the South Pacific region. This is evident in New Zealand's approach to economic reforms since 1984 and the birth of Rogernomics.

The Cook Islands economic reforms present a good example of the neo-classical growth theory at work. The downsizing of the public sector, implementing private sector growth and the setting up of the Development Investment Board are all prescriptions based on neo-classical growth models to solve the problems of an ailing Cook Islands economy (Williams, 1998). Temu (1996) confirms that the Cook Island's government has reduced the public service and salaries by more than 50% since July 1996. This has provided the needed changes, thus resulting into migration, mainly to New Zealand (Williams, 1998). This is made easier as Cook Islanders are New Zealand citizens. Halapua (interviewed by Field, 1998, p.56) cautions that the message of reforms and restructuring advocated by neo-classical growth theorist and pushed by the South Pacific Forum 'is raising false expectations'. He also notes that this is just the same medicine disguised in another label. He states that 'the quest for more foreign aid and investment continues, except that it is under the new banner of private sector development and public sector reform' (Field, 1998, p.56).

Jayaraman (1995) calls for some balance and recognises the need for both the state and private enterprises. He partly agrees with the neo-classical model that governments need to withdraw from functions that can best be done by the private sector. However, he also points out that it is the state's responsibility to ensure private sector development by providing favourable economic conditions. Cole (1993) on the other hand strongly supports the neo-classical message and offers no compromise. He claims that the private sector is the key to growth of island economies of the South Pacific. It is evident that the neo-classical growth approach is firmly rooted in the economic policies of most island governments with plans for privatisation and deregulation being widely implemented in the region. Nevertheless, one needs to be cautious and tread warily on the message of free markets and privatisation, as island economies face various problems of vulnerability and smallness.

Todaro points out that the difference in structure and organisations of developing countries 'often makes the attainment of appropriate economic policies based either on markets or enlightened public intervention an exceedingly difficult endeavour' (Todaro, 1997, p.89). The recent Asian crisis

raised serious doubts of the function of markets and global capitalism. It became increasingly clear that the neo-classical approach required serious re-thinking. Field (1998, p.56) quoted international financier George Soros as saying 'The global capitalist system, which has been responsible for the remarkable prosperity of this country in the last decade is coming apart at the seams'. This is an extreme and rather personal reflection of the Asian meltdown. Hildebrand (1998, p.35) commented that the 'international financial crisis that began in Asia and spread to other continents, leads urgency to efforts to strengthen the architecture of the international financial system'. She reports that if the Pacific Island countries do not make progress towards reforms, then they may be forced to by the World Bank and the International Monetary Fund (IMF), key supporters of neo-classical growth models. Todaro (1997, p.90) has simply stated that 'In an environment of widespread institutional rigidity and severe socio-economic inequality, both markets and governments will typically fail'. Todaro suggests that the challenge is to determine the neo-classical models that best suit the political and institutional environment of developing countries.

### **Endogenous Theories of Growth**

The recent emergence of a fifth approach to analysing development is still clouded in controversy and debate. It is yet to be fully developed and is worth examining. The new growth theory recognised some of the theoretical shortfalls of the neo-classical growth models. Nelson (1994, p.291) noted that 'one of the things that has been the matter with most of the older neo-classical growth theory is that it did not come to grips with the fact that technical advancement is largely endogenous or with a variety of ramifications of that fact'. The new models provide a number of different perspectives for analysing growth with the emphasis on explaining long run growth and closely examining the idea of convergence between poor and rich countries. Barro (1997, p.5) points out that 'this approach provides a theory of technical progress, one of the central missing elements of the neo-classical model'. Romer (1996) agrees and suggests that 'it is plausible that technological progress is the reason that more

output can be produced today from a given quantity of capital and labour than could be produced a century ago'. The new growth theory introduces the variable of research and development in order to explain technological progress. The supporters of the new growth approach promote the idea of investing in human capital formation and the encouragement of knowledge intensive industries. Todaro (1997) highlights that in contrast to the neo-classical counter-revolution theories the state has an important role in providing the bulk of direct and indirect investment towards research and development projects.

The developing countries of the South Pacific region have now realised the importance of technology, and the need for research and development for economic expansion. Bauer, Siwatibau, and Kasper (1991, p.38) acknowledges that the 'island countries have resources whose commercial development require expertise, capital and technical know-how, from the developed economies around the Pacific Basin'. They point towards the need for sophisticated technology in mining, the need for technical and marketing research in agriculture, the need for technology and knowledge in fishing, and the demand for technical and commercial skills in the enterprise. Marjoram (1994, p.9) also notes that 'Pacific islanders are becoming increasingly dependent on the outside world technology...'. Marjoram also calls for appropriate Western technology that complements rather than displace existing indigenous technology in order to avoid dependence on overseas technology. Much can be learned from new growth theories and despite their obvious shortfalls offer another perspective to the analysis of the development process. The critics of the new growth theory argue that being dependent on a number of neo-classical assumptions, it faces the same problems, weaknesses, and limitations. Barro (1997) highlights that 'In these frameworks, the long-term growth rate depends on governmental actions, such as taxation, maintenance of law and order... and regulation of international trade, financial markets, and other aspects of the economy'. In many developing countries and SPMs such conditions are non-existent. SPMs governments face the problem of corruption and mismanagement. Hildebrand warns that 'fiscal mismanagement by officials and lax implementation of crucial policies on the part of politicians will send the pacific spiralling into social devastation' (1998, p.39). It is therefore important to realise that new growth

theories often overlook these very influential factors and its limitation to analyse the economic development of SPMs.

This section has provided some discussion on the leading theories and approaches to the study of economic development. Although such controversy exists on the subject, they do shed some light on the economic progress of SPMs. Bowen (1998, p.14) states that 'there is no general theory of economic growth that can prescribe policy at all stages of economic development or for all types of economic systems'. It follows that each approach has some contribution to the understanding of the development process. This background knowledge of the major theoretical models would be beneficial in understanding the analysis of the economic growth of SPMs. It is important to note, however, that the emphasis of this study is mainly on foreign aid and its contribution to the economic expansion of SPMs. Furthermore, the theories reviewed here suggest two important but opposing views concerning foreign aid and economic growth type relationships. The liberal views of Western theories indicate that a positive relationship would exist between aid and growth. However, the dependency view would point otherwise and expect a negative relationship. This research holds an orthodox position that all capital inflows are an addition to the recipient's productive resources and thus contributes to economic growth.

The following section is a review of previous studies that have attempted to test foreign aid and economic growth relationships. These studies are built upon the theoretical models that are discussed here. This would also be useful as it provides understanding to the empirical framework that this research will use to examine the economic growth of selected SPMs. As discovered in previous chapters, foreign aid is an important and significant factor in the economic growth and development of the SPMs and warrants closer inspection and greater attention.

### **2.3 A Review of Previous Studies on the Relationship between Foreign Aid and Economic Growth**

The studies to examine the relationship between aid and economic growth can be traced to the early 1960's. This mainly involved statistical estimations that relied on poor quality data. As with the leading models of economic development, these empirical studies also reach no consensus or agreement on key findings. Many studies have been undertaken for developing countries, yet the relationship between foreign aid and economic growth produce different results. This research examines recent studies of aid-growth relationships, their major empirical findings and obvious limitations.

Most of the aid-growth models being tested have generally remained in the tradition of its Harrod-Domar predecessors. These studies have mainly used foreign aid, domestic savings, and foreign investment as basic explanatory variables (Bowen, 1998: Gounder, 1999: Islam, 1992: Mbaku, 1993). Recent studies have included foreign exchange earnings from exports, largely because of the phenomenal export led growth of the Asian Tigers. The present studies go on further to include economic policies. The following is a more detailed discussion of the most recent studies on aid-growth relationships.

The empirical results generated from aid-growth models are mixed and in some cases non-significant. Mosley (1980) in a study of 83 countries and a time period of 7 years performed an empirical analysis on the direct impact of aid and other capital flows on economic growth. Mosley's study use a two-stage least squares regression and found that these variables have no significant effect on aid, except for the 30 poorest countries where aid was significantly positive. In a more recent study, Mosley, Horrell and Hudson (1987) used a three-equation system for a sample of 67 countries for three time periods from 1960 to 1983. The model attempted to explain growth as a function of foreign aid, other financial inflows, domestic savings, export, and literacy growth rate. As with previous findings, the foreign aid variable was not significant, however, it was found to be positive. Rana and Dowling (1988) interpreted such results as lacking and proceeded to find the missing component. They determined that previous studies only focussed on direct effects with no consideration on indirect

effects (Rana and Dowling, 1988, p.4). Therefore, they introduced an aid-growth model for total effects (direct plus indirect) using data from nine Asian countries. This included additional explanatory variables such as export growth and changes in the labour force. They found that only the foreign investment and labour force growth rate variables had a positive and significant relationship with economic growth.

Studies by Islam (1992) and Mbaku (1993) followed along the same lines but were for Bangladesh and Cameroon. Islam tested the aid-growth model using data for Bangladesh from 1972 to 1988. Islam found that foreign capital appeared to have a positive contribution to growth, even though domestic resources have a more significant impact on growth than foreign resources. He also found that some type of foreign capital such as loan and food aid were more influential than other types of capital inflow. Mbaku on the other hand noted that foreign aid had no significant impact on economic growth in Cameroon. However, he does point out that domestic resources (in the form of savings) had a more significant contribution to growth than foreign resources. This confirms earlier findings by Islam.

A study by White (1992) provided a critical survey of the macroeconomic impact of foreign aid and aid effectiveness. He contends that the aid-growth models used in earlier studies did not fully capture the aid-growth relationship. White points out that these studies used a simple accounting analysis that allowed no feed-back effect from the possibility that aid may simulate income and lead to higher savings. He states that 'despite some more sophisticated treatments of the problem, there remains no agreement as to the relationship between aid and savings' (White, 1992, p.189). The macroeconomic models used by White involves the modelling of various variables that influence the behaviour of aggregate demand, aggregate supply and trade balances.

Burnside and Dollar (1997) extends aid-growth models to include the policy variable. They explained that the effects of aid on growth did not depend on aid flows only. It included other factors such as inflation, the budget surplus, and trade openness. Furthermore, they establish that the institutional quality of a recipient country also influence the impact of aid on growth. In measuring

institutional quality Burnside and Dollar assess such factors as corruption, law and order, and equality issues within the recipient country. They conclude that aid generally has a large effect on growth in a 'good policy environment'. (Burnside and Dollar, 1997, p.32).

Table 2.3 presents a detailed summary of various studies on the foreign aid and economic growth relationship. The principal methodology for this research is largely based on the theoretical and empirical frameworks reviewed in these sections.

**Table 2.3 Summary of Empirical Studies on the Relationship between Foreign Aid and Economic Growth from 1980 – 1999**

Study	Sample	Design	Dependent Variables	Explanatory Variable	Var. of Significance (Sign)
Mosley (1980)	n = 83 1970-77	3SLS	YP S	A, S, I YP	not significant
Islam (1992): Specific Country Study	Bangladesh 1972 - 88	OLS	Y	S, A, LF	S (+)
Mbaku (1993): Specific Country Study	Cameroon 1971 - 90	OLS	Y	S, I, LF	S (+)
Burnside and Dollar (1997)	n = 56 1970 - 93	2SLS	Y	A, AP, YP, IN,FD, BD, OPI, PI, GC EA, INF	AP(+), IN(+), INF(-), OP(+)
Bowen (1998)	n = 67 1970 - 88		Y	A, S, I, X	
Gounder (1999a): Specific Country Study	Fiji 1968 - 96	ARDL	Y	A, B, M, L, LF, ID, IP, G,TC, IG, X	A(+), B(+), X(+), IP(+) G(+), TC(+)

**Note:** A: foreign aid, S: savings, Y: National income growth, YP: per capita GNP, I: foreign investment, X: exports, LF: labour force, AP: interaction effect between ethnic issues and political assassinations, IN: institutional quality, FD: financial deepening, BD: budget deficit, INF: inflation, OPI: openness index, PI: policy index, GC: government consumption . B: bilateral aid, M: multilateral aid, G: grant aid, L: loan aid, TC: technical co-operation aid, ID: domestic investment, IP: private investment, IG: government investment, 3SLS: 3 stage least squares, 2LS: 2 stage least squares, OLS: ordinary least squares, ARDL: auto-regressive distributed lag method of cointegration.

**Source:** as shown in the table.

A study by Gounder (1999a) is one of the more recent attempts to examine the aid growth relationship for a specific country. This approach evaluates the impact of the various components of foreign aid i.e. bilateral, multilateral, grant, loan and technical co-operation aid on economic growth for the country of Fiji. The effects of domestic resources such as exports and

investments are also examined. Gounder's results for Fiji indicate that total aid flows and its various forms have a significant and positive impact on the country's growth.

## **2.4 The Political Economy of Development**

It has long been acknowledged that political stability and economic growth are both related directly and indirectly to increase the standard of living (Alesina and Perotti, 1995; Burnside and Dollar, 1997; and Gounder 1999b). The literature on this topic notes that political stability is one of the essential factors for economic growth and progress. Although this study does not fully examine this relationship, it is worth some discussion with emphasis on its relevance to respect to the SPMs.

The World Development Report (1997) noted that 'markets and governments are complementary: the state is essential for putting in place the appropriate foundations for markets...A survey of local entrepreneurs in sixty-nine countries shows that many states are performing their core functions poorly: they are failing to ensure law and order, protect property, apply rules and policies predictably. Investors do not consider such states credible, and growth and investment suffer as a consequence' (World Bank, 1997, p.4-5). Therefore, following this logic, studies that evaluate the performance of a country have extended the forces responsible for changes in the economy relating to the political-economic effects and impacts. Alesina and Perotti (1995) and Person and Tabellini (1990) have discussed the macro-political economy literature and the various links between foreign aid, policy options and economic growth.

Burnside and Dollar (1997) have gone on further to analyse the relationship between foreign aid, policies and growth. Generally, the key findings from these type of studies have differed. Nevertheless, there appears to be some consensus on more recent works that find political instability led to a decline in economic growth. These studies have used cross-sectional data for African, Latin American and Asian countries. Scully (1988) finds that politically open economies following political, civil and economic freedom

grow at three times the rate of societies in which these liberties are restricted. Barro's (1991) study for a sample of 98 countries also agree that restricted political freedom is linked to lower per capita growth. The study by Gounder (1999b) on Fiji has also concluded that political instability has adversely affected the economic growth of the country.

In the case of the SPMs studied here it is difficult to evaluate and empirically analyse the impact of political instability on economic growth due to lack of data on economic freedom, political civil liberty index, etc. These are variables that are generally used for such analysis. The World Bank reports that 'aid has a large effect in good management environments' (1998, p.14). Burnside and Dollar (1997) have also pointed out that the impact of aid on growth do not only depend on aid inflows alone, but also the policy levels and institutional quality in the recipient country. They have used variables such as the interaction effect between ethnic issues and political assassination and institutional quality to examine the above relationship.

For the SPMs and most developing countries measuring such factors as institutional quality will be an impossible task given the lack of appropriate data. Nevertheless, it is important to acknowledge the need for stable political environments and sound management practices in improving the effectiveness of foreign aid in the recipient countries. This study is restricted to examine the direct relationship between foreign aid and economic growth. It considers that the SPMs case studies undertaken here have stable economic environments but recognises at a glance their poor institutional qualities and economic management. Although this study does not fully examine the political economy of the SPMs, it does however, recognise the positive relationship between foreign aid, political stability and economic growth.

## **2.5 Aid - Growth Models**

The initial model for this study is derived from the neo-classical production function, where Y or Gross Domestic Product (GDP) is a function of capital stock, K and the available labour supply, L. This follows closely the

models used by Islam (1992), Mbaku (1993) and Bowen (1998) with the initial Solow Growth model depicted in Equation 1.

$$Y = (K, L) \quad (1)$$

$$F_1 > 0; F_2 > 0; F_{12} < 0; F_{22} < 0 \quad (2)$$

The usual regularity conditions are specified in equation 2 to ensure that marginal productivity of the inputs are positive and declining (well behaved).

Extending equation 1 by differentiation, i.e. dividing both sides by  $Y$ , rearranging terms and letting  $dk/dt = I$  (where  $I$  stands for domestic capital formation (investment)), the following equation is obtained:

$$\dot{Y} = a_0 + a_1 I + a_2 \dot{L}F \quad (3)$$

Where  $Y_i$  stands for growth rate in GDP in country  $i$ ,  $I$  stand for the ratio of investment to the GDP, and  $\dot{L}F$  stands for the annual growth rate of the labour force. The coefficient of  $I$ , ( $\alpha_1$ ) measures the marginal productivity of investment and coefficient of  $\dot{L}F$  ( $\alpha_2$ ) reflects the share of labour force in GDP. The constant,  $\alpha_0$ , is the intercept term representing the effect of excluded variables including technological change. In most cases  $\dot{L}F$  data is not available and population growth rate is used as a proxy (e.g. Islam, 1990). Replacing  $\dot{L}F$  by the population growth rate  $\dot{P}$  and adding a stochastic error term  $U$ , gives the following equation 4:

$$\dot{Y}_i = a_0 + a_1 I + a_2 \dot{P} + U \quad (4)$$

Equation 4 is the terminal equation that will be used for testing the aid growth relationship. This equation can be estimated further by disaggregating the investment ( $I$ ) variable into its specific components of foreign capital inflows and domestic savings. Foreign capital inflows include foreign aid and private investment flows. These variables can be tested for its separate effect.

Furthermore, foreign aid can also be examined as with various components such as bilateral aid, multilateral aid, loan aid and grant aid with the intentions of assessing their different impacts, on economic growth: Islam (1992) and Mbaku (1993) have used some of these components. Gounder (1999) used the components mentioned here for the case of Fiji. Other explanatory variables, such as trade or growth in exports have also been included in some of these studies.

## **2.6 Summary and Conclusion**

This chapter has offered some discussion on the leading theories of economic development in the light of SPMs. It has also reviewed some of the more recent empirical studies on the relationship between foreign aid and economic growth. The methodology used in this study is selected from this theoretical and empirical literature and would be applied to analyse the impact of foreign aid on the economic growth for selected country case studies of the Cook Islands, Kiribati, Samoa, and Solomon Islands.

The leading theories of economic development give a range of different perspectives with no agreement on a single approach. However, one can identify two major conflicting ideologies. The Western theories of economic development include stages of growth models, structural change, neo-classical and endogenous growth theories. These theories are mainly based on the experiences of the now developed economies and are considered the orthodox approach to studying growth and development. The dependency theorists challenge the inconsistency of these models and their lack of consideration of the economic realities of developing countries. They are firmly against the use of foreign resources as a means to improve the recipient's economic wellbeing. The proponents of the dependency theory claim that such transfers will keep recipient countries tied to donor nations and forever keeping them on the periphery working for the developed countries in the centre of the system.

Although, these differences exist, each approach has a valuable contribution to one's understanding of the development process.

The stages of growth model highlights the importance of savings and investment for growth. Structural change theories point out the key links between traditional agriculture and modern industry. The challenges of dependency theorists give attention to the importance of international power relationships and the need for global co-operation. The conventional neo-classical economic theories emphasise the crucial role of freer markets and less state intervention. New growth theories analyse the sources of long-term growth with particular interest on technological progress. It is therefore important to realise that each of these factors has an impact on growth. Furthermore, each theory of economic development enables one to view the process from different angles, widening significantly one's perception. The primary difference between economic theories is the varied importance assigned to different factors and the proposed relationship between those factors. Likewise, empirical studies of foreign aid and economic growth find no agreement on definitive results. The economic literature has largely consisted of single equation models. The findings from the empirical analysis are mixed. The models for this study is chosen from the theoretical and empirical studies discussed in this chapter. It is applied to the data from the selected country case studies from the SPMs. The empirical models and results will be further examined in Chapter 5.

# CHAPTER THREE

## Economic Growth and Development of the South Pacific Microstates

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*“Every Nation strives after development. Economic progress is an essential component, but not the only component... Development is not purely an economic phenomenon. In an ultimate sense, it must encompass more than the material and financial side of people’s lives. Development should therefore be perceived as a multidimensional process involving the reorganisation and reorientation of entire economic and social systems. In addition to improvements in incomes and outputs, it typically involves radical changes in institutional, social, and administrative structures as well as in popular attitudes and in many cases, even customs and beliefs.”*

*Micheal P. Todaro (1997, p.69)*

### 3.0 Introduction

Every nation faces a challenge as they try to provide the basic needs of their ever-growing populations. This challenge has become more desperate as the developing world slowly lags behind the more developed nations. Even in the small Island states of the South Pacific there is a concern to meet the basic needs as these economies enter the next millennium. This anxiety has created an atmosphere of quick fix solutions and Islands for sale attitudes amongst these Island leaders. The foreign investment venture of some of these South Pacific Microstates (SPMs) into creating tax havens, the sale of passports and selling telephone lines to international porn outfits provide clear illustrations of this adventurous spirit (Pacific Island Monthly, 1996 issues). This has worsened as the major donor countries apply constant pressure on the recipient SPMs governments to perform. However, Bertram proclaims that this is not an

important issue 'it is a matter, rather, of enabling them, to find on their own terms, a satisfying place in the world community' (1993,p.257). The overriding objective is not to bully these nations into developing but rather to assist and let them determine on their own terms the development that suits them best. It is to provide progress that is beneficial to all rather than the few.

This Chapter, explores the literature related to economic growth and development of the SPMs. It aims to provide an insight and clarity to the concepts that may appear at first to be ambiguous and broad. It also provides the discussion of the role of foreign aid for economic growth and progress of SPMs. The intention is to understand the key concepts that this research will deal with in terms of the contribution of foreign aid to economic growth of the island economies.

### **3.1 Economic Expansion and its Impact on the People and Economies of the South Pacific Microstates**

For the SPMs, economic expansion has come to represent a life-style of great material abundance. Some of this material abundance relate to motorcars, television, running water, electricity and fast foods to name a few. While this has provided comfort and luxuries to some it has not been cheap. There is a price to pay for a new way of life or any form of change for that matter. Poirine notes that in 'non western cultures, economic progress ...seems to destroy a highly valued traditional way of life' (1995, p.48). This provides support to the view that economic expansion in the SPMs is incompatible with old ways and values. In some SPMs life has become so westernised that returning to traditional ways of doing things is impossible. The attraction of state employment supported by foreign aid has driven many from the village and subsistence lifestyles to the major towns.

The migration of the population in the case of Niue and the Cook Islands is not only confined to major towns but to larger metropolitan countries (mainly New Zealand) where access is not restricted. New Zealand Statistics census for 1996 show that 34,167 Cook Islanders, 14,712 Niueans and 83,718 Samoans

reside in New Zealand (Statistics New Zealand, 1996). This is daunting compared to the populations in their home countries (see Table 3.3a). The United Nations (UN) estimates that in 1996 the population of the Cook Islands is down to 19,000, With Niue a meagre 2,000 and Samoa at 167,000 (UN, 1997). Migration has not been a problem for Kiribati and Tuvalu, rather they experience overpopulation due to high population growth rates. With the wages and salaries generated from government employment and remittances from overseas the demand for foreign goods is established and encouraged. This creates a high demand for imported goods that far exceed exports, leading to negative trade balances.

Bertram and Watters (1985) has described this form of transformation as the evolution of a MIRAB system. This is a system characterised by migration (MI), remittances (R), foreign aid (A), and bureaucracy (B). Bertram and Watters (1986, p.47) noted that these are 'largely exogenous set of factors, which do not merely supplement onshore commodity production in the Islands but which have increasingly and decisively dominated the respective islands economies and largely determined their evolution'. They claim that the evolution of the MIRAB system has 'turned the Islands from resource based into rent based economies and skewed the occupational structure toward bureaucracy and non-agriculture activities' (Bertram and Watters, 1986, p.57). In hindsight, Bertram and Watters (1985 and 1986) imply that if one wishes to examine the economic expansion of SPMs then it is appropriate to closely examine and understand the MIRAB system. However, such a system refers only to the Cook Islands, Tuvalu, Kiribati and Niue. This research acknowledges the other variables that exist in such a system and does not offer any further discussion except for a detailed discussion of foreign aid.

The desirability of growth and development is not undisputed. The criticisms are many and point to the irreversible disruption of traditional societies and lifestyles. Furthermore, critics have argued that economic expansion leads to the 'spread of a uniform materialistic mass culture, which will lead to cultural shallowness and loss of meaning, and to the increasing exploitation of people as a result of the spread of capital market relations' (Szirmai, 1997, p.7). The alarming reports of global warming, the extinction of

rain forests and the pollution of air and water has added more distaste towards the concept of economic growth and development. Such criticism have highlighted the cost of economic expansion and creates an awareness of its limits. This has lead to initiatives that make sustainability as a focus of economic growth and development. This is a form of economic expansion that does not diminish the life chances of future generations.

Criticism of economic growth and development brings to our attention the downside of modernisation or economic expansion. Nevertheless, the fact still remains that developing countries and all SPMs have already been exposed to the cash economies, colonial domination and outside influences. It is not a matter of choice rather it is more of acceptance and making the best of this situation. The choice was already made when the first explores came to the coral shores of the South Pacific. Traditional self-sufficient economies have been interrupted and can no longer exist on their own. The exposure to the outside world has created modern preferences and needs that can no longer be satisfied with limited local resources. The need for economic expansion is more evident today as the economies of SPMs are forced to exist as separate political and economic entities. Chapman (1982, p.138) expressed that: 'Niueans have responded without resistance to the permeation into their lifestyle of New Zealand's own ways and values. In fact, they have come to accept and desire as an integral part of their modern lifestyle practically everything with which New Zealand is associated...The evolution of Niuean society, as a consequence of New Zealand's imperial aspirations, has reached a point of no return'.

Frank Rohorua, a Solomon Island academic states in an article written by Veramu (Island Business, November 1998) that; 'while we may not be happy with the way development is being carried out in the Pacific, the reality of our lives is such that we have become so westernised that it might not be possible to return to purely traditional ways of doing things'. Butuna (1995) agrees that many islanders have relatively high levels of aspirations from their associations with former colonial powers. It is therefore not a case of deciding whether or not to have economic expansion but more to determine the appropriate form of expansion, at a pace that would not destroy their environment and island identity. It is about finding the balance where western culture can exist

comfortably in tandem with traditional beliefs and values. It is about accepting progress, creating jobs and opportunities for the people of SPMs without destroying the opportunities. Such ideals consider the integration of traditional and modern ways of doing things.

In the Islands of the South Pacific today, economic expansion is widespread and dominates the landscape with high rise buildings where once the coconut trees stood. The noisy movement of traffic and the endless buzz of loud stereos all illustrate the progress that has reached the shores of all SPMs. The phenomenon of economic expansion has left nothing unchanged. This part of the discussion provides some understanding on what growth and development means to the SPMs. This looks at the past growth and development experiences of SPMs. It examines broadly the impacts of economic expansion on their economies and their way of life.

### **3.2 Economic Growth and Development of the South Pacific Microstates: Prospects and Obstacles**

The economic growth and development of SPMs requires a great deal of effort. The process will not be easy and calls for difficult political choices and commitment. The wide diversity in terms of physical, political, social and economic characteristics amongst SPMs lead to differences in development prospects and obstacles. However, in most cases there appears to be more obstacles and little prospects leading to limited options for economic progress. Bauer, Siwatibau, and Kasper (1991) offer some discussion on factors that hamper the growth and development of SPM. They point towards narrow production bases, small domestic markets, remote external markets and short supply of skills to name a few. Butuna (1995) and Gounder (1995) in studies on small open economies of the South Pacific come to the same observations. They claim that with small populations and land masses scattered over a vast Pacific ocean there exists such problems as fragmented domestic markets, high transport cost and a vulnerability to natural disasters. Streeten highlights the disadvantages of small economies as being 'less diversified' and have 'relatively

high trade risks' (1993, p.197). With these given problems the prospect for any form of economic growth let alone development is limited for most of the SPMs, especially in the case of those that are considered minuscule. It appears that although the available options for economic expansion is limited the opportunity to do so still remains. However, for the extremely smaller SPMs the future is bleak and can only be described as one of continuing dependency.

Tisdell and Evans point out 'that there is little prospect of a number of resource poor Small Island Developing Nations (SIDS) in the Pacific being able to obtain self-sustaining economic growth and target levels of income through foreign aid intended for productive investment and technology' (1985, p.15). This is a reflection of the foreign aid dependency argument. Given the economic and physical characteristics of SPMs, economic independence and self-sufficiency is difficult despite the large flows of foreign aid. They offer alternatives for considerations that includes: 1) remain dependent on donors and foreign aid, 2) emigrate to donor countries and 3) 'opt for Autarky' with lower income levels and the preservation of traditional culture. These options appear to be unattractive and extremely difficult to accept. Nevertheless, some of the SPMs simply have no other alternatives and seriously need to take these into account. Connell (1986, p.54) agrees that 'atoll development options are naturally constrained by limited land (and sometimes lagoon) areas, and the simplicity of atoll environments. Connell also offers some interesting options such as 'new plant varieties, fertilisers, technology...' to overcome these constraints. However, he does realise that these 'options are diminished by changes in aspirations that have resulted in ... some loss of skills and knowledge...that enable survival and success in environments often threatened by natural hazards' (Connell, 1986, p.54). Briguglio (1995) also notes that these problems or obstacles are not only confined to the SPM but to many Small Island Developing States (SIDS). He points out that SIDS: 'face special disadvantages associated with small size, insularity remoteness and proneness to natural disasters. These factors render the economies of these states very vulnerable to forces outside their control, a condition which sometimes threatens their very economic viability' (Briguglio, 1995, p.1615). The study by Briguglio reveals that despite the high levels of GDP per capita for SIDS giving

an impression of a strong economy, the reality is that these economies are extremely fragile. In this regard SPMs need to address these economic and environmental vulnerabilities before any form of economic expansion is seriously considered.

It is simply accepted by some that economic self-reliance is beyond the reach of most SPMs. Knapman (1986) suggest that this is largely because development in the South Pacific is heading in the wrong direction following the wrong logic. He points out that 'pacific development has not been to alleviate or eradicate the kind of poverty found in Africa or Asia but rather to reach the income levels which Pacific Islanders observe in Australia, New Zealand or the United States' (Knapman, 1986, p.147). Butuna (1995, p.2) describes that 'these people's desired levels of living seem to follow from their association with countries like New Zealand, Australia, and the United States. He points out that a lot of Cook Islanders, Niueans, and Samoans live in New Zealand (as discussed earlier). Furthermore, with the given resources and obvious drawbacks of being small the obstacles are so overwhelming that even outside assistance would not change the outcome. Connell argues that: '...although self-reliance is an important goal especially in some sectors, and should remain a target, the prospects for an overall increase in self-reliance is very small indeed...More often self-reliance remains a nominal political objective, the key to formulation of development plans, but not a genuine economic objective' (1988, p.80).

Bertram (1993) has also expressed concern at policies that place self-reliance or progress towards it as a central focus. He points out that such policies offer false hope. Bertram claims that 'not only are the expectations of rising self reliance in this sense likely to be disappointed, but the pursuit of unattainable goals can involve squandering of resources, degradation of local environments, and subversion of local cultures' (1993, p.248). It appears that the struggle towards economic independence may not be all that important for the SPMs, but rather the need to retain sustainable 'rent incomes' (Bertram, 1993, p.257). Interestingly, this would imply that in the long run the commitment of donor governments to the welfare of Island communities is continued and unchanged. This is largely outside the control of SPMs and

presents immediate and long-term political setbacks. For Island leaders it would be difficult to avoid outside influences on domestic policies and brings into question their right as self-governing entities. Such arguments support the first option given by Tisdell and Evans (1985) for SPMs to maintain the status quo and remain dependent on foreign aid and the generosity of donors. It is a form of development that raises living standards and preserves indigenous societies and cultures (Bertram, 1993). This idea of foreign aid dependency as a form of sustainable development is best described in the following extract: 'It is now more likely to be the diversity and strength of external ties (whether for trade, aid, tourism or whatever) that are the greatest contribute to domestic economic growth and development rather than food production systems that were so crucial in the past...' (Connell, 1988, p.17). This implies, that for SPMs with little prospects for growth and development, it appears that this would be the optimal solution.

In an earlier discussion, Bertram refers to this phenomenon as 'dependent development' (1986, p.809). It is the 'preservation and enhancement of their status as rentier societies' (Bertram, 1986, p.809). In this sense there is nothing wrong with being a dependent economy - what other choice is there? It should be noted however, that this is a difficult option to accept by the recipient as well as the donor. It is often the case where welfare dependency is seen in the same light as social welfare payments. Such negative imagery influences a donor's perceptions about foreign aid, altering the way aid is given or even reducing it altogether. Bertram (1993) gives an example where aid to the Kiribas from the United Kingdom (UK) was altered for such reasons. It was changed from grant aid to project aid. These alterations were done to accommodate the donor's preconceived notions of economic development and partially to benefit UK contractors. This demonstrates outside influences and control of a recipient country's economic policies. It creates a situation where the donor controls the economic expansion of the recipient - a big brother knows best relationship.

On the other hand Knapman argues that 'aid will lead to more aid' (1986, p.139). It is described as an endless state of dependency that will ultimately destroy the very societies it is meant to help. He talks about 'massive

erosion of self-help' and expresses concern that 'aid not only fails to increase the ability to produce real income, but actually reduces it' (Knapman, 1986, p.151). Bertram and Watters (1986) note such remarks as early as 1947 concerning the Cook Islands. A report by Davis (1947) indicates that: 'the parent country, in her eagerness to do her best for this dependency has sapped the native's initiative by spoon feeding methods. Kavamani, the government, is now the thing to look to for any utilities or improvements' (cited by Bertram and Watters 1986, p.51). It is a common understanding that aid is free and unlimited. Little effort is given to the development effort as the reliance on foreign aid provides an induction of unearned resources that keep consumption levels extremely high. It is impossible for such consumption levels to be sustained or even attained for that matter with available local resources. Knapman goes on to state that the 'islands development aspirations cannot be realised on the basis of severely constrained production possibilities and income earning opportunities – without permanent and growing aid dependence' (1986, p.152). The stark alternative would be for these SPMs to live within their means. Knapman (1986) refers to this as the 'Zen approach' or zero economic growth, an approach that requires an adjustment of aspirations according to the resources available.

It is a choice that Island leaders do not find acceptable as they themselves struggle to stay in power. Once again the Cook Islands offer a good example where current restructuring programmes are forcing the islanders to live within the nations means. Prime Minister Sir Geoffrey Henry has openly criticised these reforms for the poor performance of his Cook Islands Party (CIP) in recent national elections. Bauer, Siwatibau, and Kasper comment that such ideas of zero economic growth may be 'economically sound' but 'politically difficult to put in place' (1991, p.23). Nevertheless, it would be one option worth considering given the prospects of SPM.

Others have offered more favourable alternatives yet difficult to implement. Cole (1993) suggests that the solution for economic expansion for Island economies in the South Pacific is the promotion of the private sector. This approach focuses on international trade and the encouragement of a free market system. It calls for the removal of tariffs and regulatory frameworks 'that support inefficiency' and 'create a lack of entrepreneurial spirit' (Cole,

1993, p.233). Cole realises that a private sector led growth and development also faces certain constraints due to lack of trained labour, entrepreneurial flair, and a highly regulated business sector. Nevertheless, these 'constraints and challenges can be surmounted with political will and determination' (Cole, 1993, p.244). Jayaraman (1995) examines the opposite side of the coin – the public sector. He notes that the growth of the public sector is a direct result of 'weak private sector initiatives' (Jayaraman, 1995, p.34). In saying this, he also points out the need for governments to pull out from areas and operations that can best be done by the private sector. Furthermore, Jayaraman realises that the state plays an important function in the progress of SPMs. That function is to provide 'an enabling environment for the private sector' (Jayaraman, 1995, p.57). It is apparent that the private sector led growth is highly dependent on government policies that offer favourable conditions for investment and management operations. This does not imply the use of protectionist policies but rather a more open macroeconomic environment where the private sector can play a more dynamic role. In another study, Jayaraman (1996) further examines private investment and the macroeconomic environment of the South Pacific Island countries. This study notes the commitment of the SPMs to promote the private sector and for this to succeed it needs greater improvements of their macroeconomic environments. The section below explores the role of foreign aid in the SPMs, which sets the scene for the empirical analysis that will be undertaken in Chapter 5

### **3.3 The Role of Foreign Aid in the Economies of the South Pacific Microstates**

Ever since gaining political independence, SPMs have largely relied on foreign aid to support economic expansion. Foreign aid is simply a transfer of resources from developed countries (donors) to developing countries (recipients). The concept of foreign aid that exists today originated from the destruction of European countries after World War II. It involved large injections of funds from the United States into the war torn economies of Europe

to assist in their economic recovery and overall rebuilding. The transfer of these funds were first controlled by the World Bank set up in 1945 for this sole purpose. In 1946 the European Recovery Program replaced this major function of the World Bank. This was better known as the Marshall Plan and became the basis for bilateral aid.

It is apparent from the literature that two dominant yet contradicting viewpoints exist on foreign aid. The traditional view contends that foreign aid not only complements domestic resources of capital poor countries, but also helps them to mitigate some constraints of isolation, resource poor and small size, all positively contributing towards economic expansion. It is a view held by donor governments and multilateral agencies. The New Zealand government itself expresses that the principal purpose of its aid is to 'achieve lasting improvements in the living conditions of present and future generations of men, women and children of developing countries, especially the poor (Ministry of Foreign Affairs and Trade, 1999). Such views are based on the belief that a shortage of capital resources in developing countries is a significant obstacle to economic growth and development. Mbaku notes foreign aid improves the developing countries 'capital formation' and would enable them to proceed without further assistance (1993, p.1310). Empirical studies by Islam (1992) on foreign aid and economic growth using Bangladesh as a case study provide some interesting results. The study reveals that 'foreign resources, in its highly aggregate form has no significant contribution to growth' (Islam, 1992, p.541). However, it did note that some form of resource transfers contributed more to growth than others. Mbaku (1993) carried out similar studies for the nation of Cameroon, reaching the same conclusions. The implications of these results confirm that resource transfers do have an impact on growth in the recipient country. Nevertheless, as noted earlier, one should not hasten to conclude that there is an overall economic progress.

The second view on foreign aid denounces such transfers as superficial and often damaging to the economies of recipient countries. According to this view, foreign aid substitutes rather than complements domestic resources and leads to a situation of dependency. Knapman (1986) argues that such resource transfers do not work for Pacific Island states. He claims that 'aid will tend to

create the need for more aid, leading to a condition of permanent aid dependence' (Knapman, 1986, p.139). The poor economic performance of most Island states in the South Pacific and the high level of dependence of the SPMs on foreign aid offer some substance to Knapman's arguments. Even more alarming is the notion that these SPM will remain dependent despite any amount of resource transfer. Bauer bluntly points out that 'if a country or rather a people, cannot readily develop without external gifts, it is unlikely to develop with them' (1976, p.100). He goes on to state that '...even when aid improves current economic conditions in the recipient countries it need not promote their long-term development' (Bauer, 1976, p.100). One must then realise that it takes more than just foreign aid to lift a developing country from the continuous state of dependence and never-ending despair of poverty. This is more of a warning and is given to those that believe that foreign aid is the miracle solution to all the problems of the developing world. The success of the 'Marshall Plan' in Europe would not necessarily mean that it could be repeated in other parts of the world. The major differences between these groups of countries cannot be ignored. While Europe had the infrastructure, skilled manpower, and entrepreneurial attitudes, the countries of the developing lacked these resources. Therefore, European countries were in a better position to utilise large injections of foreign aid. Such misconceptions have been addressed as past mistakes offer valuable lessons.

Although foreign aid is seen to inhibit rather than promote economic progress of the developing world by some studies it should not imply that such resource transfers are pointless. It merely highlights their limitations and obvious weaknesses. Terminating foreign aid completely would be impractical and would leave dependent developing nations worse off than they were before. Bauer, Siwatibau and Kasper (1991) also note that it would be difficult to totally phase out foreign aid. They claim that this is 'partly because of the momentum of existing commitments, and partly because of the influential and articulate interest groups' (Bauer, Siwatibau, and Kasper, 1991, p.17). It is also interesting to note that they call for foreign aid reforms. The reforms reflect quality control measures aimed at improving the focus of foreign aid. The reforms mainly include changes in the criteria of foreign aid allocation. It

suggests that foreign aid should be given to countries whose policies are most likely to promote economic expansion and overall social progress. However, one must approach such condition with caution. It is clear that this would give more control to the donor countries. This can easily lead to a situation where the perceptions of economic expansion of a donor country are forced upon the recipient countries. History has shown that this is often the case with foreign aid provided on a conditional basis. The case of Kiribati foreign aid from the UK demonstrates this kind of behaviour (refer to section 3.2 of this chapter).

Aid motivation studies suggest a variety of reasons for giving aid. While the recipient need argument suggest that aid is given for humanitarian concerns, the other view reflects the benefits donors achieve from aid in terms of strategic, political, and commercial interest. Gounder (1995) presents a detailed analysis of various studies on foreign aid motivation of several donors.

In the case of SPMs foreign aid does offer some hope as they struggle to establish themselves in the world community as an economic and political entity. But so far the efforts have been to no avail. Notably that SPMs still remain heavily dependent on foreign aid. It would be hard to imagine the consequences of phasing out foreign aid for these countries. Bertram (1986) offers a more sympathetic solution (also mentioned in earlier sections). It is one of 'dependent development', where the prime objective is not self-sufficiency but rather the maintainance of foreign aid. He claims that for SPMs, foreign aid is a big part of the foundation in which the modern economy is built upon. The lack of any real prospects for economic growth and development has resulted in resource wastage and misdirected focus as SPMs leaders seek self-sufficiency goals. He argues that 'dependent development' would be more beneficial and sustainable for SPMs in the long run than other alternatives. But this development is totally reliant upon the commitment of the donor countries. It breeds uncertainty and drains the recipient's political influence and autonomy.

Although Fairbairn warns that 'donors should refrain from using aid for political and commercial ends' it is difficult to determine the donors motives for giving aid (1985, p.266). Even Bertram (1986, p.820) notes that 'the biggest long run risk is that the donor's political commitment might weaken in the face of domestic pressure'. This would be a risk that leaders of the SPMs need to

accept as a condition of 'dependent development'. Another danger of accepting this form of development is the creation of a society of welfare beneficiaries not being able to survive on their own. A dole system on a wider scale. As suggested by Knapman (1986) and discussed in earlier sections. He states that foreign aid has the ability to reduce the production capabilities of recipient populations but especially for SPMs. He claims that it creates an attitude of indifference towards development and no real effort is given to attain it. One can argue that this has already taken place with the evolution of the MIRAB system (refer to section 3.1 of this chapter for a discussion of the MIRAB system). Nevertheless, to include and formally accept sustaining a rentier status as an economic policy target would be difficult, by both the donor and the recipient government.

Foreign aid to promote economic expansion is one thing, foreign aid for welfare payments is another issue altogether. Fairbairn proposes that 'aid should be extended in spirit of mutual respect and partnership as a sincere gesture of goodwill to assist Pacific countries attain higher levels of development and wellbeing' (1985, p.266). He emphasises that a donor country needs to accept the development choices determined by a recipient country. It should be a 'they know what they want' approach rather than 'I know better attitude' (Fairbairn, 1985, p.266).

In recent years a new view on the role of foreign aid has emerged. The focus is more on improving the effectiveness of foreign aid through institutional development in recipient countries and policy reforms. The World Bank points out that 'it is possible to assist development in countries with weak institutions and policies, but the focus needs to be on supporting reformers rather than disbursing money' (1998, p.116). The idea is that recipient countries with good policies and sound economic management would utilise foreign aid more effectively. Studies by Burnside and Dollar (1997) provide some of the empirical evidence that support this new approach to foreign aid assistance (discussed in Chapter 2). Therefore, it is argued that 'donor agencies need to create internal mechanisms and incentives that foster selectivity and that focus large scale finance on developing countries with good policies' (World Bank, 1998, p.117).

It is apparent from the following Table 3.3a that foreign aid to SPMs is mainly in the form of grant aid. This acknowledges the disadvantaged position faced by the resource poor SPMs.

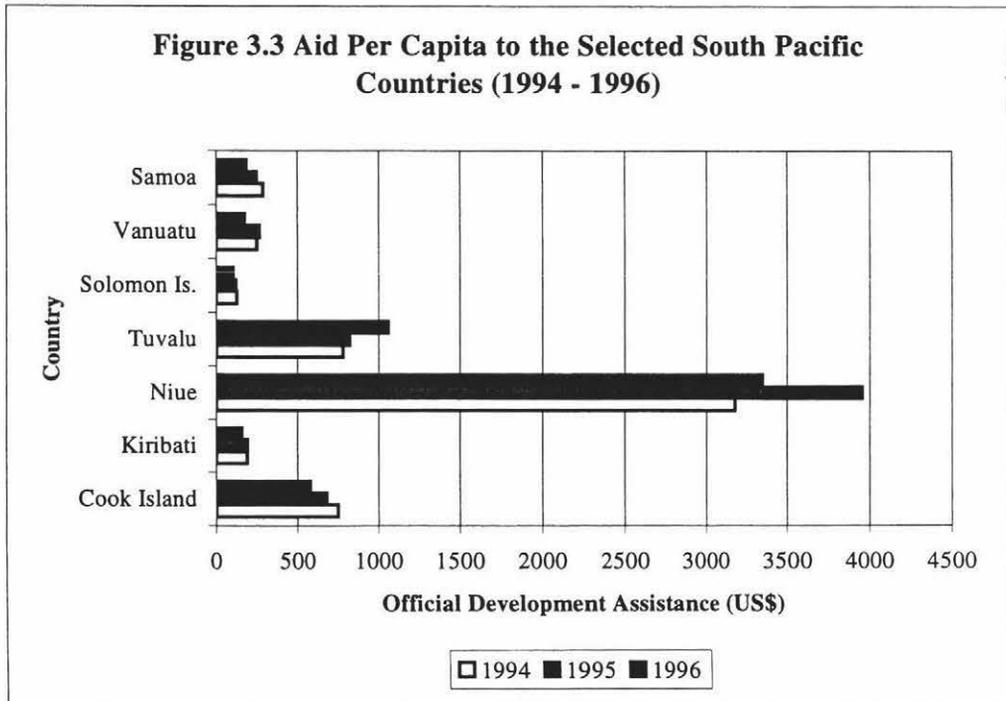
**Table 3.3a Official Development Assistance (ODA) to Selected SPMs**

Country		1993	1994	1995	1996
<b>Cook Island</b>	Population ('000)	18.9	19.1	19.3	19.5
	Loan Aid US\$(millions)	1.9	1.2	0.4	4
	Grant Aid US\$(millions)	11	13.2	12.7	7.4
	Total Aid US\$(millions)	12.8	14.3	13.1	11.3
	Aid per capita US\$	677	749	679	579
<b>Kiribati</b>	Population ('000)	77.1	78.9	79	81
	Loan Aid US\$(millions)	0	0.2	0.3	-0.1
	Grant Aid US\$(millions)	16	15.2	15.3	13.1
	Total Aid US\$(millions)	16	15.4	15.5	13
	Aid per capita US\$	208	195	196	160
<b>Niue</b>	Population ('000)	2.2	2.2	2.1	2
	Loan Aid US\$(millions)	0	0	0	0
	Grant Aid US\$(millions)	4.6	7	8.3	6.7
	Total Aid US\$(millions)	4.6	7	8.3	6.7
	Aid per capita US\$	2091	3182	3952	3350
<b>Tuvalu</b>	Population ('000)	9.4	9.5	9.6	9.8
	Loan Aid US\$(millions)	0.1	0.1	0.3	0.1
	Grant Aid US\$(millions)	4.1	7.3	7.7	10.3
	Total Aid US\$(millions)	4.2	7.4	7.9	10.4
	Aid per capita US\$	447	779	823	1061

**Source:** UN Statistical Yearbook (various editions), OECD-Geographical Distribution of Financial Flows to Developing Countries (various publications)

It is also apparent that aid per capita for Niue and Tuvalu are extremely high. In 1996 Niue received US\$3,350 and Tuvalu US\$1061 in aid per capita. This is then followed by the Cook Islands and Kiribati with per capita aid of US\$579 and US\$160 respectively. It appears the smaller SPMs (in terms of population) received more aid per capita than larger states. Whereas, total foreign aid to Niue decreased during the period 1994-1996 from US\$7 million to US\$6.7 million, they still received the highest aid per capita. The reduction follows the same trends with the declining population. This is a major concern for Niue and needs to be addressed immediately. Any further reduction in Niue's population will mean more foreign aid cut back. Tuvalu experienced an increase in foreign aid for the same period from US\$447 to US\$1061 per capita. The Cook Islands

and Kiribati both faced foreign aid reductions for these years. For the Cook Islands, aid per capita decreased from US\$677 in 1993 to US\$579 in 1996. At the same time proportion of aid given as loans show an increase of approximately 15 percent of total aid to 35 percent. Similarly, Kiribati's aid per capita declined from US\$208 to US\$160 for the entire period. Apart from Tuvalu, total foreign aid to the selected SPMs for the period of 1991 to 1996 shows a declining trend.



**Source:** UN Statistical Yearbook (various editions), OECD- Geographical Distribution of Financial Flows to Developing Countries (various publications).

Figure 3.3 confirm that overall the smaller SPMs receive more aid per capita than the larger and more populous states. Niue and Tuvalu both receive the largest amount of aid per capita amongst SPMs. Knapman (1986) has argued that this bias in aid allocation is not confined to the South Pacific but concerns all small countries. He points out that ‘countries whose population is less than five million receive about three times the aid per head received by larger countries with similar income levels’ (De Vries, 1975: cited by Knapman, 1986, p.139). Furthermore, Knapman argues that this bias is even greater with countries that have populations under one million.

Foreign aid to the South Pacific is mainly through bilateral arrangements. Tiskata states that 'aid from bilateral sources by far outweighs multilateral aid, accounting for 70-80 percent of the total' (1998, p.5). Figure 3.3b shows foreign to the South Pacific island economies from major donor countries. Traditionally, Australia, New Zealand, United States, the United Kingdom, France and Japan are the major aid donors to the South Pacific region.

**Table 3.3b ODA by Major Donors US\$(millions) in 1996**

	Australia	Denmark	France	Germany	Japan
Cook Is.	1.1	0	0	0.1	0.3
Kiribati	4.8	0	0	0	4.5
Niue	0.5	0	0	0	0.1
Tuvalu	3.1	0	0	0	4.6
Fiji	12.5	0	1.2	0.2	18.6
Samoa	8.4	0	0.2	0.1	14.3
Solomon Is	8	0.2	0.3	1.5	18.2
<b>Total</b>	<b>38.4</b>	<b>0.2</b>	<b>1.7</b>	<b>1.9</b>	<b>60.6</b>
<b>Oceania</b>	<b>336.3</b>	<b>0.2</b>	<b>836.5</b>	<b>5.8</b>	<b>197.7</b>

**Table 3.3b continued**

	Netherlands	New Zealand	USA	UK
Cook Is.	0	5.6	0	0
Kiribati	0.2	2	0	0
Niue	0	5.9	0	0
Tuvalu	0	1.4	0	0
Fiji	0.2	6.6	1	0
Samoa	0.2	6.7	1	0
Solomon Is	0	4.3	1	0
<b>Total</b>	<b>0.6</b>	<b>32.5</b>	<b>3</b>	<b>0</b>
<b>Oceania</b>	<b>4.3</b>	<b>69.9</b>	<b>231</b>	<b>12.2</b>

**Source:** OECD- Geographical Distribution of Financial Flows to Developing Countries (various publications).

Although, Australia and France provide a large proportion of foreign aid to the South Pacific region (Oceania), it is mainly given to their former colonies and dependencies. Official Development Assistance (ODA) from Japan appears to be more focused on larger pacific countries such as Fiji, Solomon Islands and Samoa. For Niue and the Cook Islands, the main provider of ODA is New Zealand. Tuvalu and Kiribati are seen to be more reliant on Australian and Japanese ODA. This indicates that the flow of aid to the region is more politically motivated and mainly follows former colonial ties. Knapman (1986, p.140) simply states that 'any close correspondence between aid flows and aid requirements is likely to be purely coincidental'. It is therefore, rather obvious

that the distribution of ODA or foreign aid cannot be totally explained by the recipient's resource needs.

The discussion above suggest that island economies rely heavily on aid to meet its resource needs, and are dependent on foreign aid. It is also rather obvious that aid will remain a key factor in the economic growth and development of SPMs. This has rather more serious implications and needs to be carefully considered. The recent downturn in the global economy has lead to economic recessions in most donor countries. This puts a lot of pressure on government expenditure in these countries that is likely to threaten their current and future levels of commitment. It is now perhaps more important than ever for SPMs to capitalise on existing arrangements rather than endure the extreme difficulties of adjustments and reforms once foreign aid is cut. Furthermore, it would remove the uncertainty that arises from year to year allocations of grant aid. The argument presented here is for SPMs to better utilise foreign aid flows given the existing opportunities. But to do so, they need to understand the relationship between foreign aid and economic growth. This study offers that general to specific understanding of the aid growth relationship.

### **3.4 Summary and Conclusion**

This chapter examines the literature related to economic growth and development within the South Pacific context, and provide some clarity to key concepts that this study deals with. The impact of economic growth and development on SPMs is impeded by obstacles faced by island nations that also affect future economic expansion. Thus there is a significant role for foreign aid in the economies of SPMs.

The terms economic growth and development have often been interpreted to mean the same. Economic expansion in the SPMs has altered the way of life so much that returning to traditional lifestyles is near impossible. However, one cannot deny these changes but accept them and make the best of what is given. Therefore, the challenge facing all SPMs is more about determining their own place in the global community. This is about

understanding their needs and abilities for further economic progress. For the SPMs the target of self sustained growth and becoming complete economic entities is some what unrealistic and difficult given the lack of resources (natural and human) and isolation from international markets. Nevertheless, it does not imply that SPMs are unable to progress. There are other alternatives which are politically difficult to accept but need to be carefully considered. Foreign aid has played a significant role in the economic expansion of SPMs and continues to do so. In the economic literature two dominant and opposing views on foreign aid both offer some valuable understanding to the concept of foreign aid, its meaning and intentions. For SPMs, foreign aid remains the main contributor to growth and development. Any future plans of economic expansion for SPMs will most certainly have foreign aid at its core.

The issues discussed in this chapter provides the foundation for developing the empirical analysis to be undertaken. The preceding chapters will build upon these concepts and further examine these issues using econometric models.

## CHAPTER FOUR

### An Overview of the Selected Case Studies of the Cook Islands, Kiribati, Samoa, and the Solomon Islands

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*'To raise the standards of living and promote economic development in the region, the people of the Pacific Islands must be involved in the process, ...'*  
(Dr Sitiveni Halapua, 1999)

#### 4.0 Introduction

This chapter provides an overview of foreign aid flows, economic growth and the development process of each of the selected country case study of the South Pacific Microstates (SPMs) of the Cook Islands, Kiribati, Samoa, and the Solomon Islands. It examines each country with particular interest on their physical, political and economic characteristics. The emphasis is mainly on analysing the economic performance of these countries so one can begin to understand the process of economic growth and development that exist. This chapter describes the pattern of growth of real Gross Domestic Product (GDP), trade, investment and foreign aid flows for each of the selected SPMs for the period 1970 to 1995.

This chapter is organised as follows. Section 4.1 provides a discussion on the definition of small island states with some emphasis on the advantages and disadvantages of being a small country. Section 4.2 is an overview of the South Pacific region with comparison to the Caribbean, African and Indian Ocean groups. It also provides an overview of the selected country case studies. This examines the historical, political and growth performance of the Cook Islands, Kiribati, Samoa, and the Solomon Islands. Section 4.3 is a discussion on the key factors for economic growth for each of the selected case studies. Finally, section 4.4 presents the summary and conclusion of this chapter.

## **4.1 The South Pacific Microstates: A Definition of Small Island States**

As stated in Chapter 1, the South Pacific Microstates mainly refers to small islands in terms of population and resource base. This would specifically include Niue, Tuvalu, Kiribati and the Cook Islands. This research stretches this definition to include Samoa and the Solomon Islands. This section briefly reviews the concept of smallness to explain the inclusion of these latter islands within the scope of SPMs.

The literature on smallness would agree that the Solomon Island and Samoa in terms of population size are actually considered small. Streeten (1993,p.197) points out that ‘...we can define a country’s size by its population, or by its area, or by its national income’. He bluntly states that the ‘best simple measure is population’ (Streeten, 1993, p.197). Streeten suggests that a small country is one with less than 10 million inhabitants and a very small one is with less than 5 million. Srinivasan (1986) on the other hand denotes that a small country is one with a population between 1.5 million to 5 million and a very small one is less than 1.5 million. Legarda (1984) takes this measure even lower and considers a country with less than 1 million people as small. Given all these differences, the population criterion to measure the size of a country appears to be too simple. However, in the case of the Solomon Islands and Samoa it is apparent that these measures consider them either small or very small. On this basis the Solomon Islands and Samoa can be included as a microstate or in this case, as SPMs.

### **4.1.1 Smallness: Advantages and Disadvantages**

There are certain advantages associated with a small island state. For instance, small island states tend to receive more foreign aid per capita as evident in the case of Niue, Tuvalu and the Cook Islands (see Chapter 3 for a detailed discussion). Knapman (1986) and Streeten (1993) also note that foreign aid per capita tends to increase as the size of the country declines. It is obvious

that for these small island states remittances can easily provide a steady source of foreign exchange. A study by Browne and Scott (1989) found that remittances is a major contributor to the economies of several South Pacific countries. They point out that Kiribati, Tonga and Samoa receive a significant amount of remittances from migrant workers overseas. However, one of the major advantages of small island states is the strong sense of community and closer homogeneity of the population. Streeten (1993) states that for small countries national solidarity and collective action is stronger. This is crucial for implementing change and accepting progress.

On the other hand, Briguglio points out that small island developing states (SIDS) face special problems associated 'with small size, insularity, remoteness and proneness to natural disasters' (Briguglio, 1995, p.1615). He refers to limited natural resource endowments, dependence on a narrow range of export commodities and the limitations of domestic competition. Streeten (1993) notes that small countries will tend to rely more on imports and foreign markets. This would explain the Cook Islands and Kiribati's dependence on imports (this is discussed in detail in section 4.3).

It is obvious, that one of the most constraining factors of economic growth and development for small island states is the limited land area. Shand (1980) states the limited landmass of Pacific Island countries makes them more vulnerable to problems such as limited diversity and lower potential for experimentation. Butuna (1995) points out that this also leads to problems of over population creating economic and social problems. Furthermore, an additional problem of small island states is that these small landmasses are scattered over a wide ocean creating problems of distance and fragmentation. Briguglio (1995) argues that these factors render the economies of small island states vulnerable to forces outside their control. It is a condition that threatens the economic viability of all small island states.

The next section provides an overview of each of the selected country case study of the Cook Islands, Kiribati, Samoa, and the Solomon Islands.

## **4.2 Regional Overview: The Historical, Political and Growth Performance of the Selected Country Case Studies**

The vast Pacific Ocean covers one-third of the World's surface. According to Eccleston, Dawson and McNamara (1998) this ocean contains over 25,000 islands. They point out however, that only 7,500 of the islands are considered 'Pacific Islands'. Furthermore, only 10 percent of these islands are populated and of the estimated 6.3 million people living in the region, 83.9 percent live in Melanesia, 8.9 percent in Polynesia and 7.1 percent live in Micronesia (Eccleston, Dawson and McNamara, 1998, p.249). See the map of the South Pacific region on page XI. This section begins with a regional overview of the South Pacific. It provides a comparison to other similar regions in the world such as the Caribbean and the African and Indian Ocean group.

### **The South Pacific Region**

The South Pacific region contains hundreds of small islands and atolls spread across a wide Pacific Ocean. The people of these islands have so far enjoyed relatively safe, secure and subsistence lifestyles. The rich cultural traditions and the family based societies with common sharing practices that exists in these islands create a laid back attitude towards life. This may reflect the slow economic growth and development the region has experienced in the past two decades compared to similar island economies in other regions.

For the period 1983 to 1993 the average growth rate of real GDP for Pacific Islands is 2.1 percent per annum (World Bank, 1991, p.8). This is lower than the real GDP growth rates for the Caribbean and the African and Indian Ocean regions at 3.2 percent and 5.4 percent per annum respectively (World Bank, 1996, p. 1). In 1997, GNP per capita averaged US\$1,519 in the Pacific Member Countries (PMCs) compared to US\$4,450 in the Caribbean and US\$2,400 in the African and Indian Ocean group (see Table 4.2). Within the PMCs, GNP per capita in 1997 varied considerably ranging from US\$2,578 in Fiji to US\$663 in Kiribati (World Bank, 1999). The population levels of Pacific islands in 1997 is much higher than the other two regions (refer to Table 4.2).

This reflects declining mortality and increasing fertility (World Bank, 1996). It also indicates that as a result of high population levels and low levels of national output, GDP per capita is declining. This may explain the low levels of GDP in the South Pacific region compared to the Caribbean and African and Indian Ocean.

**Table 4.2 Comparative Indicators of the Pacific, Caribbean and African and Indian Ocean Countries**

Country	Population ('000) 1997	GNP(US\$millions) 1997	GNP/Capita 1997 (US\$)	Ava. GNP/Capita 1997 (US\$)
<b>Pacific</b>				1519
Fiji	815	2101	2578	
Fed. States of Micronesia	111	213	1919	
Kiribati	83	55	663	
Marshall Is.	60	97	1617	
Solomon Is.	403	374	928	
Tonga	98	187	1908	
Vanuatu	177	252	1424	
Western Samoa	174	194	1115	
<b>Caribbean</b>				4450
Antigua and Barbuda	66	502	7606	
Barbados	265	1743	6577	
Belise	230	649	2822	
Dominica	74	243	3284	
Grenada	96	295	3073	
St Kits and Nevis	41	247	6024	
St Lucia	159	598	3761	
St Vincent and Grenada	112	275	2455	
<b>Africa and Indian Ocean</b>				2400
Cape Verde	401	425	1060	
Comoros	518	194	375	
Maldives	256	342	1336	
Marutiatius	1000	4398	4398	
Sao Tome and Principe	138	44	319	
Seychells	78	539	6910	

**Source:** World Bank (1999).

The present economic condition in the South Pacific region has further deteriorated following the Asian financial and economic downturn. The Economic Intelligence Unit (EIU) country report for the first quarter of 1999 predict economic contractions for many countries in the region. The Asian Development Bank (ADB) reports that in 1995 the average real GDP for Pacific islands declined by 1 percent (ADB, 1998a, p.223). Although there is some

improvement with a real GDP growth rate of 2.8 percent in 1996, poor growth performance was recorded in Kiribati, Marshall Islands, Federated States of Micronesia, and Tonga (ADB, 1998a, p.24). EIU (1999) report also notes that the adverse weather conditions created by the El Niño and the La Niña phenomenon is expected to further dampen economic growth as commodity exports suffer. ADB (1998a) describes the economic performance in the Pacific region as 'tough' with most island economies experiencing contractions in real GDP growth rates and absolute declines in GDP. The following sections provide an overview of the historical, political and economic performance of each of the selected SPMs in detail.

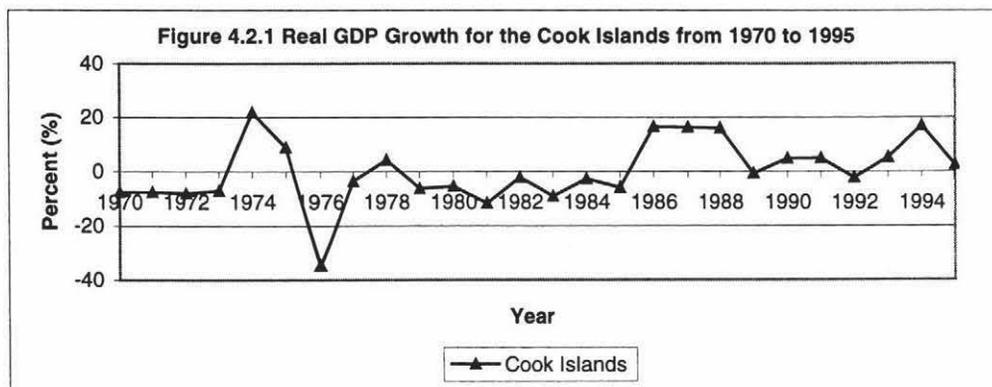
#### **4.2.1 The Cook Islands**

The Cook Islands is a group of 15 islands with a total land area of 234 square kilometres, however, the Cook Islands has one of the largest territorial areas in the world with 2.2 million square kilometres of sea (Eccleston *et.al*, 1998). The country is mainly a mixture of volcanic and coral islands with a few scattered atolls. The population in 1997 is estimated to be 18,000 and appears to be stabilising after a period of growing migration as a result of the 1995 economic reforms (Keith Reid, 1998).

In the year 1900 the Cook Islands was included in the boundaries of New Zealand and becomes a protectorate of the United Kingdom (UK). This arrangement was changed in 1965, as the Cook Islands becomes a self-governing nation in free association with New Zealand but with limited control over defence and foreign policies. Under this new arrangement, the Cook Islanders are given New Zealand citizenship. The system of government is based on the Westminster model with an elected parliament of 25 members (including a member who represents Cook Islanders living in New Zealand). The leader of the government is the Prime Minister and the head of state is the Queen of England.

The Cook Islands economy is largely dependent on the Government with agriculture still playing an important role. Remittances, foreign aid, sales of

postage stamps and the export of agricultural commodities are also major contributors to the economy. In 1996 the share of agriculture to GDP is 18 percent, with trade and public administration making up 26 percent and 23 percent of GDP respectively (ADB, 1998b).



Source: UN (various), World Bank (various), ADB (various).

The growth performance in the Cook Islands from 1970 to 1995 is rather mixed (see Figure 4.2.1). In 1970 real GDP declined by 8 percent as the country's major export commodity citrus suffered as a result of low international prices (UN, 1980). As the crisis in the citrus industry intensified real GDP fell sharply in 1976 by 35 percent with exports contracting by 40 percent and the labour force declining by 6 percent as migration to New Zealand gained momentum (UN, 1980. Also refer to appendix 4.3, Table A4.3.1). Temu (1996) explains that such growth trends reflect the open nature of the Cook Island's economy. It is apparent that the Cook Island's dependence on a narrow range of export commodities and limited resources has negatively affected the growth performance of the country. Prior to the opening of the international airport in 1974 and the establishment of the tourism industry the Cook Islands mainly relied on the citrus industry.

Figure 4.2.1 shows that the real GDP to declined from 16 percent in 1994 to 0.26 percent in 1995. A 15 percent drop in tourist numbers has also contributed to this decline (ADB, 1997). Major government reforms such as a substantial retrenchment of staff and pay reductions has paved the way for a slow recovery. A more recent development in the Cook Islands is the introduction of pearl farming that has shown great success and has become a valuable export. In 1997 the value of pearl exports for the first six months was

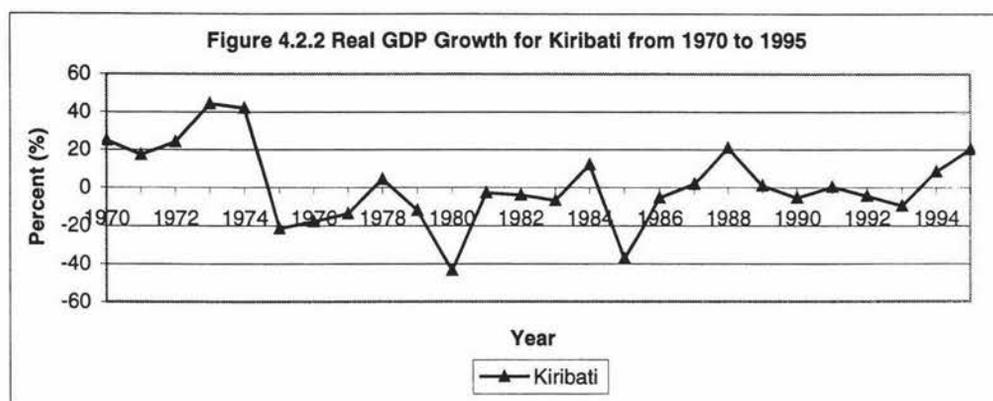
NZ\$1 million (ADB, 1998a, p.150). The Asian Development Bank (1998a) reports that there are some improvements with real GDP growth recorded at 0.5 percent in 1997 after a 5 percent decline in 1996. It is expected that GDP in 1999 will pick up and reach levels of around 4 percent as pearl exports continue to expand as a result of increasing developments in the industry (ADB, 1998a). Despite these upheavals in the local economy, Cook Islanders have one of the highest per capita GDP amongst SPMs of \$4,231 in 1995 (UN, various. Also see appendix 4.2).

#### **4.2.2 Kiribati**

Kiribati (pronounced Kiribas) is made up of 33 low lying coral atolls, neatly divided into three main groups known as the Gilbert Islands, the Phoenix and Live Islands. It covers an area of 3.5 million square kilometres of ocean but only 817 square kilometres of land (Eccleston *et.al*, 1998, p.265). The islands are mainly coral atolls with lagoons in the middle and have rather shallow top soil that make it difficult to grow crops (McKinnon *et.al*, 1993, p.5). With the country being located in the central Pacific Ocean and scattered on both sides of the equator, the weather is hot and humid causing occasional periods of drought. Its population in 1996 is 79,000 mainly concentrated in the Gilbert group (ADB, 1998b). Kiribati has an over population problem most evident in Tarawa which has a population of 24,000 and a density of 542 people to a square mile and as a result has led to the introduction of various resettlement programs (Keith Reid, 1998).

Micronesians first settled Kiribati between 200 and 500 AD forming a single culture and spoken language. In 1892 Kiribati along with Tuvalu became the British protectorate of Gilbert and Ellice Islands. In 1975 Ellice Islands seceded to form Tuvalu and Kiribati becomes a republic in 1979 with the end of British rule. Kiribati is a democratic republic of the commonwealth and has a parliament of 41 members elected to a four-year term. The President is both the head of state and the government and is elected by the House of Parliament. There are two major political parties known as the 'Mareaban te Mauri' (MTM)

and the National Progressive Party. Eccleston *et.al* (1998) notes that political groupings mainly reflect Protestant and Catholic religious affiliations.



**Source:** UN (various), World Bank (various).

The end of the phosphate industry in 1979 has created dramatic changes in the Kiribati economy. The economy that was once built on phosphate revenue is now based on the export of traditional agricultural commodities of fish and copra controlled by an overbearing government sector. In 1980 the share of agriculture to GDP was 23 percent with trade, transport and communications, and public administration making up 20 percent, 22 percent and 25 percent of GDP respectively (ADB, 1998b). After 16 years this composition has altered markedly. In 1996 agriculture accounted for 16.2 percent of GDP with trade and transport and communications both declining to 15 percent of GDP (ADB, 1998b). It appears that for the same year the share of public administration to GDP has increased to 38 percent indicating the Governments strong hold on the economy (ADB, 1998b). Kiribati also has a Revenue Equalisation Reserve Fund (RERF) that was established in 1956 to accumulate phosphate earnings. This is used to supplement government revenues and contain the budget deficit (World Bank, 1996).

Prior to 1979 growth of the Kiribati economy closely followed the exports of phosphate. During the period 1970 to 1974 the country registered a strong growth performance (see figure 4.2.2). In 1970 the real GDP growth rate was recorded to reach 24 percent. It remained at such levels as phosphate prices reached an all time high. As prices returned to original levels real GDP declined from US\$163 million in 1974 to US\$128 million in 1975 giving a negative growth rate for real GDP of 21 percent (UN, various. See also Appendix 4.3,

Table A4.3.2). The end of phosphate exports in 1979 resulted in export to contract by 90 percent and GDP to fall by 43.5 percent in 1980 (UN, various. Also refer to Table A4.3.2 in Appendix 4.3). As with the Cook Islands it appears that Kiribati also faces the same problems of being a small country.

The World Bank (1991) reports that during the 1980s growth stagnated with great variability reflecting the vulnerability of the country's main exports (copra and fish) to fluctuations in international market prices and natural disasters. For example, in 1985 real GDP declined by 37 percent as export growth decreased by 65 percent as a result of low prices for export commodities (UN, various: World Bank, various). However, improvement in the export performance with growth rates of 35 percent has resulted in real GDP to increase by 20 percent in 1995 (UN, various. Also refer to Table A4.3.2). This is largely due to the devaluation of the Australian dollar leading to more competitive exports.

In recent years growth has been less erratic but still remains sluggish. The Asian Development Bank (ADB) notes that real GDP growth averaged a little more than 7 percent per annum from 1994 to 1996 (1998a, p.152). This is an improvement from an average real GDP growth rate of 0.8 percent per year from 1983 to 1993 (World Bank, 1996, p.8). Little has been done to diversify the productive base of the economy with the export of seaweed as the only new inclusion (ADB, 1997). Tourism and manufacturing both remain a small and stagnant sectors. It appears that the country has yet to recover from the loss of phosphate with the task made more difficult with Kiribati's limited resources. The Asian Development Bank also notes that 'real GDP growth in the 1990s has remained below the population growth rate, resulting in a steady fall in per capital GDP' (ADB, 1997, p.151). See Appendix 4.2, Table A4.2.

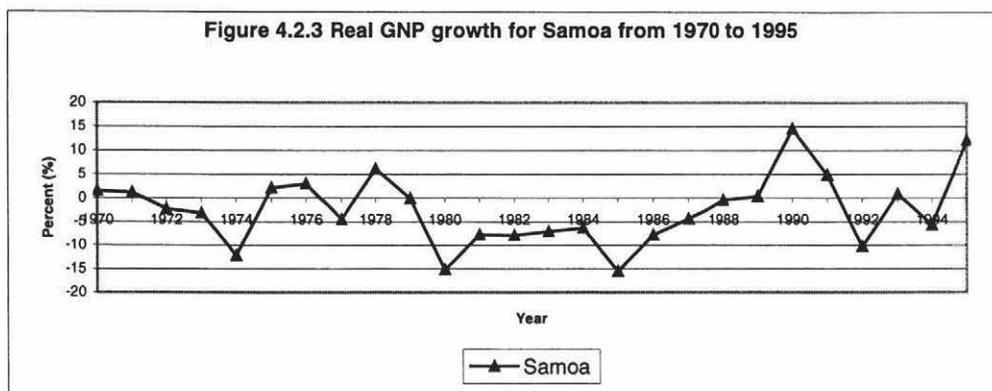
### **4.2.3 Samoa**

Samoa consists of two main islands of Upolu and Savai'i. It has a total land area of 2,830 square kilometres and a sea area of 131,000 square kilometres

(World Bank, 1991). The country has fertile volcanic soil that supports an important forestry industry. While marine resources are abundant other natural resources such as minerals are relatively limited. The population in 1997 is estimated to be 170,000 and is evenly distributed amongst the two Islands (EIU, 1999, p.26).

Polynesians first settled Samoa in 1000 BC unified by one single culture. In 1900, America and Germany split the country into two groups known as Western and American Samoa. The outbreak of the First World War in 1914 lead New Zealand to annex Western Samoa with German plantations seized (Eccleston et al, 1998). New Zealand's administration ended in 1962 with Western Samoa achieving full independence. The 49 member 'Fono' (legislative assembly) is elected by universal suffrage to a five year term with the government being led by a Prime Minister and an appointed cabinet. However, candidates are only confined to Matai's (elected clan leaders). In 1997 the country amended its constitution and along with its name from Western Samoa to simply Samoa. There are two major political parties, however the opposition offers no serious challenge for the government. Although the country is politically stable there is wide a spread allegation of top level corruption.

The economy of Samoa is largely based on subsistence agriculture with coconuts, taro and copra dominating exports. In 1996, 40 percent of GDP came from the agricultural sector with manufacturing, services and the Government accounting for 18 percent, 23 percent and 11 percent of GDP, respectively (EIU, 1998). This shows that the share of agriculture to GDP has increased by 9 percent from 31 percent in 1986 indicating the considerable role this sector has in the country's economic performance. Nevertheless, Samoa's economy is small and has been ravaged by numerous cyclones leading to a poor growth performance (see Figure 4.2.3). The World Bank reports that the average growth of real GDP per annum from 1983 to 1993 is 1 percent (1996, p.8). The World Bank notes that this is due to declining terms of trade and a rapid expansion of Government expenditure. The EIU (1995) reports that government services and finances in 1986 accounted for 19 percent of GDP. This is the second largest share next to agriculture.



**Source:** OECD (various), World Bank (various editions), ADB (various editions).

There has been some improvement in the early 1990s but devastating cyclones and the destruction of one of its main export crop (taro) by leaf blight disease has resulted in sharp contractions (ADB, 1997). This explains Samoa's poor export performance with negative growth rates from 1990 to 1995 as real GNP growth rates decline from a healthy 14.5 percent in 1990 to negative 10.3 percent in 1992 (see figure 4.2.3). As a result the Samoan economy has recovered strongly with real GDP growth recorded at 7 percent in 1996 with the private sector, tourism and agriculture all performing well (ADB, 1998a, p.157). Furthermore, high levels of foreign aid of 30 percent of GDP and over during the period 1990 to 1995 appears to have assisted in Samoa's economic recovery (OECD, various. Also refer to Table A4.3.3 in Appendix 4.3).

On the other hand, real per capita GNP shows a declining trend for the entire period from US \$2217 in 1970 to US \$885 in 1995 (World Bank, various. See Appendix 4.2, Table A4.2.1). Nevertheless, the Asian Development Bank notes that the 'living standards are probably higher than official statistics indicate' (ADB, 1998, p.158). Samoa's economy is expected to strengthen with a focus on privatisation and continued boom in the agricultural and fisheries sector (EIU, 1999).

#### 4.2.4 The Solomon Islands

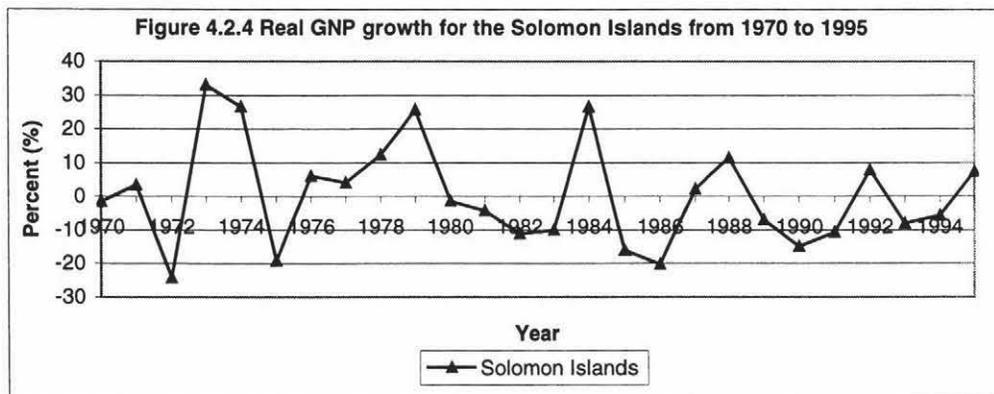
The Solomon Islands is archipelagic in nature and consists of six main islands. It has a land area of 28,000 square kilometres spread across 1.5 million square kilometres of ocean (World Bank, 1991, p.5). The islands are mainly, made up of rich volcanic soil with substantial forest covering. The country has small deposits of mineral resources with gold the only one being developed. The 1997 the population is estimated to be 400,000 with 90 percent living in rural areas (Kieth-Reid, 1998, p.206).

The Solomon Islands was first settled between 4,000 – 5,000 years ago by Austronesians (Keith-Reid, 1998). In 1900 the Solomon Islands becomes a British Protectorate to end the threat of colonisation by Germany. The Solomon Islands becomes an independent state in 1978 with a national parliament of 47 members. The Prime Minister is elected from the parliament to be head of government with Queen Elizabeth II being head of state, represented by a governor-general who must be a Solomon Islander.

The Solomon Islands economy is heavily reliant on agriculture with the majority of the population located in rural areas. In 1995, 49 percent of GDP consisted of agricultural production with public administration and trade accounting for 20 percent and 9.74 percent of GDP respectively (ADB, 1998b). The country also has a rich base of fishery, forestry and mineral resources that are slowly being developed. The forestry sector has become a big money earner for the economy. In 1995 timber exports earned the country US\$83.1 million in foreign exchange with fish and palm oil bringing in US\$42.8 million and US\$19.5 million respectively (EIU, 1999). Recent reports indicate that in an attempt to strengthen the economy, gold deposits are being developed along with heavy government investment in agriculture, livestock, agro-industries, export assembly industries and Tourism (Keith-Reid, 1998, p.206). However, the growth performance of the Solomon Islands economy is the most volatile of the four country case studies. See Figure 4.2.4.

The economy has largely suffered from low international prices for its agricultural products and high inflation rates. The Solomon Islands has also been hit by devastating cyclones in the mid-1980s leading to sharp contractions

of GDP growth rates. See figure 4.2.4. In the 1970s the country experienced some positive growth trends in real GNP with a few sharp declines as commercial fishing and canning became major industries controlled mainly by Japanese companies (Eccleston *et.al*, 1998, p.259).



**Source:** OECD (various), World Bank (various).

The Asian Development Bank (1998a) reports an average GDP growth of 5.4 percent per year during 1990-1995 indicating a steady and improving performance. This has increased from an average growth rate of 3.2 percent per year for the period 1983 to 1993 (World Bank, 1996, p.8). Figure 4.2.4 indicates that real GNP growth for the Solomon Islands is mainly declining for the period 1990 to 1995 except for the year 1992. The Asian Development Bank points out that this has been mainly due to falling commodity prices, high inflation and the impact of the Asian crisis which affected the log exports (1998a, p.159). Furthermore, it appears that Government domestic borrowing to sustain fiscal imbalances has created considerable inflationary pressures and is noted to be the major factor in reducing the country's real GDP growth (World Bank, 1996, p.119). The Asian Development Bank (1998a) has also pointed out that Government deficits have crowded out investment and caused serious problems for the financial systems. The EIU (1999) country report expects serious government reforms with reductions in the civil service as leaders attempt to achieve a greater degree of macroeconomic balance.

During the period 1970 to 1985 the Solomon Islands per capita GNP was relatively high and peaked at US\$1,611 in 1980 (World Bank, various). The Asian Development Bank (1998a) also notes that rapid population growth is leading to a fall in per capita GNP. It appears that real GNP per capita has fallen

below the US\$500 making it a low-income country (UN, various: World Bank, various. Also see Appendix 4.2, Table A4.2.1)

### **4.3 Key Factors for Economic Growth and Development: Foreign Aid, International Trade and Investment**

The models presented in chapter 2 have identified the key ingredients for economic growth, given by the following equation (1):

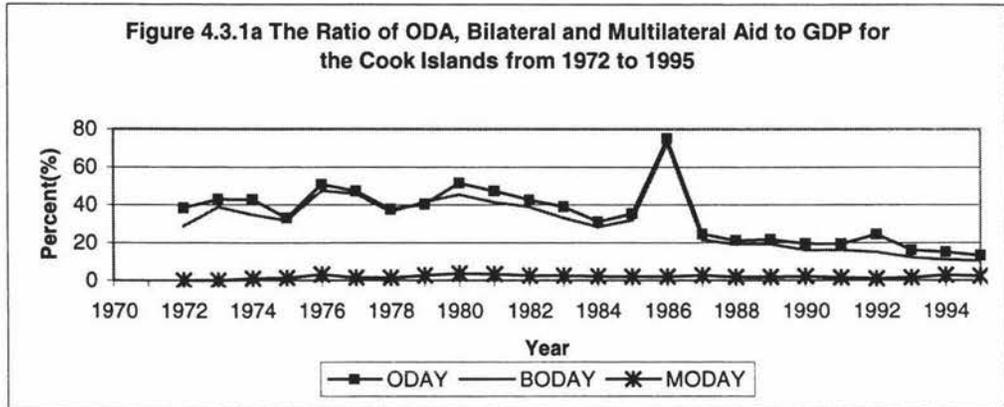
$$\dot{Y} = a_0 + a_1 I + a_2 \dot{L}\dot{F} + \alpha_3 \dot{X} + \varepsilon \quad (1)$$

This Equation (1) implies that domestic and foreign investment ( $I$ ), the Labour force ( $\dot{L}\dot{F}$ ), and exports ( $\dot{X}$ ) are key factors that contribute to economic growth. This section examines each of these factors in detail with a focus on foreign aid, trade, and investment. In the case of the Cook Islands and Kiribati there is insufficient investment data. As a consequence the analysis is restricted to foreign aid and trade. For Samoa and Solomon Islands investment has been estimated, which is explained in detail in Appendix 4.1.

#### **4.3.1 The Cook Islands**

The Cook Islands has largely relied on foreign aid funds to assist in the development process. However, Overseas Development Assistance (ODA) to the Cook Islands appears to be falling as donors tighten purse strings. Nevertheless, the Cook Islands still receive one of the highest levels of aid per capita in the region. As noted in previous chapters, foreign aid to the Cook Islands is mainly through bilateral arrangements and in grant form. The period 1972 to 1992 shows that bilateral aid to GDP ratio is over 20 percent. This has declined in recent years to 10.5 percent of GDP in 1995 (refer to Appendix 4.3, Table A4.3.1). This reduction in foreign aid to the Cook Islands has led to large amounts of Government borrowing. This has created public debts of US\$107 million in 1996 forcing the country into large scale restructuring programmes (Kieth- Reid, 1998, p.164). With the economic reforms of 1996

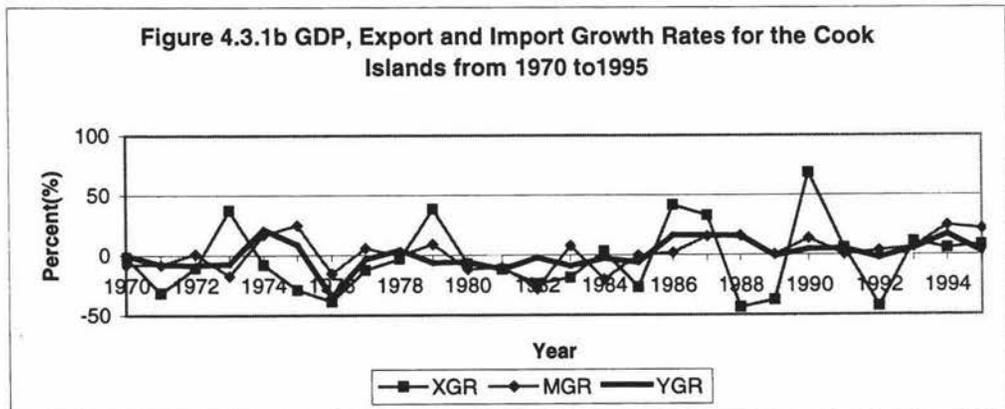
pressed on the Cook Islands by ADB and other aid donors the country has been forced to better utilise current flows of foreign aid from Australia and New Zealand. Multilateral assistance is minimal and as a ratio of GDP is less than 10 percent for the entire period (see Figure 4.3.1a). This is also the case for loan aid.



**Note:** ODAY = ODA as a ratio to GDP, BODAY = Bilateral ODA as a ratio to GDP, MODAY = Multilateral ODA as a ratio to GDP.

**Source:** OECD (various), UN (various), World Bank (various).

Trade in the Cook Islands since the 1940s has mainly been one sided with imports higher than the exports. The country has free trade with New Zealand but also has arrangements with Japan, Australia, French Polynesia, European Union (EU) and the United States of America (USA).



**Note:** XGR = Export Growth Rate, MGR = Import Growth Rate, YGR = GDP Growth Rate.

**Source:** As for Figure 4.3.1a.

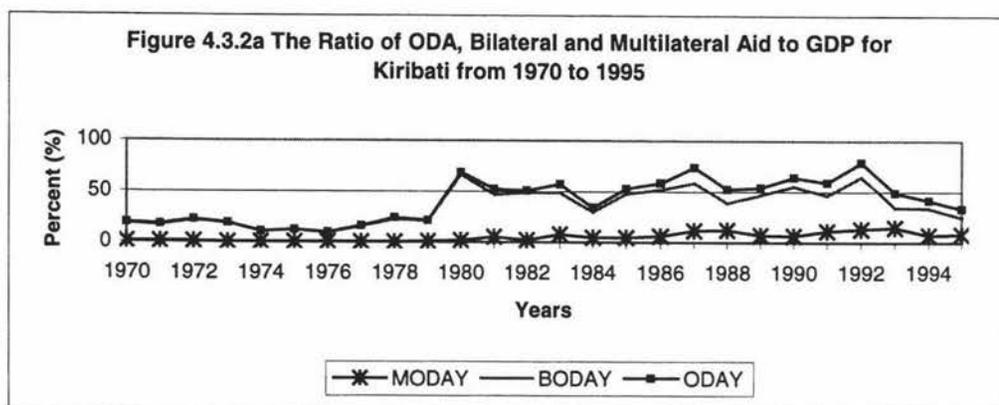
The main exports are pearls, fresh and canned fruit, vegetables and handicrafts. In 1996 the export of food accounted for 38 percent of total export earnings with manufactured items making up 33 percent (ADB, 1998b). The

Cook Islands imports manufactured goods, food, live animals, mineral fuels, chemicals, beverages, raw materials, and tobacco (Keith-Reid, 1998, p.155). With such a narrow export base and reliance on perishable agricultural commodities, the country faces fluctuating export growth rates and a persistent trade deficit. Furthermore, Figure 4.3.1b indicates that export growth rates are more volatile than imports. This reflects the problem associated with all small island economies. The Asian Development Bank (1998a) expects exports to improve with pearl farming performing well. Temu (1996) also points out that in 1994 black pearl sales injected NZ\$5 million into the Cook Islands economy. Import demand is mainly driven by the tourism and construction sectors. These are the largest private sector activities in the Cook Islands. This explains why food, machines and transport equipment make up 45 percent of total import receipts. There is also some indication that imports exert greater influence on GDP growth with the trends closely following each other (see figure 4.3.1b). In 1997 the Government in an effort to reduce the reliance on imports have introduced a protective tariff of at least 20 percent on most imports that compete directly with locally produced goods (ADB, 1998, p.151). However, with country's main sectors still dependent on imports, it is expected that trade deficits will continue with no major changes for surplus.

### **4.3.2 Kiribati**

The end of phosphate mining in 1979 has led to significant changes in the Kiribati economy. Although foreign aid flows to the country has not changed much the GDP has fallen dramatically (see section 4.2.2). This decline has meant that foreign aid flows have become more important to the economy with Official Development Assistance (ODA) as a ratio to GDP increasing from 21 percent in 1979 to 68 percent in 1980. It has remained at such high levels throughout the remaining years to peak at 78 percent in 1992 (see Figure 4.3.2a). As with many small countries, foreign aid is transferred through bilateral arrangements and given largely in the grant form. For Kiribati, there is little multilateral assistance until 1979 when it slowly begins to increase.

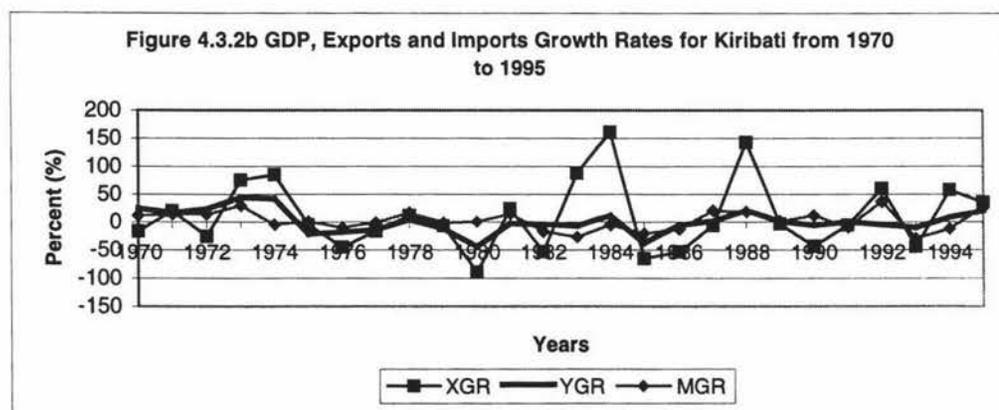
Nevertheless, it still remains at low levels and it does indicate the country's extra efforts to find other funds to replace the loss of phosphate earnings.



**Note:** ODAY = ODA as a ratio to GDP, BODAY = Bilateral ODA as a ratio to GDP, MODAY = Multilateral ODA as a ratio to GDP.

**Source:** OECD (various), UN (various), World Bank (various).

The Kiribati's trade performance has suffered greatly with the cessation of phosphate mining. Export receipts have declined dramatically as the export base is reduced to only copra and marine products. In 1995 marine products generated AUS\$6.3 million in export receipts while copra earned the country AUS\$ 266,000 (ADB, 1998b). In sharp contrast, total export earnings in 1975 for Kiribati was reported to be US\$101 million (UN, 1980. Also see Appendix 4.3, Table 4.3.2).



**Note:** XGR = Export Growth Rate, MGR = Import Growth Rate, YGR = GDP Growth Rate.

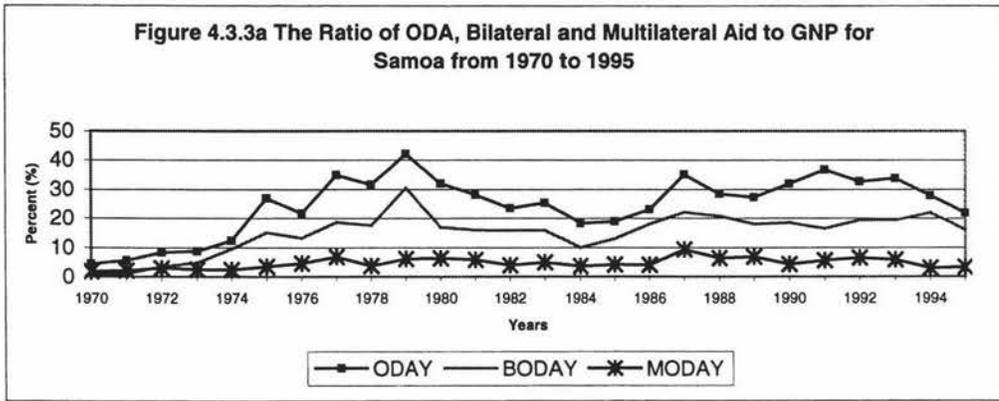
**Source:** As for Figure 4.3.2a.

The country mainly imports machinery, transport equipment, food, mineral fuels, manufactured goods, chemicals, beverages, and tobacco (Keith-Reid, 1998). The Asian Development Bank (1998b) reports that in 1995 food

and basic manufactured goods accounted for 51 percent of total import receipts. Kiribati has various trade arrangements with countries such as Japan, China, New Zealand, Australia, USA, and some European countries. With such a narrow export base, there has been great variability in export growth rates (Figure 4.3.2b). This reflects the vulnerability of the main export commodities to fluctuating prices, weather and natural disasters (Temu, 1996, p.8). The World Bank (1996) notes that exports will continue to decline with the deficit in the capital accounts being covered by interest earned from the income of the Revenue Equalisation Reserve Fund (RERF). Foreign aid also provides a source of funding for its resource needs.

### **4.3.3 Samoa**

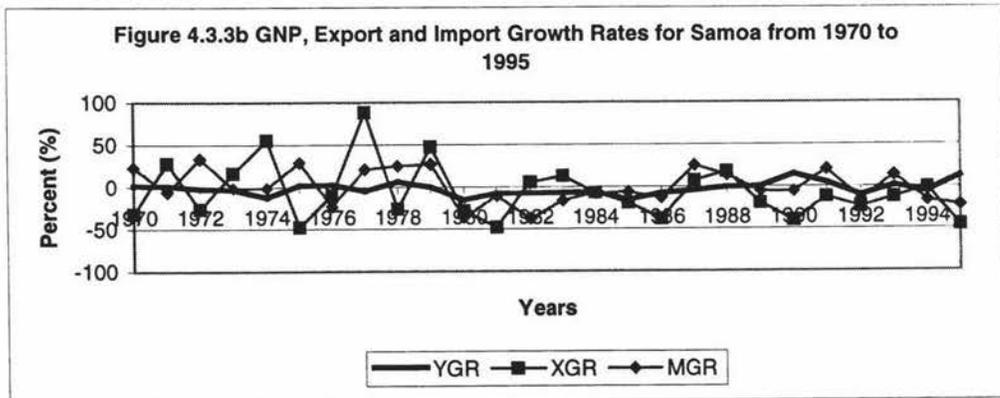
Foreign aid flows into the Samoan economy have remained fairly constant after reaching a peak of US\$76 million in 1979 (OECD, various. Also refer to Appendix 4.3 in Table A4.3.3). With declining real GNP the ratio of ODA to GNP has increased from 8 percent in 1973 to a high of 42 percent in 1979. Figure 4.3.3a illustrates that it has remained over 20 percent for the rest of the period. It also points out that foreign aid flows to Samoa has mainly been through bilateral arrangements with small amounts through multilateral organisations. As with Kiribati and the Cook Islands a large proportion of ODA to Samoa is in grant form this also includes technical assistance. This gives an indication of the importance of foreign aid flows to the Samoan economy. Fairbairn (1991) notes that foreign aid given to Samoa has been used to finance the balance of payments and public sector development programs. This would suggest that the performance of foreign aid in Samoa depends largely on the government's use of aid funds.



**Note:** ODAY = ODA as a ratio to GNP, BODAY = Bilateral ODA as a ratio to GNP, MODAY = Multilateral ODA as a ratio to GNP.

**Source:** OECD (various), World Bank (various), ADB (various).

The Samoan economy has mainly faced a consistent trade deficit throughout the entire period from 1970 to 1995 with some slight improvements in terms of lower trade deficits for some years. Samoa's principal commodity copra earned the country Tala\$4 million in 1996 with timber and bananas bringing in Tala\$832,000 and Tala\$724,000 (ADB, 1998b). Its imports include food, live animals, machinery, transport equipment, fuel, manufactured goods, textiles, iron, steel, paper, beverages, and tobacco (Keith-Reid, 1998). The country's main trading partners are New Zealand, Australia, the United Kingdom, United States of America, and other pacific island states.

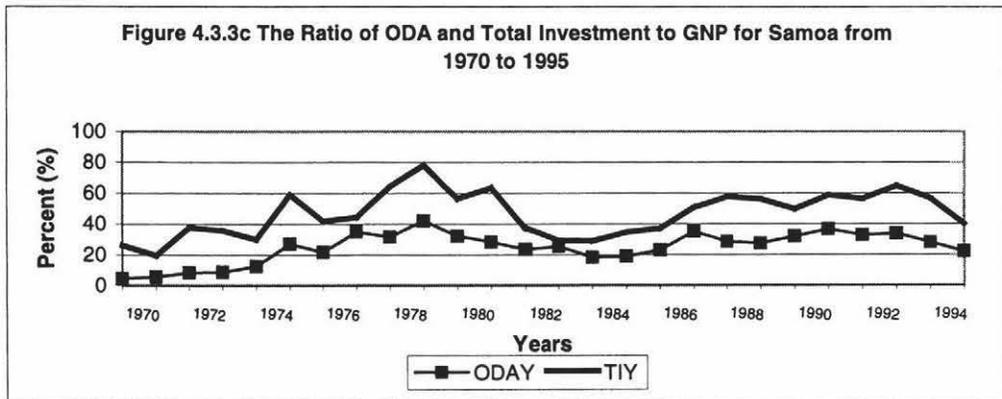


**Note:** XGR = Export Growth Rate, MGR = Import Growth Rate, YGR = GNP Growth Rate.

**Source:** As for Figure 4.3.3a.

Unlike Kiribati and the Cook Islands, Samoa has the potential to diversify and widen its export base. However, progress is slow and exports

continue to steadily decline from US\$51 million in 1980 to US\$2.74 million in 1995 (World Bank, various. Refer to Appendix 4.3, Table A4.3.3).



**Note:** TIY = Total Investment as a ratio to GNP, ODAY = ODA as a ratio to GNP.  
**Source:** As for Figure 4.3.3a.

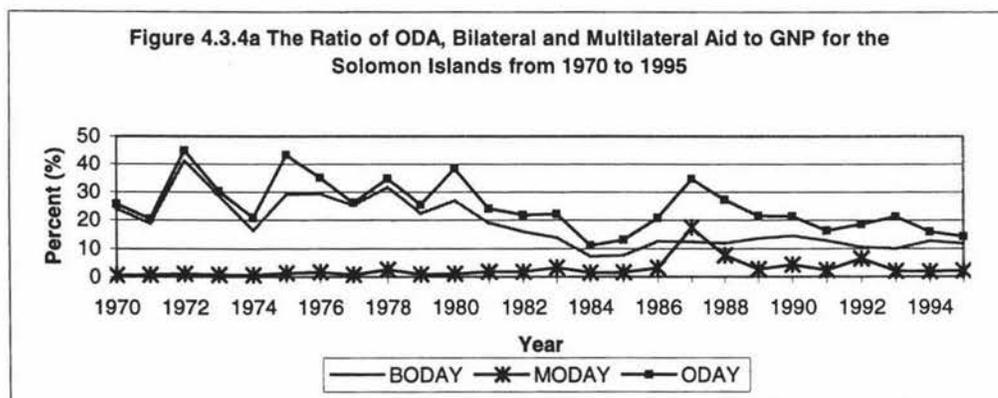
Cyclones, crop diseases, fluctuating prices, and a narrow export base have contributed to this decline. For instance, taro export receipts as a result of taro leaf blight has fallen from Tala\$1 million in 1980 to Tala\$98,000 in 1996 (ADB, 1998b). Prior to this disease taro had been one of Samoa's big money earners next to copra and timber exports. Fluctuating and highly erratic export growth rates reflect the vulnerability of Samoa's exports to external prices and natural disasters that constantly plague the country resulting in lower economic growth. See Figure 4.3.3b. Import growth trends also show variability but not as much as export growth trends. Although imports are gradually declining from US\$96 million in 1993 to US\$63 million in 1995, they still remain at high levels (World Bank, 1995. Also see Appendix 4.3, Table A4.3.3).

Investment levels in Samoa have constantly remained at over 30 percent as a ratio of GNP since 1972 (Fairbairn, 1991). However, real GDP growth for Samoa from 1980-1988 is recorded to be 0.4 percent per year and from 1983 to 1993 it is 1 percent per year (World Bank, 1991 and 1996). So despite the high levels of investment economic growth has remained subdued. Figure 4.3.3c shows total investment levels are greater than foreign aid levels. It is an indication that investment in Samoa is largely comprised of foreign aid funds since there is little or no domestic savings. World Bank (1993) data for Samoa show negative gross domestic savings from 1978 to 1992. Fairbairn also notes that the bulk of foreign aid in Samoa is 'channelled into public sector

programmes, with an emphasis on infrastructure and resource development' (Fairbairn, 1991, p.6). However, it is important to realise that with the uncertainty of foreign aid flows, it should not be relied upon as a fixed source of investment. Fairbairn (1991) suggests that Samoa needs to strengthen its domestic savings base to release funds into more productive private investments.

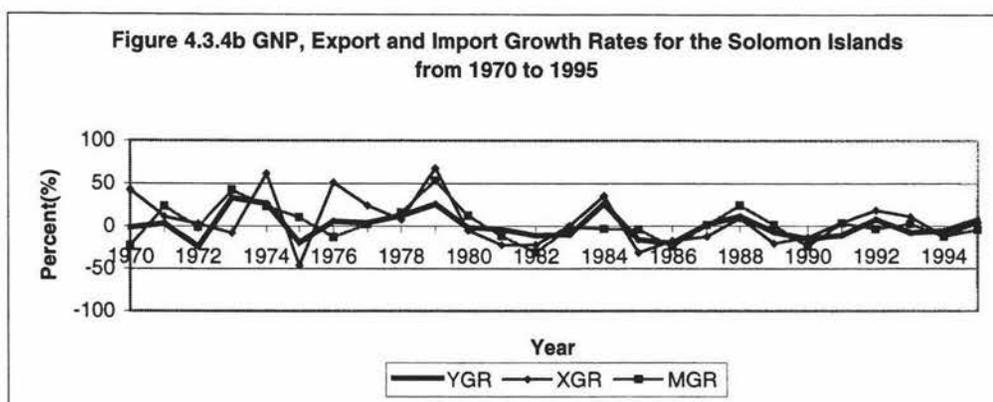
#### 4.3.4 The Solomon Islands

Foreign aid flows to the Solomon Islands have remained steady but recent figures show a declining trend after peaking at US\$139 million in 1980 (OECD, various. Also see Appendix 4.3, Table A4.3.4). It is also interesting to note that during the 1980s multilateral assistance increased while bilateral aid flows declined. Figure 4.3.4a show that bilateral aid (BODAY) as a proportion of GNP reached a high of 41 percent in 1973, this has fallen to 11 percent in 1995. Nevertheless, bilateral aid remains dominant with grant aid making up a larger proportion. The World Bank (1996) notes that the government's development budget is mainly aid driven. This would suggest that foreign aid is likely to have some contribution to growth in the economy, largely through government sector spending.



**Note:** ODAY = ODA as a ratio to GNP, BODAY = Bilateral ODA as a ratio to GNP, MODAY = Multilateral ODA as a ratio to GNP.

**Source:** OECD (various), UN (various), World Bank (various), ADB (various).



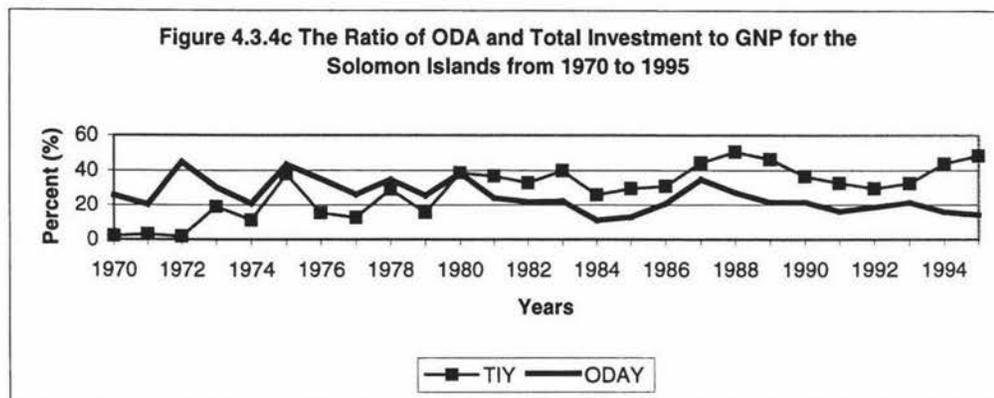
**Note:** XGR = Export Growth Rate, MGR = Import Growth Rate, YGR = GNP Growth Rate.

**Source:** As for Figure 4.3.4a.

Trade in the Solomon Islands has been rather even, with import and export trends closely following each other. There is also some indication that export is positively related to growth with the trends moving in the same direction. The country's main exports are logs and timber with fish, copra, and palm oil making up a small percentage. In 1995 exports totalled US\$168.3 million with timber sales accounting for 50 percent of this total. Imports include machinery, transport, food, mineral fuels, chemicals, beverages, and tobacco (Keith-Reid, 1998). In 1995, 71 percent of total import receipts consisted of machinery and transport equipment, food and manufactured goods (EIU, 1999). The Solomon Islands has trade arrangements with Australia, New Zealand, Papua New Guinea, USA, and countries in Asia and Europe. Export and import growth rates have been highly erratic in the early periods but appears to settle in the latter stages.

The cause for such growth patterns is likely to be a reliance on a narrow export base with commercial fishing as the main industry before logs and timber. For instance, the World Bank notes that during 1985 to 1986 lower commodity prices for copra, palm oil and timber lead to a poor export performance with terms of trade reduced by 25 percent in these two years (1991, p.205). This was worsened with Cyclone Namu in 1986 severely damaging crops leading to a dramatic reduction in palm oil production and as a result real GDP growth for the period 1985 to 1986 slowed to 1.4 percent down from 4.5 percent during 1981 to 1984 (World Bank, 1991, p.205). This suggests that further diversification and export expansion will reduce these fluctuations.

Moreover, Bauer, Siwatibau, and Kasper (1991) state that the Solomon Islands has the potential to achieve economic viability and independence through export growth and sound macroeconomic management.



**Note:** TIY = Total Investment as a ratio to GNP, ODAY = ODA as a ratio to GNP.  
**Source:** As for Figure 4.3.4a.

As with other pacific islands in the region investment levels have been high for the Solomon Islands but this is accompanied with low growth. The World Bank shows that the average gross investment as a ratio of GDP for the period 1983 - 1993 for the Solomon Islands is 30.7 percent per annum, however, real GDP growth per annum for the same period is only 3.2 percent (World Bank, 1996, p.8). Figure 4.3.4c shows investment levels in the 1970s are well below foreign aid. This suggests that during the period 1970 to 1980 investments are mainly funded from domestic sources with little external assistance. It would also appear that from the 1980s onwards the increase in total investment is supported largely from foreign resources such as external aid. This may influence the effect of foreign aid on the economic growth of the Solomon Islands.

#### 4.4 Summary and Conclusion

This chapter provides an overview of each country case study. It has highlighted some characteristics in terms of the concept of smallness and problems it creates for small island economies. In comparison to the Caribbean,

African and Indian Ocean regions, the South Pacific Island economies have performed poorly with stagnant and slow growth.

The discussion of each country's Historical and Political systems has provided some idea of the legal systems and cultural diversity that exist in the region. It is important to note that the colonial past has shaped and influenced these SPMs into what they are today. The Cook Islands and Samoa are closely associated with their colonial masters, New Zealand. Similarly Kiribati and Solomon Islands have the same sort of relationship with Australia. The physical characteristics of each country differ greatly and are unique as their culture. The economy of each of the selected country case study is largely dominated by the agricultural and government sectors. The economic performance from 1970 to 1995 has been poor with slight improvements. Real GDP growth has mainly been negative and highly erratic in most cases. Rapidly rising population growth rates and falling output has meant declining GDP per capita. This is most evident for Kiribati and Solomon Islands. The Asian Development Bank (1998) reports that the regions economies are expected to improve but growth still remains weak.

Foreign aid has been a dominant feature of these small and open island economies. For the period 1970 to 1995 foreign aid to these countries has largely been through bilateral arrangements and also through multilateral organisations. Foreign aid has also been the main source of funds for investment in Samoa and the Solomon Islands and will continue to do so in the future. Therefore, it is expected that foreign aid and investment in these countries will positively influence their growth performance. However, this will mainly depend on their respective governments given the large amounts of bilateral aid. Trade for these SPMs has mostly been one sided with imports far exceeding exports. This is with the exception of Solomon Islands. Export and Import growth rates for these countries fluctuate with great variability reflecting their small size, openness and reliance on a few export commodities. These fluctuations, however, has lessened for the Solomon Islands as the export base is diversified and expanded. The next chapter reports the results for the empirical analysis of the relationship between foreign aid and economic growth for the SPMs of the Cook Islands, Kiribati, Samoa, and Solomon Islands.

## APPENDIX 4.1

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### Data Used in the Estimated Neo-classical Models

The purpose of this appendix is to explain the methodology used to estimate the investment and savings variables for Samoa and the Solomon Islands. Since only the data for the public and external sectors are available, the estimate of saving and investment is undertaken using the following methods.

#### 1) Private Savings as a Ratio of GNP (SPY)

The estimation is based on the saving regression that used cross-section data in 1990 of 51 low-income developing countries. Ordinary least square method (OLS) is used to regress the ratio of private saving to income ( $Sp/Y$ ) on the natural log of per capita income ( $\ln YPC$ ) and the ratio of quasi-money to income ( $QM/Y$ ). The regression result is as follows:

$$SPY = - 0.2337 + 0.0508 \ln (YPC) + 0.1485 (QM/Y)$$

Where  $R^2 = 0.82$  and coefficients of independent variables are significant at a 5% level (the World Bank, 1994).

Once the private saving (SPY) is estimated, the investment variable can be derived from the national accounting identity as follows:

#### 2) Private Investments as a Ratio of GNP (IPY)

$$(S - I) = (X - M)$$

$$(SPY + SGY) - (IPY + IGY) = (X - M)$$

$$IPY = (SPY + SGY) - IGY - (X - M)$$

Where data on SGY, IGY, X, and M, is available from fiscal and balance of payment accounts.

## APPENDIX 4.2

**Table A4.2 Estimates of Growth Rates and Per Capita GDP for the Cook Islands and Kiribati, Selected Years 1970 to 1995 (constant 1990 prices)**

Year	Cook Islands			Kiribati		
	GDP US\$m	GDP/Capita US\$	GDP Growth Rate (%)	GDP US\$m	GDP/Capita US\$	GDP Growth Rate (%)
1970	88.90	4233.41	-7.63	54.62	1114.60	24.86
1975	92.78	4832.17	8.75	127.92	2413.55	-21.50
1980	53.90	3010.96	-5.46	47.13	813.93	-43.50
1985	38.66	2234.62	-6.02	28.88	451.31	-37.35
1990	63.10	3429.40	4.73	32.17	448.05	-5.41
1991	66.22	3560.10	4.94	32.28	439.15	0.33
1992	64.71	3460.57	-2.27	30.88	410.69	-4.32
1993	68.13	3604.75	5.28	27.92	362.16	-9.59
1994	79.70	4172.97	16.99	30.29	383.87	8.47
1995	81.66	4231.13	2.46	36.39	460.66	20.15

Source: OECD (various), UN (various), World Bank (various), ADB (various).

**Table A4.2.1 Estimates of Growth Rates and Per Capita GNP for Samoa and the Solomon Islands, Selected Years 1970 to 1995 (constant 1990 prices)**

Year	Samoa			Solomon Islands		
	GNP US\$m	GNP/Capita US\$	GNP Growth Rate (%)	GNP US\$m	GNP/Capita US\$	GNP Growth Rate (%)
1970	314.81	2217.01	-1.53	221.69	1360.04	-1.48
1975	270.27	1789.87	2.10	235.99	1229.13	-19.26
1980	238.81	1530.81	-15.24	362.66	1611.83	-1.46
1985	149.04	937.38	-15.60	294.08	1081.19	-16.20
1990	150.15	915.55	14.53	211.17	664.05	-14.98
1991	157.39	953.90	4.82	188.50	567.76	-10.74
1992	141.12	855.28	-10.34	203.35	598.10	7.88
1993	142.33	857.42	0.86	187.05	526.90	-8.02
1994	134.21	803.67	-5.70	176.42	479.39	-5.69
1995	150.54	885.52	12.16	189.48	496.01	7.40

Source: As for Table A4.2.

## APPENDIX 4.3

**Table A4.3.1 Variables Used For the Cook Islands Aid-Growth Models, Selected Years 1970 to 1990 (constant 1990 prices)**

Year	Y	YGR	X	XY	XGR	ODA	ODAY	LODAY	GODAY	TCODAY	MODAY	BODAY	CGY	LF	MY	MGR	M
1970	88.90	-7.63	28.82	32.42	-1.556								32.53	0.00	69.47	-7.98	61.76
1975	92.78	8.75	15.86	17.10	-28.94	30.64	33.02	0.00	33.02	5.93	1.29	31.73	107.10	1.05	75.16	25.15	69.74
1976	60.57	-34.71	9.72	16.05	-38.74	30.73	50.73	0.00	50.73	8.41	3.29	47.44	74.31	-5.73	97.38	-15.41	58.99
1980	53.90	-5.46	10.62	19.71	-7.183	27.76	51.51	2.37	49.15	18.44	3.72	45.43	71.64	-1.65	111.04	-11.99	59.85
1985	38.66	-6.02	4.37	11.29	-26.94	13.66	35.33	1.46	33.87	9.65	2.00	31.87	59.92	1.17	85.60	-0.248	33.09
1990	63.10	4.73	4.88	7.73	68.71	12.28	19.46	1.24	18.22	4.04	2.22	16.01	55.07	2.79	81.68	13.82	51.54
1991	66.22	4.94	5.16	7.79	5.792	12.71	19.20	1.68	17.51	5.10	1.50	16.02	63.59	1.09	78.13	0.381	51.74
1992	64.71	-2.27	2.96	4.58	-42.59	15.73	24.30	8.23	16.06	5.18	1.04	15.02	48.44	0.54	82.90	3.686	53.64
1993	68.13	5.28	3.29	4.83	11.11	10.91	16.01	2.26	13.75	5.21	1.55	12.20	47.81	1.07	83.92	6.581	57.17
1994	79.70	16.99	3.47	4.36	5.508	11.98	15.03	1.15	13.89	4.48	2.86	11.03	59.92	1.06	89.45	24.7	71.30
1995	81.66	2.46	3.76	4.60	8.135	10.75	13.16	0.37	12.79	2.09	2.30	10.49	49.84	1.05	106.31	21.77	86.82

**Source:** OECD (various), UN (various), World Bank (various), ADB (various), IMF (various).

**Legend:** **Y** is real GDP in US\$m, **YGR** is growth rate of real GDP, **X** is exports in US\$m, **XY** is exports as a ratio to GDP, **XGR** is growth rate of exports, **ODA** is foreign aid in US\$m, **ODAY** is foreign aid as ratio of GDP, **LODAY** is loan aid as a ratio to GDP, **GODAY** is grant aid as a ratio to GDP, **TCODAY** is technical co-operation aid as ratio to GDP, **BODAY** is bilateral aid as a ratio of GDP, **MODAY** is multilateral aid as a ratio to GDP, **CGY** is government consumption as a ratio to GDP, **LF** is labour force growth rate, **MY** is imports as a ratio to GDP, **MGR** is import growth rate, **M** is imports in US\$m.

**Table A4.3.2 Variables Used For Kiribati Aid-Growth Models, Selected Years 1970 to 1990 (constant 1990 prices)**

Year	Y	YGR	X	XY	XGR	ODA	ODAY	LODAY	GODAY	TCODAY	MODAY	BODAY	CGY	LF	MY	MGR	M
1970	54.62	24.86	36.26	66.40	-16.40	10.37	18.99	0.00	18.99	18.99	0.87	18.12	34.59	0.00	38.22	11.72	20.87
1974	162.95	42.09	105.96	65.03	85.18	17.56	10.77	0.00	10.77	10.77	0.32	10.45	12.27	0.00	20.67	-4.23	33.69
1975	127.92	-21.50	101.16	79.08	-4.53	15.81	12.36	0.00	12.36	4.92	0.30	12.06	29.45	1.92	26.46	0.49	33.85
1979	83.39	-11.89	48.91	58.65	-6.54	17.86	21.42	0.00	21.42	8.07	0.80	20.62	43.77	1.96	42.23	-1.04	35.21
1980	47.13	-43.49	5.06	10.73	-89.66	32.32	68.57	0.00	68.57	19.50	2.00	66.57	58.39	1.05	75.12	0.53	35.40
1985	28.88	-37.35	5.06	17.53	-65.20	15.23	52.73	0.00	52.42	21.26	4.82	47.60	51.63	2.07	65.75	-20.25	18.99
1990	32.17	-5.41	3.00	9.33	-42.70	20.54	63.85	0.02	61.70	24.09	6.65	55.05	53.46	2.28	83.93	12.11	27.00
1991	32.28	0.33	2.84	8.79	-5.39	19.05	59.03	0.01	57.98	31.01	11.43	46.55	56.53	2.37	76.21	-8.90	24.60
1992	30.88	-4.32	4.55	14.72	60.15	24.33	78.77	0.01	77.74	29.44	13.10	64.64	55.58	2.31	108.91	36.74	33.64
1993	27.92	-9.59	2.57	9.21	-43.44	13.65	48.89	0.00	49.01	21.05	14.61	34.40	55.16	2.53	85.93	-28.67	23.99
1994	30.29	8.47	4.07	13.42	58.13	12.49	41.23	0.00	40.77	25.58	7.22	33.55	60.58	2.33	69.79	-11.90	21.14
1995	36.39	20.15	5.49	15.10	35.16	12.13	33.32	0.00	32.89	17.38	8.26	24.63	77.42	0.13	73.33	26.25	26.69

**Source:** OECD (various), UN (various), World Bank (various), ADB (various), IMF (various), Gilbert Islands, Ministry of Finance (1976/77).

**Legend:** Same as Table A4.3.1.

**Table A4.3.3 Variables Used For Samoa Aid-Growth Models, Selected Years 1970 to 1990 (constant 1990 prices)**

Year	Y	YGR	X	XY	XGR	ODA	ODAY	LODAY	GODAY	TCODAY	MODAY	BODAY	SGY	CGY	SPY	TSY	IGY
1970	314.81	1.53	43.54	13.83	-0.21	14.17	4.50	1.68	2.82	2.76	1.91	0.91	-21.39	24.30	15.81	-5.59	20.58
1975	270.27	2.10	39.07	14.46	-47.49	72.65	26.88	8.26	18.62	9.30	3.50	15.12	-42.15	46.40	15.75	-26.40	24.81
1980	238.81	-15.24	51.40	21.52	-28.57	76.60	32.08	8.81	23.26	12.23	6.31	16.95	-37.52	28.69	16.00	-21.53	42.70
1985	149.04	-15.59	23.74	15.93	-19.35	28.13	18.87	1.32	17.55	7.52	4.18	13.06	-13.77	18.44	13.51	-0.25	26.65
1990	150.15	14.53	8.85	5.90	-40.28	47.99	31.96	9.26	22.70	9.26	4.22	18.48	-16.01	19.81	14.42	-1.58	32.32
1991	157.39	4.82	7.78	4.94	-12.10	57.80	36.72	14.62	22.10	7.46	5.54	16.56	-48.33	21.82	14.52	-33.81	26.51
1992	141.12	-10.34	5.88	4.17	-24.44	46.22	32.75	6.91	25.85	11.52	6.43	19.42	-15.06	24.95	14.18	-0.89	22.61
1993	142.33	0.86	5.13	3.60	-12.79	48.16	33.84	8.75	25.08	10.92	5.75	19.34	-1.28	7.15	13.83	12.55	28.85
1994	134.21	-5.70	5.07	3.78	-1.16	37.52	27.95	2.98	24.97	10.14	2.95	22.02	0.05	31.83	13.70	13.74	0.98
1995	150.54	12.16	2.74	1.82	-45.88	32.97	21.90	2.66	19.24	8.64	3.28	15.96	-10.53	23.18	14.39	3.86	17.23

**Table A4.3.3 continued**

Year	IPY	TIY	LF	MY	MGR	M
1970	5.47	26.05	0.00	39.94	23.12	125.72
1975	34.21	59.02	0.67	73.74	29.18	199.30
1980	13.67	56.36	0.65	78.10	-36.29	186.51
1985	8.06	34.71	0.00	50.64	-6.12	75.48
1990	17.41	49.73	0.61	55.64	-5.74	83.54
1991	32.20	58.72	0.61	64.00	20.57	100.73
1992	33.72	56.33	0.00	60.51	-15.23	85.39
1993	35.79	64.64	0.61	68.11	13.54	96.95
1994	55.68	56.66	0.60	60.30	-16.52	80.93
1995	22.82	40.04	1.80	41.83	-22.20	62.97

**Source:** OECD (various), UN (various), World Bank (various), ADB (various), IMF (various), Government of Samoa, Department of Statistics (several issues).

**Legend:** **Y** is real GNP in US\$m, **YGR** is growth rate of real GNP, **X** is exports in US\$m, **XY** is exports as a ratio to GNP, **XGR** is growth rate of exports, **ODA** is foreign aid in US\$m, **ODAY** is foreign aid as ratio of GNP, **LODAY** is loan aid as a ratio to GNP, **GODAY** is grant aid as a ratio to GNP, **TCODAY** is technical co-operation aid as ratio to GNP, **BODAY** is bilateral aid as a ratio of GNP, **MODAY** is multilateral aid as a ratio to GNP, **CGY** is government consumption as a ratio to GNP, **LF** is labour force growth rate, **MY** is imports as a ratio to GNP, **MGR** is import growth rate, **M** is imports in US\$m, **SGY** is government savings as a ratio to GNP, **SPY** is private savings as a ratio to GNP, **TSY** is total savings as a ratio to GNP, **IGY** is government savings as a ratio to GNP, **IPY** is private investment as a ratio to GNP, **TIY** is total investment as a ratio to GNP.

**Table A4.3.4 Variables Used For the Solomon Islands Aid-Growth Models, Selected Years 1970 to 1990 (constant 1990 prices)**

Year	Y	YGR	X	XY	XGR	ODA	ODAY	LODAY	GODAY	TCODAY	MODAY	BODAY	SGY	SPY	TSY	IGY	CGY
1970	221.69	0.00	77.92	35.15	42.62	56.89	25.66	1.09	24.57	9.02	0.62	23.95	8.55	13.28	21.83	9.0268	24.03
1975	235.99	-19.26	70.99	30.08	-46.24	102.29	43.35	12.93	30.42	11.25	1.38	29.04	-0.13	12.77	12.63	12.15	23.67
1980	362.66	-1.46	228.96	63.13	-5.31	139.16	38.37	10.35	28.02	9.93	1.10	26.92	10.08	17.83	27.90	12.98	25.29
1985	294.08	-16.20	128.86	43.82	-31.34	38.31	13.03	3.84	9.19	5.78	1.58	7.61	-8.96	14.47	5.52	7.489	24.90
1990	211.17	-14.98	70.43	33.35	-13.33	45.26	21.43	2.65	18.79	9.23	4.33	14.45	-8.07	11.75	3.67	4.906	27.45
1991	188.50	-10.74	73.20	38.84	3.94	30.61	16.24	1.03	15.21	8.51	2.37	12.84	-12.33	11.22	-1.11	4.091	32.38
1992	203.35	7.88	86.97	42.77	18.81	37.84	18.61	1.73	16.86	8.31	6.40	10.47	-17.28	11.45	-5.83	13.45	29.65
1993	187.05	-8.02	96.55	51.62	11.01	39.79	21.27	9.26	12.01	8.17	2.07	9.94	-6.36	10.72	4.36	16.19	30.94
1994	176.42	-5.69	84.87	48.11	-12.10	28.07	15.91	1.32	14.59	8.62	1.97	12.62	-7.78	10.27	10.27	21.87	32.81
1995	189.48	7.40	88.05	46.47	3.75	26.96	14.23	0.37	13.86	7.95	2.09	11.76	-8.16	10.43	10.43	25.94	30.55

**Table A4.3.4 continued**

Year	IPY	TIY	PGR	MY	MGR	M
1970	-6.86	2.17	2.52	24.96	-23.16	55.33
1975	25.75	37.91	3.23	55.40	10.41	130.73
1980	25.59	38.57	3.21	63.82	12.16	231.45
1985	22.12	29.6	4.21	43.34	-3.96	127.45
1990	31.48	36.38	1.27	44.75	-23.71	94.50
1991	28.52	32.61	4.40	51.90	3.53	97.84
1992	16.1	29.54	2.41	46.38	-3.60	94.32
1993	16.27	32.46	4.41	51.69	2.52	96.70
1994	21.9	43.77	3.66	48.13	-12.19	84.91
1995	22.31	48.25	3.80	42.83	-4.42	81.16

**Source:** OECD (various), UN (various), World Bank (various), ADB (various), IMF (various), The Government of the Solomon Islands, Statistical Office (several issues).

**Legend:** As for Table 4.3.3.

# CHAPTER FIVE

## Empirical Results for Aid-Growth Models for the South Pacific Microstates

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### 5.0 Introduction

This chapter presents the empirical results of the relationship between foreign aid and economic growth based on the analysis discussed in the previous chapter for the Cook Islands, Kiribati, Samoa and the Solomon Islands for the period 1970-1995. The theoretical models discussed in chapter 2 provide the foundations for the equations estimated in this chapter.

The overview of each country case study given in Chapter 4 provides some idea of their economic performance and the flow of foreign aid to the South Pacific Microstates (SPMs). It has also determined some of the central factors that are considered important for their economic growth. This chapter is mainly concerned with the empirical results of the aid-growth relationship with particular attention to other determinants of growth such as the labour force, investment and exports. The early evidence by some studies suggests that foreign aid has a dominant role in these economies. Nevertheless, the empirical examination of this relationship would clarify whether this is the case or not. The models used here have been modified to take into account data problems for some countries, however, without losing focus of the studies objectives other explanatory variables are used. This will be further discussed below.

The chapter is set out as follows. Section 5.1 presents the model specifications employed to measure the aid growth relationships. Section 5.2 highlights some of the limitations of the data used. Section 5.3 offers some discussion on the estimation procedures used in this study. Section 5.4 presents the empirical findings for each of the country case study undertaken here. A conclusion completes this chapter in section 5.5.

## 5.1 Specification of the Aid-Growth Models

As pointed out in Chapter 2, the specifications of the aid-growth models are based on the more general specifications of the neo-classical framework of the Solow-type production function. The Solow framework uses an aggregate production function that relates outputs to factor inputs (Solow, 1956). This function has been rewritten in growth terms and expressed using different variables. The notations used in the regression equations are given in the following Table 5.1. A full list is given in Appendix 5.1.

**Table 5.1: List of Variables used in the Estimation**

Variables	Description
1. $\dot{YGR}$	Growth Rate of National Income (constant 1990 prices)
2. ODAY	Total Foreign Aid as a Ratio of GDP or GNP
3. BODAY	Bilateral Aid as a Ratio of GDP or GNP
4. MODAY	Multilateral Aid as Ratio of GDP or GNP
5. GODAY	Grant Aid as a Ratio of GDP or GNP
6. LODAY	Loan Aid as Ratio of GDP or GNP
7. TCO DAY	Technical Co-operation Aid as a Ratio of GDP or GNP
8. $\dot{LF}$	Labour force Growth Rate
9. $\dot{XGR}$	Export Growth Rate (constant 1990 prices)
10. $\dot{MGR}$	Import Growth Rate (constant 1990 prices)
11. CGY	Government Consumption as a Ratio to GDP or GNP
12. TIY	Total Investment as a Ratio to GDP or GNP
14. TSY	Total Savings as a Ratio to GDP or GNP

**Note:** The Cook Islands and Kiribati use GDP ratios while Samoa and Solomon Islands use GNP ratios.

For the Cook Islands and Kiribati the equations do not include investment and domestic saving variables. The reasons are given in the discussion of the data in the next section. The following Equations (1-5) are used to estimate the aid-growth relationship for the Cook Islands and Kiribati:

$$\dot{YGR} = \alpha_0 + \alpha_1 ODAY + \alpha_2 \dot{XGR} + \alpha_3 \dot{LF} + \varepsilon_{1t} \quad (1)$$

$$\dot{YGR} = \alpha_0 + \alpha_1 BODAY + \alpha_2 MODAY + \alpha_3 \dot{XGR} + \alpha_4 \dot{LF} + \varepsilon_{2t} \quad (2)$$

$$\dot{YGR} = \alpha_0 + \alpha_1 GODAY + \alpha_2 LODAY + \alpha_3 \dot{XGR} + \alpha_4 \dot{LF} + \varepsilon_{3t} \quad (3)$$

$$\dot{YGR} = \alpha_0 + \alpha_1 TCO DAY + \alpha_2 LODAY + \alpha_3 \dot{XGR} + \alpha_4 \dot{LF} + \varepsilon_{4t} \quad (4)$$

$$\dot{YGR} = \alpha_0 + \alpha_1 ODAY + \alpha_2 \dot{MGR} + \alpha_3 \dot{LF} + \varepsilon_{5t} \quad (5)$$

The specifications for the Solomon Islands and Samoa extend the equations above to include investment and domestic savings variables. The results presented for these two countries are for the following Equations 6-11.

$$Y\dot{G}R = \alpha_0 + \alpha_1 TIY + \alpha_2 X\dot{G}R + \alpha_3 \dot{L}F + \varepsilon_{6t} \quad (6)$$

$$Y\dot{G}R = \alpha_0 + \alpha_1 ODAY + \alpha_2 TSY + \alpha_3 X\dot{G}R + \alpha_4 \dot{L}F + \varepsilon_{7t} \quad (7)$$

$$Y\dot{G}R = \alpha_0 + \alpha_1 BODAY + \alpha_2 MODAY + \alpha_3 TSY + \alpha_4 X\dot{G}R + \alpha_5 \dot{L}F + \varepsilon_{8t} \quad (8)$$

$$Y\dot{G}R = \alpha_0 + \alpha_1 GODAY + \alpha_2 LODAY + \alpha_3 TSY + \alpha_4 X\dot{G}R + \alpha_5 \dot{L}F + \varepsilon_{9t} \quad (9)$$

$$Y\dot{G}R = \alpha_0 + \alpha_1 TCODAY + \alpha_2 LODAY + \alpha_3 TSY + \alpha_4 X\dot{G}R + \alpha_5 \dot{L}F + \varepsilon_{10t} \quad (10)$$

$$Y\dot{G}R = \alpha_0 + \alpha_1 ODAY + \alpha_2 TSY + \alpha_3 M\dot{G}R + \alpha_4 \dot{L}F + \varepsilon_{11t} \quad (11)$$

Equation (1) and Equation (7) estimate the direct relationship between foreign aid and economic growth. Equations (2) to (4) and equations (8) to (10) disaggregate foreign aid into its various components of Bilateral and Multilateral aid, Grant and Loan aid and Technical co-operation aid. Equation (5) and (11) substitutes export for import into the model to examine its contribution to growth.  $\varepsilon_{1t-11t}$  is an error term and the usual assumptions apply.

Equation (1) and (7) is then re-estimated to include government consumption. Ram (1986) presents a study that examines the impact of government size on economic growth. The study employs government consumption to GDP ratio to measure the relationship between government size and economic growth. He finds that the overall impact of government consumption (CGY) on growth is positive. In this study, government consumption is used as an explanatory variable. The following Equation (12a) is estimated for the Cook Islands and Kiribati.

$$Y\dot{G}R = \alpha_0 + \alpha_1 ODAY + \alpha_2 CGY + \alpha_3 X\dot{G}R + \alpha_4 \dot{L}F + \varepsilon \quad (12a)$$

$$Y\dot{G}R = \alpha_0 + \alpha_1 ODAY + \alpha_2 CGY + \alpha_3 TSY + \alpha_4 X\dot{G}R + \alpha_5 \dot{L}F + \varepsilon \quad (12b)$$

Equation (12b) extends the above specifications of Equation (12a) to include total domestic savings to GDP ratio. This equation (12b) is applied to the

Samoa and the Solomon Islands aid-growth models. It would be interesting to determine the relationship between government consumption and economic growth for these SPMs, since it is the government sector that dominates these small economies.

## 5.2 Data, Sample and Variable Estimation

Data sample for this study was collected for seven SPMs from 1970 to 1995. However, three were removed due to missing data and lack of information. Thus, four country studies are undertaken.

The income growth variable employs annual real Gross National Product (GNP) growth for Samoa and Solomon Islands, while annual real Gross Domestic Product (GDP) growth is used for the Cook Islands and Kiribati. Foreign aid is collected from the OECD publication, *Geographical Distribution of Financial Flows to Developing Countries* (various sources), which is then measured to GDP or GNP ratios. This is also the case with the various components of foreign aid. The investment and domestic savings variable is estimated using the savings regression (refer to Appendix 4.1 for further discussion). Due to data limitations this has only been employed for Samoa and Solomon Islands. The labour force variable is given by the population growth rate calculated using data taken from the United Nation's *UN Statistical Yearbook* (several issues) including the annual yearbooks of each respective country. Export and import figures are collected mainly from the Asian Development Bank's *Key Indicators of Developing Asian and Pacific Countries* (several issues) and the United Nation's *UN Statistical Yearbook* (several issues). These data series are considered to be relatively reliable.

Note that all the variables above are first converted to constant prices using the average Consumer Price Index (CPI) for each country given by the International Monetary Fund's *International Financial Yearbook* (various editions). This is then converted to US\$ dollars (millions) using the World Bank's annual average exchange rates. The final step is to calculate the growth

rates to GDP or GNP ratios for various variables. The estimated variables employed in this study are presented in Appendix 4.3 (Table A4.3.1 to A4.3.4).

It is important to point out that although the data sources used in this study are relatively reliable there still remains some concern in the weakness of economic data in the South Pacific region. The World Bank notes that 'several countries (South Pacific) lack the capacity to conduct field surveys to gather data for computation of national income estimates and to organise and compile existing data' (World Bank, 1996, p.9). Grosh and Glewwe (1996) point out that there is still room for improvement in collecting more and better data both at a national and international level. This has been one of the key limitations of this study. As noted earlier, the insufficient time series data on investment and domestic savings levels for the Cook Islands and Kiribati has meant that these variables are not included in the empirical analysis of these countries. Therefore, given these data limitations the results presented in this study need to be interpreted with caution.

### **5.3 Methodology**

The econometric method of cointegration has been employed in this study to test the aid-growth relationship. The method concerns the derivation and estimation of the long-run equilibrium relationships between sets of variables. The finite Autoregressive Distributed Lag (ARDL) method of cointegration, as developed by Persaran and Shin (1995) illustrates the relationship between an independent variable and the dependent variable over a measurable number of future periods. The ARDL estimation procedure examines both the short and long run relationships between foreign and economic growth. It is important to note that the 'short run' relationships between variables do not persist over a long period. Therefore, temporary disturbances to the links will be picked up in the regressions. Likewise, the long-run relationship would be useful to assess shocks that constantly occur over time such as fluctuation in international prices for the country's exports. It is also important to point out that the ARDL method avoids spurious estimation

results and problems of serial correlation. It uses the most recent econometric techniques by Pesaran and Pesaran (1997) accessed through the Microfit Version 4 computer package.

The ARDL estimation procedure begins with computing the F-statistics to test the significance of the lagged levels of the variables. The maximum number of lags used in this study is two. The null hypothesis employed in the F-test is the 'non-existence' of the long-run relationship, i.e.  $H_0 = \sigma_1 = \sigma_2 = \sigma_3$ . Pesaran and Pesaran (1997) point out the asymptotic distribution of this F-statistic is non-standard and have tabulated the appropriate critical value for different numbers of regressions, irrespective of whether the ARDL estimation contains an intercept and/or trend. For each equation, the table presents two sets of critical values covering all the possible classifications of the variables for integrated of order one (I(1)) and integrated of order zero (I(0)). The decision to accept or reject the hypothesis is simple. If the F-statistic is computed to be higher (lower) than the upper bound (lower bound) of the critical value, then the null hypothesis would be rejected (accepted). However, if the F-statistics falls within the band, then the order of integration is required to determine the significance of the long run relationship. The results of the F-test is given in the following section. It would be discussed together with the empirical results for each of the selected SPMs case studies.

The model diagnostic tests of Serial Correlation (SC), Functional Form (FF), Normality of the residuals (N) and Heteroscedasticity (H) are not subject to any problems. The estimation of the aid-growth models are for the period 1970 to 1995. Discussion on each of the estimated equations and the statistical significance, or lack of, between the explanatory variables and economic growth is given in the following section.

## **5.4 Empirical Results**

The empirical results and comments on the estimated coefficient are presented in this section. The F-test is also discussed here. The results for the

Cook Islands is given first, followed by Kiribati, Samoa, and the Solomon Islands.

### 5.4.1 The Cook Islands

The results reported for the Cook Islands in Table 5.4.1a, indicate that the equations used to estimate the aid-growth relationship fall outside the critical value band. Therefore, a conclusive decision can be made without needing to know whether the underlying variables are  $I(0)$  or  $I(1)$ . The majority of the equations exceed the upper bound of the critical value band at the 90 percent level of significance. Therefore, the null hypothesis that no long-run relationship exists between the variables is rejected.

**Table 5.4.1a The F-test Results for the Cook Islands**

Equations	k	Critical Value Band		F-staistic	Pass or Fail
		Intercept and No Trend <sup>a</sup>			
		I(0)	I(1)		
Equation 1	3	4.385	5.615	13.17	Pass
Equation 2	4	3.817	5.122	7.15	Pass
Equation 3	4	3.817	5.122	11.65	Pass
Equation 4	4	3.817	5.122	3.6	Fail
Equation 5	3	4.385	5.615	6.06	Pass
Equation 12a	4	3.817	5.122	3.71	Fail

**Note:** k represents the degree of freedom

<sup>a</sup> represents the 99 percent level of significance

As indicated by the estimated value of the adjusted  $R^2$ , the models have a reasonable fit to the data. The model diagnostics appear to perform well with the F-statistics statistically significant at the 10 percent level (at least). The results are reported in 5.4.1b.

Considering Equation (1) in terms of the short-run coefficients, none of the variables have a significant relationship with growth. The foreign aid coefficient (ODAY) is negative, however, it is not statistically significant. The growth rate of the labour force ( $\dot{L}F$ ), although has a positive relationship with economic growth it has not contributed significantly. The long-run coefficients point out that only exports ( $XGR$ ) appear to exert a positive and significant impact on growth at the 5 percent level. Therefore, in the long-run, a 1 percent

increase in exports leads to a 0.26 percent increase in growth. As such, it supports the findings given by Islam (1992) and Mbaku (1993). Therefore, in the case of the Cook Islands, domestic resources (i.e. exports and labour force) exert a much stronger effect on growth than foreign resources (i.e. foreign aid).

Equation (2) retains the significant contribution of exports in the long-run. The short-run coefficient for bilateral aid (BODAY) has a positive sign, however it is not statistically significant. Multilateral aid (MODAY) has a negative contribution to growth that is statistically significant at 10 percent. The labour force growth rate coefficient appears to have some contribution to economic growth but at a 13 percent significant level. The results indicate that multilateral aid has a poor performance in the Cook Islands. This result differs from that of Gounder (1999a) in the case of Fiji, which found that bilateral aid contributed to the country's economic growth. The poor performance of bilateral aid and the negative effect of multilateral aid explain why foreign resources have no effect on the Cook Islands economic performance. It shows that foreign aid through Government to Government transfers (i.e. bilateral aid) for the Cook Islands has no effect on growth.

Equation (3) includes grant aid (GODAY) and (LODAY) in the estimation. Once again these components of foreign aid do not appear to have any significant contribution to the economic growth for the Cook Islands (both in the short and long term). However, the short and long-run coefficients for grant aid is negative while for loan aid it is positive. It should be noted that bilateral aid to the Cook Islands constitutes over 90 percent of the total aid program with 100 percent grant element. The failure of grant aid to influence the country's economic growth brings into question the Government's utilisation of foreign aid funds. Islam point out that the poor performance of grant aid is related to the fact that grants are not repaid, thus Government authorities 'perhaps tolerate a greater degree of corruption in its utilisation' (Islam, 1992). Exports in Equation (3) still remain an important contributing factor to the economic growth of the Cook Islands. Equation (4) offers similar results when technical co-operation aid (TCODAY) is estimated. Technical co-operation aid is negative, but it does not contribute to growth. Although, loan aid has a positive relationship with growth it is not statistically significant. In the long-

run, the coefficient for these variables remain the same as discussed above as well as the associated significant levels. However, it is interesting to note that the labour force growth rate coefficient in this case becomes positive and significant at 10 percent when it is estimated with the technical co-operation aid variable. This result indicates that the inclusion of technical aid has improved the impact of the labour force on the country's economic performance. It would imply that through higher education, training opportunities, and other human development programmes, it has made the labour force more efficient thus increasing its contribution to growth.

The fifth equation (5) includes imports in the specifications rather than exports. It is also noted that the models explanatory power has improved with an adjusted  $R^2$  of 0.30. In the short-run, the coefficients for foreign aid (ODAY), labour force growth rate, and imports ( $MGR$ ) are positive. However, only the imports variable is statistically significant at 1 percent level. The positive foreign aid variable has some importance. It suggests that foreign aid is largely channelled towards the imports sector. As discussed in the earlier chapters, imports are largely used in the tourism and construction sectors – the two main private sector industries in this small economy (see Chapter 4). The long run coefficients display similar results.

The final estimation for the Cook Islands includes government consumption to GDP ratio (CGY) in the analysis (Equation 12a). The coefficients for foreign aid and labour force are not significant with only exports contributing to growth in both periods. The emphasis, however, is more on the government consumption coefficient. In this case government consumption is positive but has not significantly contributed to growth. Thus, it can be said that although the government sector dominate the Cook Island's economy it does not make any important contribution to the country's economic performance. Temu (1996) points out that the Government provides free sanitation, water supply, garbage disposal and health services. In this case Government provision of social services has lead to wasteful expenditure since some of these services can be performed more effectively by the private sector. This can explain the lack of influence of the CGY variable on growth and gives a fair indication of the main use of bilateral aid in the Cook Islands.

**Table 5.4.1b Empirical Results for the Cook Islands****Equation (1):**  $\dot{YGR} = \alpha_0 + \alpha_1 ODAY + \alpha_2 XGR + \alpha_3 \dot{LF} + \varepsilon$ 

$$\dot{YGR} = 3.67 - 0.037\Delta ODAY_t + 0.10\Delta XGR_t + 0.16 XGR_{t-1} + 1.62\Delta \dot{LF}_t$$

(0.55)      (-0.20)                      (1.26)                      (2.04)\*\*                      (1.36)

**Model Diagnostics:**  $R^2 = 0.34$ ,  $\bar{R}^2 = 0.19$ ,  $F_{(4,20)} = 2.36^{***}$ ,  $SC\chi^2(1) = 0.003$ ,  $FF\chi^2(1) = 4.68$ ,  $Norm\chi^2(2) = 1.38$ ,  $H\chi^2(1) = 0.365$ **Long-Run Coefficients**

$$\dot{YGR} = -0.037ODAY + 0.26 XGR + 1.62 \dot{LF}$$

(-0.20)                      (2.34)\*\*                      (1.36)

**Equation (2):**  $\dot{YGR} = \alpha_0 + \alpha_1 BODAY + \alpha_2 MODAY + \alpha_3 XGR + \alpha_4 \dot{LF} + \varepsilon$ 

$$\dot{YGR} = 11.46 + 0.01\Delta BODAY_t - 4.57\Delta MODAY_{t-1} + 0.09\Delta XGR_t + 0.17 XGR_{t-1} + 1.76\Delta \dot{LF}_t$$

(1.59)      (0.08)                      (-1.72)\*                      (1.21)                      (2.26)\*\*                      (1.59)

**Model Diagnostics:**  $R^2 = 0.44$ ,  $\bar{R}^2 = 0.28$ ,  $F_{(4,20)} = 0.270^{**}$ ,  $SC\chi^2(1) = 0.18$ ,  $FF\chi^2(1) = 6.27$ ,  $Norm\chi^2(2) = 0.57$ ,  $H\chi^2(1) = 1.04$ **Long-Run Coefficients**

$$\dot{YGR} = 0.14BODAY - 4.57MODAY + 0.27 XGR + 1.75 \dot{LF}$$

(0.08)                      (-1.72)\*                      (2.48)\*\*                      (1.59)

**Equation (3):**  $\dot{YGR} = \alpha_0 + \alpha_1 GODAY + \alpha_2 LODAY + \alpha_3 XGR + \alpha_4 \dot{LF} + \varepsilon$ 

$$\dot{YGR} = 1.64 - 0.01\Delta GODAY_t + 0.87\Delta LODAY_{t-1} + 0.11\Delta XGR_t + 0.15 XGR_{t-1} + 1.91\Delta \dot{LF}_t$$

(0.23)      (-0.07)                      (0.80)                      (1.37)                      (1.89)\*                      (1.53)

**Model Diagnostics:**  $R^2 = 0.37$ ,  $\bar{R}^2 = 0.19$ ,  $F_{(4,20)} = 1.9^*$ ,  $SC\chi^2(1) = 0.001$ ,  $FF\chi^2(1) = 4.82$ ,  $Norm\chi^2(2) = 1.40$ ,  $H\chi^2(1) = 0.22$ **Long-Run Coefficients**

$$\dot{YGR} = -0.01GODAY + 0.87LODAY + 0.26 XGR + 1.91 \dot{LF}$$

(-0.07)                      (0.80)                      (2.32)\*\*                      (1.53)

**Table 5.4.1b continued**

---

**Equation (4):**  $\dot{YGR} = \alpha_0 + \alpha_1 TCODAY + \alpha_2 LODAY + \alpha_3 \dot{XGR} + \alpha_4 \dot{LF} + \varepsilon$

$$\dot{YGR} = 1.21 - 0.006\Delta TCODAY_t + 0.89\Delta LODAY_t + 0.11\Delta \dot{XGR}_t + 0.16 \dot{XGR}_{t-1} + 1.96\Delta \dot{LF}_t$$

(0.26)      (-0.01)      (0.82)      (1.36)\*\*      (1.95)      (1.87)\*

**Model Diagnostics:**  $R^2 = 0.37, \bar{R}^2 = 0.19, F_{(4,20)} = 2.0^*, SC\chi^2(1) = 0.002, FF\chi^2(1) = 4.68, Norm\chi^2(2) = 1.38, H\chi^2(1) = 0.219$

**Long-Run Coefficients**

$$\dot{YGR} = -0.006TCODAY + 0.89LODAY + 0.26 \dot{XGR} + 1.96 \dot{LF}$$

(-0.01)      (0.82)      (2.34)\*\*      (1.87)\*

---

**Equation (5):**  $\dot{YGR} = \alpha_0 + \alpha_1 ODAY + \alpha_2 \dot{MGR} + \alpha_3 \dot{LF} + \varepsilon$

$$\dot{YGR} = -2.08 + 0.06\Delta ODAY_t + 0.48\Delta \dot{MGR}_t + 0.81\Delta \dot{LF}_t$$

(-0.32)      (0.34)      (2.85)\*\*\*      (0.75)

**Model Diagnostics:**  $R^2 = 0.39, \bar{R}^2 = 0.30, F_{(4,20)} = 4.13^{**}, SC\chi^2(1) = 0.29, FF\chi^2(1) = 0.004, Norm\chi^2(2) = 0.39, H\chi^2(1) = 0.36$

**Long-Run Coefficients**

$$\dot{YGR} = 0.06ODAY + 0.50 \dot{MGR} + 0.82 \dot{LF}$$

(0.34)      (2.85)\*\*      (0.75)

---

**Equation (12a):**  $\dot{YGR} = \alpha_0 + \alpha_1 ODAY + \alpha_2 CGY + \alpha_3 \dot{XGR} + \alpha_4 \dot{LF} + \varepsilon$

$$\dot{YGR} = -0.83 - 0.05\Delta ODAY_t + 0.08\Delta CGY_t + 0.10\Delta \dot{XGR}_t + 0.16 \dot{XGR}_{t-1} + 1.80\Delta \dot{LF}_t$$

(-0.06)      (-0.26)      (0.37)      (1.22)      (1.9)\*      (1.37)

**Model Diagnostics:**  $R^2 = 0.35, \bar{R}^2 = 0.16, F_{(4,20)} = 1.9^*, SC\chi^2(1) = 0.04, FF\chi^2(1) = 4.42, Norm\chi^2(2) = 1.63, H\chi^2(1) = 0.33$

**Long-Run Coefficients**

$$\dot{YGR} = -0.05ODAY + 0.08CGY + 0.26 \dot{XGR} + 1.80 \dot{LF}$$

(-0.26)      (0.37)      (2.22)\*\*      (1.37)

---

**Note:** \*\*\*, \*\*, \* are significance levels at one, five and ten percent levels. *t* ratios are given in Brackets. Critical values for the various tests are as follows:  $\chi^2(1) = 6.63, \chi^2(2) = 9.21$ , The test statistics are as follows:  $R^2$  = coefficient of determination,  $\bar{R}^2$  = coefficient of determination, adjusted for degrees of freedom. *F* = F statistics, SC = Serial Correlation, FF = Functional Form, Norm = Normality of residuals, H = Heteroskedasticity.

Keith-Reid (1998) points out that recent economic reforms has lead to new Government policies diverting foreign aid from budgetary support to specific projects. This effect has not been shown as foreign aid flows to the Cook Islands has steadily declined since 1992. It can be concluded that the insignificant impact of foreign aid on economic growth is largely due to poor Government administration and utilisation of such funds. It is obvious that domestic resources provide the main source of growth for the Cook Islands with exports performing well. However, with limited domestic resources the Cook Islands need to find other alternatives. It is also important for government policies to improve the utilisation of foreign resources to promote economic sustainability.

#### 5.4.2 Kiribati

The F-test is employed on all the equations used to estimate the aid growth relationship for Kiribati. The results reported in Table 5.4.2a indicate that the majority of the equations fall outside the critical value band. All the equations exceed the upper bound critical value at a 90 percent confidence interval that support the hypothesis that the long run relationship exist for the variables used here.

**Table 5.4.2a The F-test Results for Kiribati**

Equations	k	Critical Value Band		F-staistic	Pass or Fail
		Intercept and No Trend <sup>a</sup>			
		I(0)	I(1)		
Equation 1	3	4.385	5.615	4.68	Fail
Equation 2	4	3.817	5.122	3.62	Fail
Equation 3	4	3.817	5.122	6.14	Pass
Equation 4	4	3.817	5.122	5.27	Pass
Equation 5	3	4.385	5.615	5.72	Pass
Equation 12a	4	3.817	5.122	5.73	Pass

**Note:** k represents the degree of freedom

<sup>a</sup> represents the 99 percent level of significance

The estimated equations for Kiribati perform better than the Cook Islands with the adjusted  $R^2$  relatively high for all equations. The model

diagnostics are given and have no apparent problems. The results are reported in Table 5.4.2b.

The first equation (1) reveals that the relationship between foreign aid (ODAY) and economic growth is negative and statistically significant at 1 percent in the short-run. The labour force growth rate ( $\dot{L}F$ ) is also negative but does not contribute to growth. The export ( $XGR$ ) coefficient indicates a positive relationship with growth that is significant at the 10 percent level. The long run coefficient for exports and foreign aid are negative with only the labour force growth rate variable having a positive sign. However, all these relationships are not statistically significant. The export variable contributes only in the short run and mainly reflects the performance of the country's two main exports and the loss of phosphate earnings. This result differs from that presented by Gounder (1999a) for the performance of foreign aid in Fiji. However, the literature does point out that foreign aid can have a negative impact on growth such as the cross country study by Mosley (*et.al*, 1987) which concluded that leakage's of aid to non-productive expenditures in the public sectors resulted in the negative effects of foreign aid. This is known as aid fungibility. Temu (1996) also points out that in Kiribati high public sector wage levels is mainly funded by foreign aid flows. This can explain the negative effect of foreign aid on the country's economic growth.

Equation (2) disaggregates foreign aid into its components of bilateral aid (BODAY) and multilateral (MODAY) aid. The results indicate that the short-run coefficients for bilateral and multilateral aid are negative. This relationship is significant at the 5 and 10 percent level, respectively. The labour force and export variables give similar results to that reported for Equation 1 i.e. export is the only factor that has a positive and significant impact on growth. In the long run, none of the variables have any significant contribution to growth. Although bilateral aid has a positive relationship with growth it is not significant. Therefore, the aid-growth relationship examined through bilateral and multilateral aid is also a negative one that does not persist in the long run.

Including grant aid (GODAY) and loan aid (LODAY) into the specifications, the estimates indicate that this negative relationship between foreign aid and growth still remains. The short-run coefficient for grant aid is

negative and significant at the 1 percent level. The loan aid variable is positive, however it has no impact on growth. In the long run, these relationships remain unchanged with the exception that grant aid is no longer significant. It is becoming apparent that foreign aid given through grants have not been productive. It is important to note that Kiribati like the Cook Islands has an aid program that is largely made up of bilateral aid with the grant element constituting over 90 percent. The negative effect of foreign aid on growth clearly implies the Government's non-productive use of such funds. Furthermore, Temu (1996) points out that foreign aid in Kiribati is used to support the Government sector and as a result it has made it impossible for the private sector to be competitive. Export and the labour force growth rates retain their positive relationship with growth as noted in the earlier results.

Equation (4) introduces technical co-operation aid (TCODAY) in place of grant aid. The estimated short-run coefficients for technical co-operation aid and loan aid is negative but has no significant impact on economic growth. The long-run coefficient for technical co-operation aid becomes positive, however it still makes no significant contribution to the economy, while the loan aid variable remains negative and insignificant. These results indicate that technical co-operation aid has a positive relationship with growth in the long-term, but being a small amount of the foreign aid package it is not large enough to be a contributing factor to growth.

Equation (5) includes imports ( $MGR$ ) in the estimation. In the short-run, the foreign aid variable retains its negative relationship with economic growth, which is significant at the 10 percent level. The labour force growth rate coefficient has a value of negative 3.94 but it has no importance to the country's growth. However, imports appear to be a key contributor to Kiribati's economic growth. Both the short and long-run coefficients for imports are positive and significant at the 1 percent level. It implies that in the long term a one percent increase in imports leads to a 0.71 percent increase in economic growth. The last equation (12a) employed for Kiribati examines the effect of government consumption as a share of GDP ( $CGY$ ) on economic growth. The short and long run estimates for government consumption show a negative relationship with growth that is significant at the 10 percent level. Note that the

foreign aid coefficient is positive in the long run but it is not significant. This result tends to suggest that the poor performance of foreign aid is associated with the recipient government's administration and utilisation of funds. As such, it supports earlier findings for Kiribati that an overbearing and inefficient Government sector propped by foreign aid funds leads to a negative aid-growth relationship. This result supports the recent arguments presented by Temu (1996) that call for private sector development and the need to reduce Government control of the economy.

It appears that domestic resources i.e. exports in Kiribati is the main driving force for economic growth. However, with Kiribati's limited resource base this only has a short-term effect on economic growth. Furthermore, it would be difficult for the country to sustain economic growth on these terms. Therefore, it is imperative for Kiribati's economic expansion that Government policies mobilise foreign resources rather than using it to fund non-productive Government activities.

**Table 5.4.2b Empirical Results for Kiribati**

---

**Equation (1):**  $Y\dot{G}R = \alpha_0 + \alpha_1 ODAY + \alpha_2 X\dot{G}R + \alpha_3 \dot{L}F + \varepsilon$

$$Y\dot{G}R = -11.35 - 0.61\Delta ODAY_t + 0.50ODAY_{t-1} + 0.09\Delta X\dot{G}R_t - 0.15 X\dot{G}R_{t-1} - 4.92\Delta \dot{L}F_t + 13.16 \dot{L}F_{t-1}$$

(-0.89)      (-3.09)\*\*\*      (2.32)\*\*      (1.91)\*      (-2.95)\*\*\*      (-1.11)      (2.52)\*\*

**Model Diagnostics:**  $R^2 = 0.76$ ,  $\bar{R}^2 = 0.67$ ,  $F_{(4,20)} = 7.92$ \*\*\*,  $SC\chi^2(1) = 0.007$ ,  $FF\chi^2(1) = 0.05$ ,  $Norm\chi^2(2) = 1.04$ ,  $H\chi^2(1) = 0.55$

**Long-Run Coefficients**

$$Y\dot{G}R = -0.25ODAY - 0.12 X\dot{G}R + 17.56 \dot{L}F$$

(-0.79)      (-0.60)      (1.04)

---

**Equation (2):**  $Y\dot{G}R = \alpha_0 + \alpha_1 BODAY + \alpha_2 MODAY + \alpha_3 X\dot{G}R + \alpha_4 \dot{L}F + \varepsilon$

$$Y\dot{G}R = -26.30 - 0.56\Delta BODAY_t + 0.81BODAY_{t-1} - 1.88\Delta MODAY_t + 0.10\Delta X\dot{G}R_t - 0.14 X\dot{G}R_{t-1} - 3.58\Delta \dot{L}F_t + 17.14 \dot{L}F_{t-1}$$

(-1.82)      (-2.76)\*\*      (2.85)\*\*      (-1.87)\*      (2.25)\*\*      (-2.83)\*\*      (-0.85)      (3.22)\*\*\*

**Model Diagnostics:**  $R^2 = 0.80$ ,  $\bar{R}^2 = 0.70$ ,  $F_{(4,20)} = 7.83$ \*\*\*,  $SC\chi^2(1) = 0.28$ ,  $FF\chi^2(1) = 0.03$ ,  $Norm\chi^2(2) = 0.03$ ,  $H\chi^2(1) = 0.47$

**Long-Run Coefficients**

$$Y\dot{G}R = 0.61BODAY - 4.48MODAY - 0.08 X\dot{G}R + 32.36 \dot{L}F$$

(0.76)      (-1.36)      (-0.38)      (1.41)

---

**Equation (3):**  $Y\dot{G}R = \alpha_0 + \alpha_1 GODAY + \alpha_2 LODAY + \alpha_3 X\dot{G}R + \alpha_4 \dot{L}F + \varepsilon$

$$Y\dot{G}R = -10.15 - 0.66\Delta GODAY_t + 0.53GODAY_{t-1} + 72.07\Delta LODAY_t + 0.09\Delta X\dot{G}R_t - 0.15 X\dot{G}R_{t-1} - 5.19\Delta \dot{L}F_t + 12.86 \dot{L}F_{t-1}$$

(-0.74)      (-3.03)\*\*\*      (2.38)\*\*      (0.21)      (1.86)\*      (-2.63)\*\*      (-1.14)      (2.39)\*\*

**Model Diagnostics:**  $R^2 = 0.77$ ,  $\bar{R}^2 = 0.66$ ,  $F_{(4,20)} = 6.78$ \*\*\*,  $SC\chi^2(1) = 0.006$ ,  $FF\chi^2(1) = 0.18$ ,  $Norm\chi^2(2) = 1.22$ ,  $H\chi^2(1) = 0.61$

**Long-Run Coefficients**

$$Y\dot{G}R = -0.26GODAY + 149.65LODAY - 0.11 X\dot{G}R + 15.94 \dot{L}F$$

(-0.81)      (0.22)      (-0.53)\*\*      (0.92)

---

**Table 5.4.2b continued**

---

**Equation (4):**  $Y\dot{G}R = \alpha_0 + \alpha_1 TCO\dot{D}A\dot{Y} + \alpha_2 LO\dot{D}A\dot{Y} + \alpha_3 X\dot{G}R + \alpha_4 \dot{L}F + \varepsilon$

$$Y\dot{G}R = -22.73 - 1.06\Delta TCO\dot{D}A\dot{Y}_t + 1.23TCO\dot{D}A\dot{Y}_{t-1} - 82.35\Delta LO\dot{D}A\dot{Y}_t + 0.12\Delta X\dot{G}R_t - 0.15 X\dot{G}R_{t-1} - 2.98\Delta \dot{L}F_t + 12.90 \dot{L}F_{t-1}$$

(-1.42)      (-1.40)                      (1.92)\*                      (-0.22)                      (2.22)\*\*                      (-2.45)\*\*                      (-0.57)                      (1.78)\*

**Model Diagnostics:**  $R^2 = 0.71$ ,  $\bar{R}^2 = 0.56$ ,  $F_{(4,20)} = 4.8^{***}$ ,  $SC\chi^2(1) = 0.006$ ,  $FF\chi^2(1) = 0.003$ ,  $Norm\chi^2(2) = 0.008$ ,  $H\chi^2(1) = 0.11$

**Long-Run Coefficients**

$$Y\dot{G}R = 0.33TCO\dot{D}A\dot{Y} - 161.20LO\dot{D}A\dot{Y} - 0.06 X\dot{G}R + 19.40 \dot{L}F$$

(0.33)                      (-0.21)                      (-0.32)\*\*                      (0.84)\*

---

**Equation (5):**  $Y\dot{G}R = \alpha_0 + \alpha_1 O\dot{D}A\dot{Y} + \alpha_2 M\dot{G}R + \alpha_3 \dot{L}F + \varepsilon$

$$Y\dot{G}R = -13.12 - 0.87\Delta O\dot{D}A\dot{Y}_t + 0.72O\dot{D}A\dot{Y}_{t-1} + 0.54\Delta M\dot{G}R_t - 3.94\Delta \dot{L}F_t + 13.01 \dot{L}F_{t-1}$$

(-0.93)      (-4.39)\*\*                      (3.75)\*\*                      (3.37)\*\*                      (-0.80)                      (2.23)\*\*

**Model Diagnostics:**  $R^2 = 0.71$ ,  $\bar{R}^2 = 0.60$ ,  $F_{(4,20)} = 6.80^{***}$ ,  $SC\chi^2(1) = 0.53$ ,  $FF\chi^2(1) = 0.41$ ,  $Norm\chi^2(2) = 1.19$ ,  $H\chi^2(1) = 2.59$

**Long-Run Coefficients**

$$Y\dot{G}R = -0.19O\dot{D}A\dot{Y} + 0.71 M\dot{G}R + 11.98 \dot{L}F$$

(-0.85)                      (2.94)\*\*                      (1.05)

---

**Equation (12a):**  $Y\dot{G}R = \alpha_0 + \alpha_1 O\dot{D}A\dot{Y} + \alpha_2 C\dot{G}Y + \alpha_3 X\dot{G}R + \alpha_4 \dot{L}F + \varepsilon$

$$Y\dot{G}R = 6.78 - 0.52\Delta O\dot{D}A\dot{Y}_t + 0.63O\dot{D}A\dot{Y}_{t-1} - 0.46\Delta C\dot{G}Y_t + 0.07\Delta X\dot{G}R_t - 0.13 X\dot{G}R_{t-1} - 8.38\Delta \dot{L}F_t + 13.14 \dot{L}F_{t-1}$$

(0.43)      (-2.64)\*\*                      (2.92)\*\*                      (-1.80)\*\*                      (1.52)\*                      (-2.63)\*\*                      (-1.79)\*\*                      (2.66)\*\*

**Model Diagnostics:**  $R^2 = 0.80$ ,  $\bar{R}^2 = 0.70$ ,  $F_{(4,20)} = 8.13^{***}$ ,  $SC\chi^2(1) = 0.18$ ,  $FF\chi^2(1) = 1.21$ ,  $Norm\chi^2(2) = 1.51$ ,  $H\chi^2(1) = 0.49$

**Long-Run Coefficients**

$$Y\dot{G}R = 0.20O\dot{D}A\dot{Y} - 0.76C\dot{G}Y - 0.10 X\dot{G}R + 7.90 \dot{L}F$$

(0.59)                      (-1.91)\*\*                      (-0.66)                      (0.64)

---

**Note:** \*\*\*, \*\*, \* are significance levels at one, five and ten percent levels. *t* ratios are given in Brackets. Critical values for the various tests are as follows:  $\chi^2(1) = 6.63$ ,  $\chi^2(2) = 9.21$ , The test statistics are as follows:  $R^2$  = coefficient of determination,  $\bar{R}^2$  = coefficient of determination, adjusted for degrees of freedom. *F* = F statistics, SC = Serial Correlation, FF = Functional Form, Norm = Normality of residuals, H = Heteroskedasticity.

### 5.4.3 Samoa

The F-test is employed on all equations used for Samoa. The reported F-statistics for these equations fall outside the critical value band. Equation 7, 10 and 11 fail at the 99 percent significance level. However, they exceed the upper value of the critical value band at the 90 percent significant level. The results are presented in Table 5.4.3a.

**Table 5.4.3a The F-test Results for Samoa**

Equations	k	Critical Value Band		F-staistic	Pass or Fail
		Intercept and No Trend <sup>a</sup>			
		I(0)	I(1)		
Equation 6	3	4.385	5.615	8.47	Pass
Equation 7	4	3.817	5.122	2.93	Fail
Equation 8	5	3.516	4.781	10.21	Pass
Equation 9	5	3.516	4.781	6.83	Pass
Equation 10	5	3.516	4.781	2.97	Fail
Equation 11	4	3.817	5.122	3.6	Fail
Equation 12b	4	3.817	5.122	3.68	Fail

**Note:** k represents the degree of freedom

<sup>a</sup> represents the 99 percent level of significance

The estimation for Samoa show that the models have a reasonable fit. The adjusted  $R^2$  range from 0.26 to 0.48 with the model diagnostic exhibiting no major setbacks. The results are reported in Table 5.4.3b. Equation (6) for Samoa examines the simple production function of total investment (TIY), labour force ( $\dot{L}F$ ) and exports ( $XGR$ ). The short-run coefficients indicate that investment and the labour force variables for Samoa have a positive relationship with economic growth that are both significant at the 1 percent level. Exports have a negative impact on growth but this is not significant. The estimated long run co-efficients retains these relationships offering some insights to Samoa's economic growth process. It maintains that a 1 percent increase in investment leads to a 0.22 percent increase in growth. Fairbairn (1991) points out that a high level of gross domestic investment in Samoa is attributed to high levels of Government investment funded by foreign aid flows. See Figure 4.3.3c in Chapter 4. The poor performance of the export variable is attributed to various factors such as cyclones and low prices for the export commodities.

Extending Equation (6) to include foreign aid (ODAY) and domestic savings (TSY) gives Equation (7). The estimations explanatory powers improved dramatically to an adjusted  $R^2$  value of 0.41. The results indicate that in the short term foreign aid has a positive contribution to economic growth, which is significant at the 1 percent level. On the other hand, domestic savings has a negative and significant impact on the country's growth at the 10 percent level. In the long-run, both these variables display positive coefficients however, only foreign aid appears to exert a positive impact on growth. The behaviour of the export and labour force variables remain unchanged to that described in Equation (6) i.e. only the labour force contributes to growth. In this case, a 1 percent increase in foreign aid contributes to the country's economic growth by 0.42 percent. This result is similar to that of Gounder (1999a), which finds that foreign aid in an aggregated form contributes to Fiji's economic growth. The low savings levels in Samoa can explain the negative short-run results for this variable and its failure to have any significant contribution in the long run.

Equation (8) disaggregates foreign aid into its components of Bilateral (BODAY) and Multilateral (MODAY) aid. It begins to examine the relationship between various components of foreign aid and economic growth. The estimated short run coefficients indicate that bilateral aid is positively related to economic growth. This relationship is significant at the 5 percent level. Multilateral aid has a negative 0.57 coefficient but this has no statistical significance. The long run coefficients produce similar results retaining the relationships described in the short run. Domestic savings, exports and the labour force show very little change in their relationship with growth as described in earlier equations and do not require further discussion at this point. Nevertheless, the results clearly point out that bilateral aid contributes to the country's economic growth by 0.65 percent every time it is allocated an additional 1 percent of total aid funding. This implies that foreign aid through Government to Government transfers for Samoa has a strong influence on growth. This is an indication that recipient Governments can utilise foreign aid effectively. Fairbairn (1991) points out that the bulk of foreign aid in Samoa is channelled into public sector development programs, with emphasis on

infrastructure and human resource development. This can explain the positive effect of bilateral aid and the significant contribution of the labour force on economic growth.

The next equation (9) examines the relationship between grant (GODAY) and loan (LODAY) aid and economic growth. In this case, the short run coefficients point out that both grant and loan aid are positively related to economic growth with a coefficient of 0.27 and 0.79, respectively. However, it is only loan aid that has an important contribution, which is significant at the 10 percent level. This result tend to agree with those obtained by Islam (1992) and Mbaku (1993) for Bangladesh and Cameroon, respectively. In the long run a percentage increase in loan aid would lead to a 0.78 percent rise in growth. This suggests that foreign aid allocated as loan aid are more effective than grant aid. As pointed out by Islam (1992), it may be the case that loan aid is better administered with tighter controls so it would generate enough revenues to make repayments. Equation (10) takes this analysis a bit further and includes technical co-operation aid (TCODAY) rather than grant aid. The results identify that loan aid still holds a positive relationship with growth that is significant at the 5 percent level (both in the short and long run). Technical co-operation aid in the short run has a negative impact but this has no significance. Although, it becomes positive 0.85 in the long term, it has no contribution to growth. Therefore, one can determine that for Samoa loan aid has a stronger influence on the country's economic performance than the other two foreign aid components of grant and technical co-operation aid.

The following equation (11) includes imports ( $MGR$ ) instead of exports. In this case, foreign aid's relationship with growth remains positive and significant at the 5 percent level. Although the estimated coefficients for imports are positive for both periods there is no impact on growth. However, it is important to note that imports appear to have a more productive influence on the country's growth performance as compared to exports. Imports have a coefficient of 0.05 while the value of the export variable is negative 0.04 (this is for both periods).

The estimation that includes government consumption to GDP ratio (CGY) is given by Equation (12b). The model has the highest adjusted  $R^2$  value

of 0.48. The short run estimates for government consumption indicate no significant relationship with growth exist. However, attention is placed more on the long run coefficients. The foreign aid and labour force variables retain their positive and significant relationship with growth as discovered in earlier estimations. For this result, the domestic savings and government consumption variables are of more interest. The estimated long run coefficients for these two variables implies a positive relationship exists with economic growth, which is significant at the 10 level percent.

Therefore, one can point out that the government contributes to economic growth by 0.42 percent for every percentage increase in their expenditure. The World Bank (1991) points out that Government has been able to finance its budget through high levels of foreign aid on concessional terms. This can explain the effectiveness of foreign aid flows and the significant contribution of total investment towards Samoa's economic growth. This also supports earlier findings by Ram (1986) that Government consumption has a positive influence on economic growth. Furthermore, it suggests that government consumption has some influence on the performance of domestic savings. For example, the World Bank has pointed out that the improved fiscal position of the Government has booted national savings to around 26 percent of GDP from 1985 to 1990 (World Bank, 1991). This can explain the positive savings performance for Samoa when it is estimated with CGY.

It appears that foreign resources i.e. foreign aid exert a much stronger influence on Samoa's economic growth than domestic resources i.e. exports. However, the labour force is the only domestic factor that contributes to growth. It can be said that the Government's effective utilisation of foreign aid leads to significant contribution to growth. Nevertheless, Samoa should not rely on foreign resources given the uncertain flows of foreign aid in recent years. It is a concern that exports do not contribute to growth despite the country's potential and relatively abundant natural resources. With a highly productive labour force Samoa needs to consider a shift into high-tech industries, such as those found in most Asian countries. The Japanese-owned Yakazi factory in Samoa, which manufactures auto-parts for exports is a good example.

**Table 5.4.3b Empirical Results for Samoa**

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**Equation (6):**  $\dot{YGR} = \alpha_0 + \alpha_1 TIY + \alpha_2 X\dot{GR} + \alpha_3 \dot{LF} + \varepsilon$

$$\dot{YGR} = -19.67 + 0.22\Delta TIY_t - 0.04\Delta X\dot{GR}_t + 8.55\Delta \dot{LF}_t$$

(-3.31)\*\*\* (2.23)\*\*\* (-0.97) (3.17)\*\*\*

**Model Diagnostics:**  $R^2 = 0.38$ ,  $\bar{R}^2 = 0.29$ ,  $F_{(4,20)} = 4.25^{***}$ ,  $SC\chi^2(1) = 1.17$ ,  $FF\chi^2(1) = 1.76$ ,  $Norm\chi^2(2) = 3.17$ ,  $H\chi^2(1) = 0.78$

**Long-Run Coefficients**

$$\dot{YGR} = 0.22TIY - 0.04 X\dot{GR} + 8.55 \dot{LF}$$

(2.23)\*\*\* (-0.97) (3.17)\*\*\*

---

**Equation (7):**  $\dot{YGR} = \alpha_0 + \alpha_1 ODAY + \alpha_2 TSY + \alpha_3 X\dot{GR} + \alpha_4 \dot{LF} + \varepsilon$

$$\dot{YGR} = -19.11 + 0.42\Delta ODAY_t - 0.18\Delta TSY_t + 0.23TSY_{t-1} - 0.03\Delta X\dot{GR}_t + 8.59\Delta \dot{LF}_t$$

(-3.55)\*\*\* (2.86)\*\*\* (-1.78)\* (2.01)\*\* (-0.80) (3.10)\*\*\*

**Model Diagnostics:**  $R^2 = 0.53$ ,  $\bar{R}^2 = 0.41$ ,  $F_{(4,20)} = 4.33^{***}$ ,  $SC\chi^2(1) = 0.28$ ,  $FF\chi^2(1) = 0.02$ ,  $Norm\chi^2(2) = 3.99$ ,  $H\chi^2(1) = 1.73$

**Long-Run Coefficients**

$$\dot{YGR} = 0.42ODAY + 0.05TSY - 0.03 X\dot{GR} + 8.59 \dot{LF}$$

(2.86)\*\*\* (0.50) (-0.78) (3.10)\*\*\*

---

**Equation (8):**  $\dot{YGR} = \alpha_0 + \alpha_1 BODAY + \alpha_2 MODAY + \alpha_3 TSY + \alpha_4 X\dot{GR} + \alpha_5 \dot{LF} + \varepsilon$

$$\dot{YGR} = -18.62 + 0.65\Delta BODAY_t - 0.57MODAY_t - 0.12\Delta TSY_t - 0.06\Delta X\dot{GR}_t + 9.72\Delta \dot{LF}_t$$

(-2.85)\*\* (2.20)\*\* (0.56) (-1.17) (-1.55) (3.16)\*\*\*

**Model Diagnostics:**  $R^2 = 0.41$ ,  $\bar{R}^2 = 0.26$ ,  $F_{(4,20)} = 2.64^*$ ,  $SC\chi^2(1) = 1.37$ ,  $FF\chi^2(1) = 0.02$ ,  $Norm\chi^2(2) = 1.20$ ,  $H\chi^2(1) = 1.75$

**Long-Run Coefficients**

$$\dot{YGR} = 0.65BODAY - 0.57MODAY - 0.12TSY - 0.06 X\dot{GR} + 9.72 \dot{LF}$$

(2.20)\*\* (-0.56) (-1.17) (-1.55) (3.16)\*\*\*

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**Table 5.4.3b continued**

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**Equation (9):**  $Y\dot{G}R = \alpha_0 + \alpha_1 GODAY + \alpha_2 LODAY + \alpha_3 TSY + \alpha_4 X\dot{G}R + \alpha_5 \dot{L}F + \varepsilon$

$$Y\dot{G}R = -16.77 + 0.27\Delta GODAY_t + 0.79\Delta LODAY_t - 0.14\Delta TSY_t + 0.25TSY_{t-1} - 0.02\Delta X\dot{G}R_t + 7.75\Delta \dot{L}F_t$$

(-2.86)\*\*\*    (1.32)                    (1.98)\*                    (-1.27)                    (2.14)\*\*                    (-0.47)                    (2.68)\*\*

**Model Diagnostics:**  $R^2 = 0.56$ ,  $\bar{R}^2 = 0.41$ ,  $F_{(4,20)} = 3.77^{**}$ ,  $SC\chi^2(1) = 0.0005$ ,  $FF\chi^2(1) = 0.04$ ,  $Norm\chi^2(2) = 4.04$ ,  $H\chi^2(1) = 1.20$

**Long-Run Coefficients**

$$Y\dot{G}R = 0.27GODAY + 0.78LODAY + 0.11TSY - 0.01 X\dot{G}R + 7.75 \dot{L}F$$

(2.23)                    (1.98)\*\*                    (0.92)                    (-0.46)                    (2.68)\*\*

---

**Equation (10):**  $Y\dot{G}R = \alpha_0 + \alpha_1 TCODAY + \alpha_2 LODAY + \alpha_3 TSY + \alpha_4 X\dot{G}R + \alpha_5 \dot{L}F + \varepsilon$

$$Y\dot{G}R = -18.30 - 0.36\Delta TCODAY_t + 1.21TCODAY_{t-1} + 0.73\Delta LODAY_t - 0.12\Delta TSY_t + 0.20TSY_{t-1} - 0.01\Delta X\dot{G}R_t + 7.73\Delta \dot{L}F_t$$

(-2.71)\*\*    (-0.54)                    (2.22)\*\*                    (1.99)\*                    (-1.15)                    (1.77)\*                    (-0.28)                    (2.78)\*\*

**Model Diagnostics:**  $R^2 = 0.63$ ,  $\bar{R}^2 = 0.48$ ,  $F_{(4,20)} = 4.15^{***}$ ,  $SC\chi^2(1) = 0.70$ ,  $FF\chi^2(1) = 0.51$ ,  $Norm\chi^2(2) = 1.94$ ,  $H\chi^2(1) = 0.56$

**Long-Run Coefficients**

$$Y\dot{G}R = 0.85TCODAY + 0.73LODAY + 0.08TSY - 0.01 X\dot{G}R + 7.73 \dot{L}F$$

(1.37)                    (1.99)\*                    (0.75)                    (-0.28)                    (2.78)\*\*

---

**Equation (11):**  $Y\dot{G}R = \alpha_0 + \alpha_1 ODAY + \alpha_2 TSY + \alpha_3 M\dot{G}R + \alpha_4 \dot{L}F + \varepsilon$

$$Y\dot{G}R = -17.22 + 0.39\Delta ODAY_t - 0.18\Delta TSY_t + 0.26TSY_{t-1} + 0.05\Delta M\dot{G}R_t + 7.72\Delta \dot{L}F_t$$

(-3.01)\*\*\*    (2.48)\*\*                    (-1.80)\*                    (2.45)\*\*                    (0.61)                    (2.67)\*\*

**Model Diagnostics:**  $R^2 = 0.53$ ,  $\bar{R}^2 = 0.40$ ,  $F_{(4,20)} = 4.22^{***}$ ,  $SC\chi^2(1) = 0.009$ ,  $FF\chi^2(1) = 0.02$ ,  $Norm\chi^2(2) = 1.83$ ,  $H\chi^2(1) = 1.14$

**Long-Run Coefficients**

$$Y\dot{G}R = 0.38ODAY + 0.08TSY + 0.05 M\dot{G}R + 7.72 \dot{L}F$$

(2.48)\*\*                    (0.80)                    (0.61)                    (2.67)\*\*

---

**Table 5.4.3b continued:**

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**Equation (12b):**  $\dot{YGR} = \alpha_0 + \alpha_1 ODAY + \alpha_2 CGY + \alpha_3 TSY + \alpha_4 XGR + \alpha_5 LF + \varepsilon$

$$\dot{YGR} = -26.34 + 0.41\Delta ODAY_t + 0.09\Delta CGY_t + 0.34CGY_{t-1} - 0.01\Delta TSY_t + 0.39TSY_{t-1} - 0.05\Delta XGR_t + 6.30\Delta LF_t$$

(-3.73)\*\*\*    (2.79)\*\*            (0.53)            (1.87)            (-0.80)            (2.87)\*\*            (-1.27)            (2.16)\*\*

**Model Diagnostics:**  $R^2 = 0.63$ ,  $\bar{R}^2 = 0.48$ ,  $F_{(4,20)} = 4.11^{**}$ ,  $SC\chi^2(1) = 0.008$ ,  $FF\chi^2(1) = 0.06$ ,  $Norm\chi^2(2) = 4.30$ ,  $H\chi^2(1) = 0.46$

**Long-Run Coefficients**

$$\dot{YGR} = 0.41ODAY + 0.42CGY + 0.29TSY - 0.04 XGR + 6.30 LF$$

(2.79)\*\*            (1.98)\*            (1.90)\*            (-1.27)            (2.16)\*\*

---

**Note:** \*\*\*, \*\*, \* are significance levels at one, five and ten percent levels.  $t$  ratios are given in Brackets. Critical values for the various tests are as follows:  $\chi^2(1) = 6.63$ ,  $\chi^2(2) = 9.21$ , The test statistics are as follows:  $R^2$  = coefficient of determination,  $\bar{R}^2$  = coefficient of determination, adjusted for degrees of freedom.  $F$  = F statistics, SC = Serial Correlation, FF = Functional Form, Norm = Normality of residuals, H = Heteroskedasticity.

#### 5.4.4 The Solomon Islands

The F-test is applied to all the equations used for the Solomon Islands. The reported F-statistics all fall outside the critical value band with Equation (12b) exceeding the upper bound critical value at a 90 percent confidence level. Table 5.4.4a presents the results for the F-test.

**Table 5.4.4a The F-test Results for the Solomon Islands**

Equations	k	Critical Value Band		F-staistic	Pass or Fail
		Intercept and No Trend <sup>a</sup>			
		I(0)	I(1)		
Equation 6	3	4.385	5.615	16.66	Pass
Equation 7	4	3.817	5.122	15.86	Pass
Equation 8	5	3.516	4.781	11.14	Pass
Equation 9	5	3.516	4.781	7.08	Pass
Equation 10	5	3.516	4.781	7.99	Pass
Equation 11	4	3.817	5.122	9.2	Pass
Equation 12b	4	3.817	5.122	3.58	Fail

**Note:** k represents the degree of freedom

<sup>a</sup> represents the 99 percent level of significance

Equation (6) to (12b) is estimated in order to analyse the relationship between foreign aid and economic growth for the Solomon Islands. The recorded adjusted  $R^2$  values for all equations range from 0.47 to 0.66. The models do not suffer from problems of Serial Correlation, Functional Form, Normality, and Heteroscedasticity. The results are reported in Table 5.4.4b.

Equation (6) looks at investment to GDP ratio (TIY), export growth rate ( $XGR$ ), and the labour force growth rate ( $LF$ ) as a function of economic growth based upon the simple 'Solow - type production function model'. The short run results point out that investment and exports both have a positive and significant contribution to growth at the 5 and 1 percent levels, respectively. The labour force coefficient is negative 0.70 but this has no significant influence on growth. In the long run the only relationship to that is positive is exports. It implies that a 1 percent increase in exports leads to a 0.56 percent increase in growth, both in the short and long term periods. Unlike Samoa, investment in the Solomon Islands only has a short-term influence. Figure 4.3.4c in Chapter 4 shows that from 1970 to 1980 the Solomon Islands had rather low investment

levels. This is below foreign aid levels for the same period. As a result TIY in the Solomon Islands only has a short-term influence on growth. Nevertheless, in the 1990s the government has slowly moved towards privatisation with the sale of Mendana Hotel and SOLRICE (rice trading firm). This shift towards more private sector involvement clearly indicates the government's intention to improve the effectiveness of investment in promoting the country's long-term performance.

The next equation (7) introduces foreign aid (ODAY) and domestic savings (TSY) in place of investments. The short run coefficients indicate that only exports, with a value of 0.25 has a positive and significant contribution to growth at the 5 percent level. Foreign aid, domestic savings, and the labour force variables are negative but these do not have any important influence on the economy. In the long run, foreign aid is positive 0.43 but it is not significant. It appears that only exports are making significant contributions to the country's economic growth in both periods. This result is similar to that of Islam (1992) and Mbaku (1993) indicating that only domestic resources in terms of exports have a contribution to economic growth. The poor performance of the savings variable is due to high levels of Government borrowing from the domestic sources to fund fiscal deficits. It suggests that the Governments uses domestic savings to balance the fiscal accounts rather than investing it in more productive areas.

The relationship between growth and bilateral (BODAY) and multilateral (MODAY) aid, the two components of foreign aid is estimated using Equation (8). The results show that in the short run bilateral aid has a negative and statistically significant impact on growth at the 1 percent level. However, multilateral aid has a positive influence on growth but the relationship is not significant. Domestic savings, labour force, and exports retain their relationship with growth as reported in earlier equations i.e. export is the only factor noted to contribute to growth. Therefore, these variables are not discussed any further unless specifically stated. The long run coefficients point out that bilateral and multilateral aid are positively related to growth with values of 0.59 and 0.71, respectively. However, only bilateral aid is significant at the 10 percent level. Thus, it can be said that foreign aid in general has a stronger and

positive effect on growth in the long term. The study by Gounder (1999a) also provides similar results for Fiji. However, it is interesting to note a dual effect (positive and negative) between bilateral aid and economic growth. This reflects to some extent the utilisation of foreign aid in the Solomon Islands. The World Bank (1991) points out that bilateral aid is largely used to fund development budgets that are used for cyclone reconstruction and large investments in fishing vessels and airport expansion. These activities take time before any real benefits are realised in terms of increased growth. Furthermore, the Solomon Islands over this period of analysis has been hit by several devastating cyclones (World Bank, 1991). Each year a cyclone hits, foreign aid increases to fund reconstruction activities, yet GNP falls as all sectors of the economy suffer damages. This can explain the negative short-run relationship between foreign aid and economic growth for the Solomon Islands.

Equation (9) extends the analysis to include grant (GODAY) and loan (LODAY) aid. In this case, the short run coefficient for grant aid is also negative and significant at the 10 percent level. Note that loan aid is negative 0.47 for the Solomon Islands but this relationship is not statistically significant. In the long run, grant aid becomes positively and significantly related to economic growth at the 10 percent level. This is expected given earlier indications of the long-term impacts of bilateral aid. It should be noted that similar to Fiji bilateral aid to the Solomon Islands is over 90 percent grant aid. Loan aid does not have any significant influence on growth such as it did for Samoa. Equation (10) includes technical co-operation (TCODAY) aid in the analysis. The results appear to be consistent with those given for Equation (9). Technical co-operation and loan aid both have a negative relationship with growth in the short term. The value of the coefficients is negative 2.91 and 0.77, respectively. However, only the technical co-operation variable displays a significant relationship with growth at the 10 percent level. The estimated long run coefficients indicate that although technical co-operation is positive, it no longer contributes to growth. This is due to the fact that technical co-operation is a small proportion of grant aid, not large enough to exert any significant influence on growth in the long term.

These results have important implications concerning foreign aid programs in the Solomon Islands. Poor administration and co-ordination of the overall aid package would explain its lack of impact on the economy's growth. The World Bank (1991) has pointed out that Bilateral and multilateral aid are controlled by two separate government departments. Such a fragmented structure would have reduced the efficiency and effectiveness of foreign aid programs even though one program is better managed than the other. It has also been pointed that this problem was not addressed until 1989 with the introduction of clearer priorities and guidelines. The evidence does suggest some improvement in the long term given a positive foreign aid coefficient but this has no impact on growth. However, the analysis ends after five years since the new guidelines were introduced and this may not be long enough to observe any significant effects.

The impact of imports ( $MGR$ ) on economic growth have also been analysed in place of exports in Equation (11). The short run coefficients show foreign aid has a negative and significant impact on growth at the 5 percent level. Imports and domestic savings display a positive relationship with economic growth. However, only imports are statistically significant at the 1 percent level. In the long term, imports and foreign aid indicate no major changes in the estimated coefficients. Including the  $MGR$  variable in the estimations has resulted in a negative aid growth relationship in both periods. This reflects the use of foreign aid on cyclone rehabilitation efforts, expenditure on physical infrastructure, and acquisition of physical assets. These activities have large components linking to imports of capital goods. The long gestation periods and low rates of return for these activities can explain the negative impact of foreign aid on economic growth. It is interesting to note that domestic savings retains its positive sign and appears to gain some importance from 12 percent to 11 percent significance. This suggests that savings in the Solomon Islands are channelled more towards investment in the imports sector rather than exports. This is mainly for fish production, timber processing, manufacturing and construction activities, which depend on imported capital materials such as machinery and specialised equipment.

Equation (12b) introduces government consumption into the analysis. The estimated short run coefficients determine that foreign aid (ODAY) is negative and has no significant relationship with growth. Savings although has a positive sign it does not have an important bearing on growth. However, government consumption is negatively and significantly related to economic growth at the 5 percent level. It implies that a 1 percent increase in government consumption leads to a 1.6 percent decline in growth. The long run coefficients for foreign aid and government consumption are positive but not significant. This result imply that Government expenditure in the short-run has not been productive. The World Bank (1996) has pointed out that the lack of fiscal discipline has detrimental effects on economic growth in the Solomon Islands. Domestic borrowing by the Government to sustain fiscal imbalances has created havoc to local financial systems. Furthermore, this poor performance of the Government can explain the negative short-run effect of bilateral, grant and technical co-operation aid on a country's economic growth. Keith-Reid (1998) blames gross maladministration and high level corruption of present and past governments for the current state of the economy. He points out that it is only recently that 'some foreign aid donors has suspended issues of cash since the government could not pay its own wage bills' (Keith-Reid, 1998, p.161). Export is the only factor to have a significant contribution to the country's growth performance.

In the case of the Solomon Islands foreign resources (i.e. foreign aid) have a dual effect on economic growth. The studies by Gounder (1999a), Islam (1992) and Mbaku (1993) do not show such effects. As mentioned earlier, this is largely attributed to the Government's utilisation of foreign aid. The results also show that domestic resources (i.e. exports) perform significantly better than foreign resources in advancing economic growth. This is not surprising given the Solomon Islands large base of natural resources.

**Table 5.4.4b Empirical Results for the Solomon Islands**

---

**Equation (6):**  $Y\dot{G}R = \alpha_0 + \alpha_1 TIY + \alpha_2 X\dot{G}R + \alpha_3 \dot{L}F + \varepsilon$

$$Y\dot{G}R = -4.90 + 0.66\Delta TIY_t - 0.50TIY_{t-1} + 0.55\Delta X\dot{G}R_t - 0.70\Delta \dot{L}F_t$$

$$\begin{matrix} (-0.39) & (2.16)** & (2.00)** & (4.72)*** & (-0.22) \end{matrix}$$

**Model Diagnostics:**  $R^2 = 0.56, \bar{R}^2 = 0.47, F_{(4,20)} = 6.39***, SC\chi^2(1) = 2.64, FF\chi^2(1) = 0.19, Norm\chi^2(2) = 5.34, H\chi^2(1) = 1.47$

**Long-Run Coefficients**

$$Y\dot{G}R = 0.16TIY + 0.56 X\dot{G}R - 0.70 \dot{L}F$$

$$\begin{matrix} (0.79) & (4.71)*** & (-0.22) \end{matrix}$$


---

**Equation (7):**  $Y\dot{G}R = \alpha_0 + \alpha_1 ODAY + \alpha_2 TSY + \alpha_3 X\dot{G}R + \alpha_4 \dot{L}F + \varepsilon$

$$Y\dot{G}R = -3.76 - 0.42\Delta ODAY_t + 0.85ODAY_{t-1} - 0.02\Delta TSY_t + 0.25\Delta X\dot{G}R_t - 2.20\Delta \dot{L}F_t$$

$$\begin{matrix} (-0.28) & (-1.52) & (2.63)** & (-0.10) & (2.65)** & (-0.70) \end{matrix}$$

**Model Diagnostics:**  $R^2 = 0.61, \bar{R}^2 = 0.51, F_{(4,20)} = 5.97***, SC\chi^2(1) = 0.23, FF\chi^2(1) = 0.05, Norm\chi^2(2) = 1.17, H\chi^2(1) = 0.08$

**Long-Run Coefficients**

$$Y\dot{G}R = 0.43ODAY - 0.02TSY + 0.25 X\dot{G}R - 2.20 \dot{L}F$$

$$\begin{matrix} (1.25) & (-0.01) & (2.65)** & (-0.70) \end{matrix}$$


---

**Equation (8):**  $Y\dot{G}R = \alpha_0 + \alpha_1 BODAY + \alpha_2 MODAY + \alpha_3 TSY + \alpha_4 X\dot{G}R + \alpha_5 \dot{L}F + \varepsilon$

$$Y\dot{G}R = -12.71 - 0.87\Delta BODAY_t + 1.46BODAY_{t-1} + 0.71MODAY_t - 0.04\Delta TSY_t + 0.22\Delta X\dot{G}R_t - 0.18\Delta \dot{L}F_t$$

$$\begin{matrix} (-1.07) & (-2.85)*** & (3.96)*** & (1.10) & (-0.17) & (2.59)** & (-0.07) \end{matrix}$$

**Model Diagnostics:**  $R^2 = 0.73, \bar{R}^2 = 0.64, F_{(4,20)} = 8.01***, SC\chi^2(1) = 0.38, FF\chi^2(1) = 0.03, Norm\chi^2(2) = 2.04, H\chi^2(1) = 1.90$

**Long-Run Coefficients**

$$Y\dot{G}R = 0.59BODAY + 0.71MODAY - 0.04TSY + 0.22 X\dot{G}R - 0.18 \dot{L}F$$

$$\begin{matrix} (1.81)* & (1.10) & (-0.17) & (2.59)** & (-0.07) \end{matrix}$$


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**Table 5.4.4b continued**

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**Equation (9):**  $\dot{YGR} = \alpha_0 + \alpha_1 GODAY + \alpha_2 LODAY + \alpha_3 TSY + \alpha_4 XGR + \alpha_5 \dot{LF} + \varepsilon$

$$\dot{YGR} = -7.34 - 0.54\Delta GODAY_t + 1.24GODAY_{t-1} - 0.47\Delta LODAY_t - 0.10\Delta TSY_t + 0.19\Delta XGR_t - 1.46\Delta \dot{LF}_t$$

(-0.59)      (-1.84)\*      (3.45)\*\*\*      (-0.69)      (-0.51)      (2.01)\*      (-0.59)

**Model Diagnostics:**  $R^2 = 0.69$ ,  $\bar{R}^2 = 0.58$ ,  $F_{(4,20)} = 6.57***$ ,  $SC\chi^2(1) = 0.61$ ,  $FF\chi^2(1) = 0.23$ ,  $Norm\chi^2(2) = 1.67$ ,  $H\chi^2(1) = 0.92$

**Long-Run Coefficients**

$$\dot{YGR} = 0.70GODAY - 0.47LODAY - 0.10TSY + 0.19 XGR - 1.46 \dot{LF}$$

(2.00)\*      (-0.69)      (-0.51)      (2.01)\*      (-0.51)

---

**Equation (10):**  $\dot{YGR} = \alpha_0 + \alpha_1 TCODAY + \alpha_2 LODAY + \alpha_3 TSY + \alpha_4 XGR + \alpha_5 \dot{LF} + \varepsilon$

$$\dot{YGR} = -16.38 - 2.91\Delta TCODAY_t + 5.04TCODAY_{t-1} - 0.77\Delta LODAY_t - 0.02\Delta TSY_t + 0.21\Delta XGR_t - 0.68\Delta \dot{LF}_t$$

(-0.83)      (-1.83)\*      (2.76)\*\*      (-0.10)      (-0.11)      (2.13)\*\*      (-0.22)

**Model Diagnostics:**  $R^2 = 0.64$ ,  $\bar{R}^2 = 0.52$ ,  $F_{(4,20)} = 5.34***$ ,  $SC\chi^2(1) = 0.01$ ,  $FF\chi^2(1) = 0.26$ ,  $Norm\chi^2(2) = 0.98$ ,  $H\chi^2(1) = 0.79$

**Long-Run Coefficients**

$$\dot{YGR} = 2.14TCODAY - 0.08LODAY - 0.02TSY + 0.21 XGR - 0.69 \dot{LF}$$

(1.15)      (-0.10)      (-0.11)      (2.14)\*\*      (-0.22)

---

**Equation (11):**  $\dot{YGR} = \alpha_0 + \alpha_1 ODAY + \alpha_2 TSY + \alpha_3 MGR + \alpha_4 \dot{LF} + \varepsilon$

$$\dot{YGR} = 9.99 - 0.65\Delta ODAY_t + 0.31\Delta TSY_t + 0.63\Delta MGR_t + 0.32 MGR_{t-1} + 0.28\Delta \dot{LF}_t$$

(0.84)      (-2.30)\*\*      (1.63)      (5.45)\*\*\*      (2.11)\*\*      (0.10)

**Model Diagnostics:**  $R^2 = 0.71$ ,  $\bar{R}^2 = 0.60$ ,  $F_{(4,20)} = 6.52***$ ,  $SC\chi^2(1) = 2.74$ ,  $FF\chi^2(1) = 1.37$ ,  $Norm\chi^2(2) = 1.32$ ,  $H\chi^2(1) = 0.63$

**Long-Run Coefficients**

$$\dot{YGR} = -0.41ODAY + 0.20TSY + 0.61 MGR + 0.18 \dot{LF}$$

(-2.34)\*\*      (1.66)      (6.43)\*\*\*      (0.10)

---

**Table 5.4.4b continued:**

**Equation (12b):**  $Y\dot{G}R = \alpha_0 + \alpha_1 ODAY + \alpha_2 CGY + \alpha_3 TSY + \alpha_4 X\dot{G}R + \alpha_5 \dot{L}F + \varepsilon$

$$Y\dot{G}R = -14.37 - 0.22\Delta ODAY_t + 0.55ODAY_{t-1} - 1.60\Delta CGY_t + 2.09CGY_{t-1} + 0.11\Delta TSY_t + 0.18\Delta X\dot{G}R_t - 2.28\Delta \dot{L}F_t$$

(-0.64)      (-0.93)      (1.85)\*      (-2.41)\*\*      (3.09)\*\*\*      (0.61)      (2.19)\*\*      (0.87)

**Model Diagnostics:**  $R^2 = 0.76$ ,  $\bar{R}^2 = 0.66$ ,  $F_{(4,20)} = 7.69$ \*\*\*,  $SC\chi^2(1) = 4.33$ ,  $FF\chi^2(1) = 0.63$ ,  $Norm\chi^2(2) = 0.27$ ,  $H\chi^2(1) = 0.005$

**Long-Run Coefficients**

$$Y\dot{G}R = 0.33ODAY + 0.49CGY + 0.11TSY + 0.18 X\dot{G}R - 2.28 \dot{L}F$$

(1.08)      (0.73)      (0.61)      (2.19)\*\*      (-0.87)

**Note:** \*\*\*, \*\*, \* are significance levels at one, five and ten percent levels. *t* ratios are given in Brackets. Critical values for the various tests are as follows:  $\chi^2(1) = 6.63$ ,  $\chi^2(2) = 9.21$ , The test statistics are as follows:  $\bar{R}^2$  coefficient of determination, adjusted for degrees of freedom. *F* = F statistics, SC = Serial Correlation, FF = Functional Form, Norm = Normality of residuals, H = Heteroskedasticity

## **5.5 Conclusion**

The empirical findings presented in this study offer valuable understanding and insights to the process of economic growth and development of the SPMs. Most importantly it has determined the relationship between foreign aid and economic growth for the Cook Islands, Kiribati, Samoa, and the Solomon Islands. These results provide a general reflection on the effects of foreign aid on the economies of most SPMs.

### **Cook Islands**

The aid-growth relationship for the Cook Islands has largely been negative and insignificant. This would suggest that despite the large amounts of foreign aid received by the Cook Islands there is little effect on growth. Furthermore, although bilateral aid given in grant form makes up a large proportion of foreign aid to the country the empirical evidence indicate that the effect is positive but the contribution is insignificant. It would suggest that foreign aid through government to government arrangements has not improved and advanced the economic growth of the country. Technical assistance aid, which is included in grant aid also provide no support for growth. Nevertheless, it has improved the impact of the labour force making it positive and significant. The external trade variables of exports and imports provide strong support for growth than any other factors. Furthermore, imports appears to have a stronger impact on economic growth reflecting the country's heavy reliance on imported materials, especially in the tourism and construction industries.

For the Cook Islands domestic resources exert a stronger influence on economic growth than foreign resources. However, with limited domestic resources Government policies need to focus more on the efficient and effective use of foreign aid for the economic expansion of the Cook Islands.

## **Kiribati**

In the case of Kiribati, the empirical evidence suggest that a short term relationship exists between foreign aid and economic growth. However, it also points out that this relationship is negative. The analysis of various components of foreign aid indicate that it has a temporary but consistently negative effect on the country's economic performance. For instance, Bilateral, Multilateral, and grant aid all display a significant but negative impact on growth. With Government consumption also negative and significant, the evidence strongly suggests poor Government utilisation of foreign aid funds through non-productive government expenditures.

As with the Cook Islands, the external trade variables are the only factors to contribute positively to the Kiribati's economic growth. However, the impact of exports is significant in the short term only reflecting the country's limited domestic resources. On the other hand imports show a strong influence in both periods.

## **Samoa**

The empirical results for Samoa provide some important implications for the country's economic performance. The analysis indicates that investments contribute positively to growth. It would suggest that the focus of public sector investment on physical and social infrastructure has improved the country's growth performance. In addition, the governments decision to privatise State Owned Enterprises (SOEs) has improved the quality of their investments.

Overall, foreign aid and its various components have a significant and positive contribution to economic growth. This gives some support to the argument that foreign aid complements domestic resources and encourages economic growth. Bilateral and loan aid are the two main components of foreign aid that has a positive and significant relationship with growth. It implies that foreign aid through bilateral arrangements and allocated as loan aid has contributed significantly to the economic performance of Samoa. However, low levels of domestic savings has been detrimental to the country's growth. It

has meant a shortage of financial credit needed for private sector investment. One can argue that Samoa needs to strengthen its domestic savings base if current levels of investment are to be maintained given the uncertainty of foreign aid flows.

The analysis of government consumption indicates that it has a positive and significant effect on Samoa's economic growth. This would reflect the considerable role of the central government in terms of investment and employment. It also points out that government utilisation of foreign aid is effective and productive leading to increasing economic growth. Furthermore, the Government's efforts to offset the resource gap using foreign aid funds has improved the savings performance. However, with the uncertainty of foreign aid flows it cannot be relied upon as the only source of investment. The labour force variable is noted to have an important contribution to growth. This largely reflects the country's emphasis on infrastructure and human resource development. Through these programs a highly skilled labour force is obtained that is productive and efficient.

For Samoa, exports and imports do not have any significant contribution to growth. A consistent decline in export earnings as a result of cyclones, low international price, and crop disease has meant little or no contribution to the country's economic performance. With imports far exceeding exports one would expect a more significant impact. However, there is no important relationship between imports and growth. Apart from cyclone reconstruction works, imports are mainly for private consumption rather than capital investment.

### **Solomon Islands**

The findings for the Solomon Islands also imply an important role for investment, exports, and foreign aid in contributing to the country's economic growth. The results indicate that investment has an impact in the short term only. In this case domestic savings has no significant contribution to the economy. This reflects low levels of domestic savings as a result of high consumption levels and shallow financial systems. Nevertheless, the

government has recognised the need to strengthen the availability of domestic credit by improving the development role of the Central Bank and the Development Bank of Solomon Islands (DBSI). These measures should improve the impact of domestic savings on the country's growth performance in the near future.

The relationship between foreign aid and economic growth for the Solomon Islands is not entirely clear as other cases in this analysis. The empirical evidence indicate that the overall foreign aid component has no significant contribution to economic growth. The results show that in the short-run the impact of bilateral, grant, and technical co-operation aid on economic growth is negative and significant. However, the long-run coefficients for these variables indicate a positive contribution to growth. This dual effect can explain why total foreign aid exerts no influence on economic growth. The evidence strongly suggests that the main cause of foreign aid inefficiency is found in the public sector. The results show government consumption in the short run has a negative and significant effect on growth. This would also explain the negative short-term impacts of bilateral, grant and technical co-operation aid.

Once again it is apparent that external trade has an important role in these economies. The export coefficient is positive and significant for all the specifications examined. It would appear that the Solomon Islands follows the export led growth strategy common in Asian countries. The expansion of exports through forestry products and the government's intentions to invest in export assembly industries should generate a positive effect on the country's economic performance. Imports also have an important contribution to growth. As mentioned earlier the country relies mainly on capital imports such as machinery and transport equipment for use in major industries. The final conclusion for this analysis of the relationship between foreign aid and economic growth for the Cook Islands, Kiribati, Samoa, and the Solomon Islands is given in the next chapter with some recommendations for future research.

## APPENDIX 5.1

**Table A5.1 List of Variables Used in the Estimation of the Model**

Variables	Description
1 $Y\dot{G}R$	Annual Growth Rate of Real GDP or GNP
2 ODAY	Total Foreign Aid as a Ratio of GDP or GNP
3 BODAY	Bilateral Aid as a Ratio of GDP or GNP
4 MODAY	Multilateral Aid as Ratio of GDP or GNP
5 GODAY	Grant Aid as a Ratio of GDP or GNP
6 LODAY	Loan Aid as Ratio of GDP or GNP
7 TCO DAY	Technical Co-operation Aid as a Ratio of GDP or GNP
8 $X\dot{G}R$	Export Growth Rate
9 $M\dot{G}R$	Import Growth Rate
10 CGY	Government Consumption as a Ratio to GDP or GNP
11 $L\dot{F}$	Labour force Growth Rate
12 TIY	Total Investment as a Ratio to GDP or GNP
13 TSY	Total Savings as a Ratio to GDP or GNP
14 X	Exports Expressed in US\$(millions)-1990 prices
15 XY	Exports as a Ratio of GDP or GNP
16 M	Imports Expressed in US\$(millions)-1990 prices
17 MY	Imports as a Ratio of GDP or GNP
18 ODA	Total Foreign Aid Expressed in US\$(millions) - 1990 prices
19 SGY	Government Savings as a Ratio to GDP or GNP
20 SPY	Private Savings as a Ratio to GDP or GNP
21 IPY	Private Investment as a Ratio to GDP or GNP
22 IGY	Government Investment as Ratio to GDP or GNP

**Note:** The Cook Islands and Kiribati use GDP Ratios while Samoa and the Solomon Islands use GNP Ratios.

# CHAPTER SIX

## Summary, Conclusion and Future Research

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### 6.0 Introduction

For most South Pacific Microstates (SPMs) it has been more than twenty years since gaining independence and self-determination, yet economic dependence still remains despite the constant flow of foreign aid. It is surprising to note that little is known about the impact of foreign aid on the economic growth of the recipient SPMs. Moreover, reviewing the theoretical literature and previous empirical research, it has been pointed out that the aid-growth relationship remains controversial. Nevertheless, it has long been recognised that foreign aid has both a positive and negative relationship with economic growth.

Various studies have focused specifically on the role of foreign aid in economic growth and have frequently tested the aid-growth relationship by treating foreign aid as an independent variable along with savings, investment and exports (Islam, 1992: Mbaku, 1993: Bowen, 1998: Gounder, 1998). The results have been mixed, with as many non-significant results as there are significant. The differences in data, samples, time periods, and models tested may explain the mixed outcome. In the tradition of these earlier approaches, this study makes an attempt to examine the relationship between foreign aid and economic growth for SPMs. In particular, the study focuses on the impact of foreign aid flows on the economic growth performance of the Cook Islands, Kiribati, Samoa, and the Solomon Islands. It also includes savings, investment, labour force, government consumption, exports and imports in this analysis.

The purpose of this chapter is to provide some discussion on the major findings of this study. Suggestions will also be made, based on these findings, on the economic policies that governments of SPMs need to adopt in order to improve the effect of foreign aid on their country's growth performance. The

chapter will conclude by considering future research that is required on the aid-growth relationship of the SPMs.

## **6.1 Policy Implications**

This study has determined that foreign aid has been a dominant factor in the overall development of the SPMs. However, the empirical analysis has uncovered some important linkages between foreign aid and economic growth. This has several implications on economic policies and programmes of foreign aid donor countries.

The results for the smaller SPMs of the Cook Islands and Kiribati tend to show that foreign resources (i.e. foreign aid) has not contributed positively to economic growth. Furthermore, despite the large amounts of foreign aid received by these smaller SPMs, the impact on the countries economic performance has not been as significant. This raises some serious concerns regarding the utilisation of foreign aid in these countries. The poor performance of bilateral, grant, and technical co-operation aid suggests that governments are directly accountable for this outcome. The empirical findings for the Cook Islands and Kiribati both indicate that government consumption has an influential role in determining the impact of foreign aid on economic growth.

The World Bank (1991) has noted that the problem is embedded within government policies. It points out that the 'lack of attention to the problem recurrent cost finding is detrimental to efficient aid use; it wastes donor money, drains administrative resources, and undermines the ultimate return from the development project' (World Bank, 1991, p.82). It has also been pointed out by Keith-Reid (1998) that it is only recently that the Cook Islands government has changed its policy, diverting foreign aid from budgetary support to projects that are designed to promote economic sustainability. Kiribati has constantly relied on foreign aid to support an over bearing government sector (Temu, 1996). It is only recently that the Kiribati Government's National Development Strategy acknowledges the need to reduce government involvement and encourage private sector participation (ADB, 1997).

It is clear that policies need to address the problems of recurrent costs. It points out the need for recipient governments of the SPMs to select projects that generate sufficient revenue to finance recurrent costs. It also raises the notion that foreign aid donor countries may have to pay closer attention to bilateral arrangements and design foreign aid packages that are more accommodating to the private sector. It is obvious that smaller SPMs have some difficulty in effectively using foreign aid in its current forms and arrangements. Nevertheless, one must also realise the difficulties that small island nations of the South Pacific face with the lack of resources, isolation, proneness to natural disasters and fragile environments. In spite of these obstacles it is apparent that domestic resources (i.e. exports) for the Cook Islands and Kiribati exert a stronger influence on their economies than foreign resources. However, with limited natural resources it would be difficult to sustain economic growth and the overall development of the country on domestic resources only. Therefore, the challenge for these small SPMs is to effectively utilise current flows of foreign resources and thus reduce current levels of economic dependency.

The results for the larger SPMs of Samoa and Solomon Islands compared to the other two SPMs of the Cook Islands and Kiribati show that foreign aid has a more favourable impact on economic growth. These countries appear to use foreign aid more effectively than the smaller SPMs of the Cook Islands and Kiribati. It is apparent that the policies of these larger SPMs tend to be more accommodating to the private sector. Both Samoa and the Solomon Islands have implemented privatisation programmes that aim to ease government involvement. It is also obvious that through prudent government expenditure, foreign aid appears to have a more positive effect on economic growth. Fairbairn (1991) has stated that the Government of Samoa has made an effort to fully utilise current flows of foreign aid by directing it towards public development projects. However, the World Bank (1996) has found that further increases in this type of government investment may not lead to additional growth. Therefore, current policies that encourage the private sector may need more attention. For instance, the Solomon Islands has taken the initiative to improve the availability of domestic credit to private enterprises by

strengthening local banks. This initiative may herald the new role of foreign aid to the SPMs.

There are also some apparent problems with the aid programmes in these larger SPMs. The empirical results for the Solomon Islands highlight some of the short falls with current administration systems and co-ordination of foreign aid. In this sense the World Bank has argued that 'policy dialogue between donors and recipients is a critical aspect of aid co-ordination' (World Bank, 1991, p.84). This requires that foreign aid donor countries need to be familiar with the recipient country's development strategies through better communication and information flow. It would also imply that recipient countries need to set out clear and obtainable development objectives. These issues need to be addressed if governments of the SPMs are serious about making full use of current foreign aid flows.

Domestic resources for Samoa have not contributed to growth with the exception of the labour force. This seriously needs to be addressed given the country's natural endowments. Government policies also need to focus on mobilising the country's productive labour force and consider the encouragement of export oriented and value added industries. Low levels of domestic savings in Samoa is a concern in the light of uncertain foreign aid flows in recent years. Improvements in the savings performance depend on providing incentives that encourages savings in the private sector. In the Solomon Islands domestic resources has been the main contributing factor to the country's economic performance. However, further diversification of the export base is needed. A lack of fiscal discipline has led to high levels of Government borrowing. As a result, savings have not contributed to growth. It is therefore, crucial that the Government achieve a stable macroeconomic environment in order to sustain economic growth and promote the overall development of the country.

Essentially the kind of impact foreign aid has on economic growth depends on recipient governments and their economic policies. It is simply because the amount of bilateral aid outweighs all other forms of external assistance. This is the scenario for all SPMs. The World Bank (1991) country study on Pacific Island Economies devotes one chapter on the importance of

improving the utilisation of foreign aid. It examines foreign aid flows to Pacific Member Countries (PMCs) and how to improve its performance. This gives some indication to the importance of foreign aid and the need to make full use of current flows. This study has acknowledged that for foreign aid to work there must be a firm commitment from both the recipient and the donor to a common goal. The uncertainty of foreign aid flows makes it now more important than ever before to take full advantage of all the opportunities to support development and reduce economic dependency.

## **6.2 Conclusion**

The focus of this study has been to examine the relationship between economic growth and foreign aid for the South Pacific Microstates (SPMs) of the Cook Islands, Kiribati, Samoa and the Solomon Islands. Chapter 1 provides a brief overview of the South Pacific region with some attention on the SPMs. It clarifies the main objectives of this study and the importance it has on the economic growth and development of the SPMs.

Chapter 2 reviews the empirical and theoretical literature surrounding the aid-growth relationship and discovers that with all the various studies done on the topic, the impact of aid on economic growth still remains controversial. It is fair to say that no single theory or model can adequately explain the role of foreign aid in the economic growth of SPMs or other less developed countries. Nevertheless, these studies have generally focused on the association between foreign aid, savings, exports, labour force, investment, government consumption and economic growth. In cases where it is possible various components of these variables have also been analysed. It is also important to note that the concept of economic growth and development do not mean the same thing. In this study growth is merely treated as an indicator that measures development, it is not development.

The third chapter explores the literature related to economic growth and development of the SPMs. The literature suggests that SPMs have to include policies that encourage economic expansions, this is no longer a matter of choice

but necessary to achieve higher standards of living. Nations can no longer stand alone and international co-operation is crucial. The challenge facing all SPMs is to effectively utilise current resources (domestic and foreign) to further promote overall development. Foreign aid has had a dominant role in the economic expansion of most SPMs and will continue to do so in the future, as foreign aid still provides resource needs, shortfall in foreign exchange and also meeting the savings-investment gap.

A descriptive analysis of the political and historical backgrounds as well as the physical and economic aspects of the selected case studies is given in Chapter 4. The political attributes of these SPMs largely resembles those of their colonial masters with some comprise to include traditional chiefly systems. The physical attributes differ considerably but there are some apparent similarities in terms of their characteristics of smallness. The economies of these SPMs are largely dominated by the government sector and are engaged in agricultural production. The growth performance from 1970 to 1995 has been sluggish and highly erratic. Foreign aid has been the main factor for these SPMs development process, as well as exports making some contribution. Investment is mainly from government sectors supported largely through foreign aid. Recent reports from the ADB (1998) expect some improvements in the growth performance of these SPMs, however, this may take some time.

The empirical results for this study are presented in Chapter 5. The results indicate that overall the models have a relatively good fit to the data and there are no problems with the model diagnostics. The analysis tends to support the empirical literature and findings surrounding the aid-growth relationship given in chapter 2, i.e. foreign aid has a positive and / or negative impact on economic growth for the island countries analysed here. This study finds that significant weight should be attributed to the recipient governments utilisation of foreign aid (such as supporting annual budgets, recurrent costs and development expenditures) when evaluating the impact of foreign aid on economic growth, especially in the case of SPMs.

In particular, foreign aid does not contribute to the economic growth of the Cook Islands with exports and imports as the only variables to have some positive influence. For Kiribati the aid-growth relationship is negative but only

for the short term. Exports and Imports also have a positive impact on Kiribati's growth performance. The Cook Islands and Kiribati will remain dependent on foreign aid in the foreseeable future. Since exports contribute significantly to growth for the Cook Islands and Kiribati, it is important these countries encourage the export sector and diversify into new production ventures and international markets. In Samoa's case, foreign aid through bilateral arrangements and allocated as loan aid has contributed to the country's economic growth and brightens future prospects of reducing economic dependency. Investment contributes to this outcome but poor domestic savings is a cause for concern. The labour force and government consumption variables also contribute positively to Samoa's growth performance. The Solomon Islands economic expansion is positively influenced by investments, exports, and foreign aid flows. However, the country has yet to take full advantage of foreign aid flows with recent reports of Government corruption and mismanagement, thus damaging crucial political relationships that also affects foreign aid flows from the donor countries. Exports continue to support the economy but the fall out from the Asian crisis highlights the pitfalls and negative impacts of the export-led growth approach. However, this should not be seen as a long lasting effect as exports play a crucial role in the development process. The Solomon Islands is likely to remain dependent on foreign aid unless the government begins to sustain the economic growth process.

### **6.3 Future Research**

This study finds that the neo-classical models are useful for the analysis of the impact of foreign aid on the economic growth of the SPMs. The empirical results indicate that recipient governments of the SPMs through their consumption and investment have a strong influence on the overall effect of foreign aid on economic growth. However, this conclusion needs qualification. Although the analysis of government consumption and total investment offer some understanding to the utilisation of foreign aid it may be more beneficial to study how economic policies accommodate foreign aid flows. In doing so, it

will directly determine the effectiveness of foreign aid and ultimately lead to the reduction in the economic dependency which is a characteristic of most SPMs.

The lack of time series data for the Cook Islands and Kiribati's investment and savings levels for the period 1970-1995 has removed these relevant variables from the regression analysis that aim to explain economic growth. Future improvements in data series would make it possible to determine the contribution of domestic resources (i.e. savings and investment) on economic growth for these smaller SPMs.

The empirical results presented in this study offer a starting point for future research conducted in this area. Much research still has to be done in order to give a definitive determination of the impact of foreign aid on economic growth for the SPMs. It is considered beneficial and practical to have specific country studies of the SPMs rather than cross-country analysis. It would enable a better understanding of the aid-growth relationship and in turn provide appropriate policy actions to be undertaken by the respective SPMs government, through which the country can achieve economic growth and development.

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