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Department/School : DEVELOPMENT STUDIES, SGDIA.

Institution/University : USP

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Contact Address

SFA, SICHE, P.O.BOX R113
HONIARA, SOLOMON IS.
PHONE: (677) 30045
amonolopo@gmail.com

Permanent Address

Fai Village, Small Malaita
Malaita Province,
Solomon Islands.

Checked 7/10
SP.

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IMPACT OF SHIPPING ON DEVELOPMENT OF SMALL ISLAND DEVELOPING STATES: A CASE STUDY OF INTER-ISLAND SHIPPING IN SOLOMON ISLANDS

Aidan Hill Monoilopo

A thesis submitted in fulfillment of the requirements for the Degree of
Masters of Arts in Development Studies

Development Studies Programme
School of Government, Development and International Affairs
Faculty of Business and Economics
The University of the South Pacific
Suva

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DECLARATION

I, *Aidan Hill Monoilopo*, declare that this thesis is an original piece of work done by me. Where other sources have been used, these have been duly acknowledged. Any omission and error or otherwise is my own and the main content of this thesis has not been previously submitted for any degree in any other University.

Signature:

Date: August 2013

Name: Aidan Hill Monoilopo

ID No:S90101650

Statement by the Principal Supervisor

I confirm that this thesis was prepared under my supervision and is the work of *Mr Aidan Hill Monoilopo*, except where other sources used have been duly acknowledged.

Signature:

Date: August 2013

Name: Dr Manoranjan Mohanty

Designation: Associate Professor

ABSTRACT

Inter-island shipping service provision is a crucial and very distinct element in the development process of Small Islands Developing States (SIDS) especially for Solomon Islands. With the increase in trading activities and globalisation the demand for inter-island shipping has been increasing. A flow of goods and increased mobility of people have been induced between the core centre such as Honiara, and the peripheral scattered islands. Axiomatically, lack of inter-island shipping retards economic and social development in the islands, states. The subject is a most neglected area of research in the SIDS, especially in the Solomon Island. This study has been undertaken to bridge this knowledge gap. The objective is to assess the impact of inter-island shipping on the development in Solomon Islands by comparing Malaita and Isabel provinces with different levels of shipping provision. The methodology adopted for this study is largely qualitative. The ontological assumptions and perspective adopted in this study are those of constructionism whereas the epistemological assumptions, which purport to the nature of knowledge itself, are those of interpretivism. Triangulation of methods was employed in this study.

This study finds that inter-island shipping has a profound impact on development, economically, politically and socially, particularly in the case of Solomon Islands. There is a strong linear relationship between level of shipping services provision and development measured by the level of income, mobility, services and physical infrastructure. The increasing demand for shipping depends largely on increased agricultural production, trade and other related factors. As revealed in this study there is a high level of trading activities and high resource exploitation in areas where there is reliable and effective provision of shipping services and vice versa. Heads of households from Isabel province earned monthly incomes ranging from $50 to $200 compared to heads of households from Malaita due to increased production, trade, and mobility. Regular and effective shipping services between Isabel and Honiara enhance their trading activities. In Solomon Islands the viability of shipping services is marred by ‘free riders’ due to the ‘wantok’ system, and collection of ‘free handshake’ fares practiced by ships’ crews. The financial constraints of many well established shipping companies were exacerbated by mismanagement and misappropriation of shipping companies’ finances.

Thus it is highly recommended that inter-island shipping services in Solomon Islands be made more equally available, effective, reliable and safe. This will require that appropriate policies and regulations be put in place. A holistic approach is needed to help improve this critical sector.

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ABBREVIATIONS

ADB	Asian Development Bank
ANZDL	Australia and New Zealand Direct Line
CBSI	Central Bank of Solomon Islands
DB	Dump Barge
FAO	Food and Agriculture Organisation
FDI	Foreign Direct Investment
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GRT	Gross Registered Tonnage
IDC	Isabel Development Company
IDCS	Isabel Development Company Shipping
IMF	International Monetary Fund
IMO	International Maritime Organisation
MARPOL	International Convention for Prevention of Pollution from Ships
MDA	Malaita Development Authority
MNC	Multinational Corporation
MSC	Malaita Shipping Company
MID	Ministry of Infrastructure Development
MV	Marine Vessel
NACRA	National Coalition for Rural Advancement
NFD	National Fisheries Development
NGPL	New Guinea Pacific Line
NGO	Non Government Organisation
NSSL	National Shipping Services Limited
NTF	National Transport Fund
NTP	National Transport Plan
PFL	Pacific Forum Line
RCDF	Rural Constituency Development Fund
SAP	Structural Adjustment Programme

SBD	Solomon Islands Bank Dollar
SDA	Seventh Day Adventist
SFA	School of Finance and Administration
SFPL	Soltuna Fishing and Processing Limited
SICHE	Solomon Islands College of Higher Education
SIDS	Small Island Developing State
SIMSA	Solomon Islands Maritime Safety Administration
SINPF	Solomon Islands National Provident Fund
SSEC	South Seas Evangelical Church
STCW	International Convention on Watching for Seafarers
TNC	Transnational Corporation
TSC	Transwest Shipping Company
TSL	Temotu Shipping Line
TEU	Twenty Equivalent Unit
UN-OHLLS	United Nations - Office of the High Representative for the Least Developed Countries and Landlocked Developing Countries
UNCTAD	United Nation Conference on Trade Agreements and Development
WTO	World Trade Organisation

CHAPTER ONE

INTRODUCTION

1.1 Background

This research is primarily concerned with studying the impact of shipping on the development of Small Island Developing States (SIDS).[1] Because of the fragmentation of many SIDS, studying the impact of shipping on development would highlight the crucial role that transport plays in the development of SIDS, where poor transport, especially shipping and lack of communications is usually considered an impediment to the development. Transport is essential for the movement of people, goods and services and it also facilitates trade and communication. Both transport and development are closely intertwined; generally, the greater the level of development, the greater the level of transport and vice versa. All modes of transport such as roads, rail, airways and sea-lanes play a crucial role in development. Of these modes, shipping in particular is the vital mode of transportation for SIDS. Solomon Islands is one of the SIDS within the South Pacific region relying heavily on shipping because of the geographical fragmentation of its islands.

It is essential that this study look at the impact of inter-island shipping services on Solomon Islands' development. This is to bring the provision of shipping services into the mainstream development plans in order to strengthen this important service sector.

Transportation, especially shipping, has long played a crucial role in the development of the many countries of the world and it is becoming more so in today's globalised world where trade is vital in the process of development. In international trade shipping plays an important role in both the developed and developing nations. This is due to the very fact that of the 510 million square kilometres that make up the planet's surface, 361 million square kilometres, that is, 71 per cent, are ocean and seas (Cuadernos De La Cepal, 1987). Besides, contemporary man is looking more and more towards sea and ocean for resource exploitation and use. This,

[1] .Small Islands Developing States (SIDS) refers to what is "recognised as a distinct group of developing island countries of the Caribbean, the Pacific and the Atlantic, Indian Ocean, Mediterranean and South China Sea facing specific social, economic and environmental vulnerabilities at the United Nations Conference on Environment and Development" (UN-OHLLS, 2010:1).

therefore, necessitates the movement of the vast amount of goods traded in the markets using sea transport. For instance, in the 1950s the volume of traded goods that were transported by ships was about 550 million tonnes, which rose to 2,350 million tonnes in the 1970s, indicating how much the volume of maritime trade has grown over the last five decades (United Nations, 1996: 13). Today maritime transport remains the backbone of global trade, which helped the movement of about 5.1 billion metric tonnes in 1997 (Australian Chamber of Commerce, 2003) and according to the International Maritime organisation (IMO,2006) as much as 90 per cent of world trade or 7.4 billion tonnes of goods were carried by ships (Kaluza *et al.*, 2010: 1).

Albeit shipping is important to both the developed and developing countries it remains a critical factor in the development process of Small Island Developing States (SIDS) in the Indian Ocean, Caribbean, and the Pacific region. It is crucial in the South Pacific region due to the fact that it is the most import-based region and that it obviously relies on shipping for the transportation of most of the goods from both developed and developing economies. The leading countries of origin of manufactured imported goods to the region are the United States, Britain, Japan, Korea, Taiwan, Malaysia, Australia, New Zealand and China. Normally these goods are imported solely for the purpose of trading them in the Small Island Developing Nations' domestic markets. International maritime shipping allows and creates opportunities for the local business owners to purchase these imported goods and sell them to the final users. Unfortunately, the bulk of these final consumers are living in the rural areas and outer islands of Small Island Developing Nations. For example, nearly 80 per cent of the people in Solomon Islands live in the rural areas of the inner and outer islands.

In the context of the small islands developing states of the South Pacific, most of the islands in these countries are scattered over the wide expanse of the Pacific ocean, which in total amounted to some 10,591,000 square kilometres (Doulman, 1987) while most of these countries have only one or two ports of entry for the importation of goods and for back loading of exportable commodities. This has a very strong and important implication for the provision of reliable and effective shipping services in the Pacific region. First, there is going to be a regular supply of goods and services available in the islands of the Pacific local markets that need to be moved to where they are needed and second, there is a great need for regular collection of exportable commodities from the region to avoid wasting the islands' resources and efforts.

It is apparent that in an island state such as Solomon Islands international maritime shipping and inter-island shipping services plays a pivotal role in its development. The movement of people, goods and services is essential in the process of development. Like other Pacific island nations, Solomon Islands is composed of very small and isolated islands that are scattered over the vast expanse of ocean. It covers 1,632,964 square kilometres, a fact that itself presents the government with a formidable challenge in terms of both communication and transportation. The need for reliable shipping services becomes more critical when 80.3 per cent of its population are living in the rural areas within these scattered islands while most of the essential economic activities are concentrated in Honiara, the capital city of Solomon Islands. Gini (1984:135) clearly supported this view when he pointed out "efficient and reliable inter-island shipping must be a key component of any programme to develop export markets" of developing countries. Therefore, in recognition of this fact many of the Small Island States including Solomon Islands, over the years after their political independence had included in their development plans improved shipping services as one of their development objectives. SIDS in general and Solomon Islands in particular attempted to make available financial allocations to be invested in the transportation sector, especially for the shipping service sector. This has been done in the realisation that poor shipping services in Small Island States of the Pacific region would further reinforce the isolation and deepen the marginalisation of the many outer island communities (Dunbar, 1981:183) as well as making them lag behind in development. In the Small Island Developing States lack of shipping services has usually led to wastage of produced materials and resources, as many valuable export commodities never reach their intended destinations, let alone reaching the export port such as Honiara in the case of Solomon Islands. The following extracts clearly voice the effects of lack of shipping in island states in the South Pacific:

> *unless the products of the soil and sea can be delivered to island ports for shipment, the whole programme of economic development from the 'grass roots' collapses.* (Solomon Islands Ministry of Works and Public Utilities, 1976:7, cited in Dunbar, 1984:40; Proctor, 1980: 411)

A similar observation was also made in the Kingdom of Tonga that:

> *inadequacy and irregularity of shipping services particularly in the outer islands results in large quantities of produce not reaching internal and external markets with growers not being adequately compensated.* (Middleton, 1984:137)

These extracts adequately describe the common shipping problems experienced by the many Small Islands Developing States of the South Pacific. Consequences of poor transport,

particularly shipping are most felt by the Small Island Developing States. They also demonstrate the reason why shipping services needs to be strengthened.

1.1.1 Rationale

It has been the rhetoric that transportation, shipping and communication are the lifeblood of trade and development, yet it is unfortunate that very little has been done to improve shipping services of most of the SIDS. In many of these countries, particularly Solomon Islands, it has been observed that poor shipping service provisions as well as poor communication are major impediments to development. As mentioned earlier, many of the exportable commodities never reach their export ports and the movement of goods and people is usually hindered. Equity and justice in the distribution of goods and services and the benefits of development to the people within the nation are prerequisites for development of the nation on a sustained basis. The inter-island shipping has a special role to play in the distribution of goods and services and national development. Wilfred Owen (cited in Cuadernos De La Cepal, 1987:11) once remarked about the importance of transport that 'in every nation and in all stages of development there is the same relationship between economic progress and the capacity to move men, materials and ideas'.

Trade is the 'engine' of economic growth and development. A sound shipping development provides fuel and helps the engine to move. In SIDS the fact still remains that shipping plays a critical role in the development process, because of the nature of geographical fragmentation. However, a comprehensive and systematic study on shipping and its role in the island states is a much neglected field. Therefore, it is of utmost importance to study shipping in its entirety especially in the context of Small Island States, most especially in studying how shipping particularly inter-island shipping affects development. Moreover, studying the potential impacts of shipping on development and the major constraints that exist within the domestic shipping sector are most needed. The study would also highlight why effective and reliable inter-island shipping services are very helpful factors in the attainment of a balanced level of development among the different islands of Solomon Islands. Here it is not an overstatement to say that shipping in the Small Islands Developing States in the Pacific region has a special place in the development of both the urban centres and rural areas since there is a real need to transport people, goods, and services from the urban centres to the rural areas and vice versa.

Moreover, inter-island shipping is a major link pin that helps facilitate trade among the urban dwellers and the rural producers. Cutting that link would bring disparities between these two groups of people. Again reliable and effective shipping services would ensure that there is an equitable distribution of income, goods and services among the citizens of the Pacific island countries regardless of where they are living, as there would be free flow of goods and services as well as people to and from the urban centres to the rural periphery. Inter-island shipping also helps in making local commercial products available for exports. Poor shipping or the lack of it would be detrimental to the Solomon Islands government's policies of equal development and the decentralisation of the major economic activities in the different provinces. The wide dispersal of its islands renders other modes of transportation expensive or inappropriate.

1.2 Research Questions

This study explores the following questions:

(a). To what extent does shipping affect development and is there any relationship between the level of shipping services provided and the level of development?

(b). Can rural development succeed in an island setting without reliable and effective shipping services?

(c). Is there any efficiency and effectiveness in inter-island shipping in Solomon Islands?

(d). What are the problems and constraints within the domestic shipping industry both at the company and national level?

(e). What impacts does inter-island shipping have on development in Solomon Islands?

(f). What are the positive and negative impacts of inter-island shipping on the development of island communities?

Answering these questions concerning the impacts of shipping on development in Solomon Islands, most especially in the rural areas, will highlight the importance of shipping to the rural population in the development of Solomon Islands and identify the major areas where shipping can be improved to enhance development in the country.

1.3 Objectives of the study

The general objective of this research is to study the impact of shipping on development in the Small Island Developing States (SIDS) with special reference to Solomon Islands. The more specific objectives are:

1. To examine the relationship between the shipping services provided and the development in the Small Island Developing States (SIDS) with reference to Solomon Islands;
2. To study the size and nature of inter-island shipping and maritime traffic of goods and services in Solomon Islands;
3. To study the viability of the shipping in Solomon Islands;
4. To identify shipping companies and their effectiveness in providing services;
5. To identify the constraints in shipping development in Solomon Islands;
6. To study the impact of shipping services on the development of Solomon Islands with reference to Isabel and Malaita provinces;
7. To make recommendations for the improvement of shipping on the basis of study findings.

1.4 Research Methodology and Methods

This study used largely qualitative approach and because it is concerned with development and human experience the methodology employed is generally interpretive in nature, while the ontological stance is of constructionism. Thus this research relies mostly on primary and to some extent on secondary data and information. Hence the basic data was generated from the area of study mostly through primary survey.

Triangulation of methods was adopted in this research, including the use of questionnaire, interview, case study, and observation methods. Altogether three sets of questionnaires and semi-structured interview schedules were used in this study. Two study areas were identified and selected and used as a case study of the impact of inter-island shipping on development. The observation technique was also undertaken and it is an ongoing study activity on the subject. A detailed discussion of the research philosophy, methodology and methods is presented in Chapter 3.

1.5 Significance of the Study

This study is of great significance to small developing states such as Solomon Islands. Apparently being an island state, shipping is one of the determining factors in the development of such island nations and it would continue to be so into the future. In this globalised era, trade is growing and becoming crucial for development. Trade and development are closely intertwined and trade mostly relies on the transport system, in this case shipping. The fact that we are living in a modern globalised world where most domestic markets are opening up means there is increasing movement of goods and services across borders and within the domestic markets. Therefore, studying the impacts of shipping on development would be of paramount importance. It would help put more emphasis on shipping, inter-island shipping, and bring it into the mainstream development exposition and plans of Solomon Islands.

Moreover, this research is also significant in that although some earlier studies were done on the role of shipping in the development of SIDS (Saggar, 1978; Couper, 1969; Brookfield, 1979; Dunbar, 1981, 1984; Kami and Dillion, 1982; Gini, 1984; ADB, 2006; Hope, 2008) they failed to study the impact of inter-island shipping on development, as well as failing to provide any systematic and comprehensive study of shipping in the context of Solomon Islands. In this regard this study should help fill this gap This study has also provided very helpful up to date information about the nature, size, reliability, viability and the constraints that have long existed within the shipping sector in Solomon Islands and in particular, it intends to provide invaluable information about the impacts of shipping on its development. Such information would be very helpful in making informed decisions and for formulating recommendations to help improve the inter-island shipping services being provided, which would help improve the plight of the rural people, who are marginalised in terms of the share of development benefits, and in this way increase their level of participation in the cash economy. In identifying the problems and impediments that prevail within the shipping service sector we can then find ways to combat such problems in order to integrate rural farmers and rural business owners to active in the cash economy and to help motivate more women to engage in economic activities and thereby enhance more growth in the economic development of rural areas that will support and sustain the urban cash sector.

This research of course would add to the existing body of knowledge about the shipping industry itself and more specifically, about the effects of inter-island shipping on development,

especially with regard to the small island states such as Solomon Islands. Moreover, this study is undertaken by an indigenous scholar who is not only well aware of the current shipping problems in Solomon Islands but had also observed and experienced problems related to this sector while living in the country in the last two decades or so.

1.6. Organisation of the Thesis

This thesis is divided into six chapters. Chapter one introduces the purpose of this study and why it is important for such a study to be carried out, especially in the context of Small Island Developing States, such as Solomon Islands. In doing this the main objectives of this research are being outlined. The chapter provides the rationale of the study, and briefly outline the methodology and methods as well as the significance of this study.

In chapter two, the theoretical discussion of the interlinkages of important concepts for example shipping, trade and development is made. The discussion includes shipping as a facilitator of trade while trade as one of the key factors in economic development, further contributes to the overall development process. A detailed discussion surveys the literature on shipping transport studies in the context of Small Island Developing countries in the Indian Ocean, the Caribbean Island nations and those of the Pacific region.

The third chapter deals with the research methodology used in this study. It begins with the discussion of research approaches including philosophies of researches methods. This Chapter focuses on the outlines of the research design, including the sources and types of data collected, the sampling technique used and sample size, and the coding and tabulation system used in this research. In addition, the study area and rationale behind the selection of the area covered in this research, the time period of the study, limitations of study and ethical considerations are covered in the chapter.

Chapter four presents background information about Solomon Islands. The information discussed in the chapter covers the physical aspects of the country, its location in relation to its major trading partners, the location of Honiara, where most of the essential services and development infrastructure are concentrated, in relation to other rural areas within the country, and the transport or shipping facilities and natural harbour ports that exist in Solomon Islands.

Other aspects covered in the chapter include a brief history of shipping, socio-demography, economy, and shipping and transport development, constraints, and issues relating to the sector.

In chapter five, the core of this study deals with the findings and data analysis based on primary data.

Chapter six deals with broad conclusions and recommendations drawn on the basis of the study findings and data analysis

CHAPTER TWO

INTER-ISLAND SHIPPING AND DEVELOPMENT IN SMALL ISLAND DEVELOPING STATES: CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

2.1 Introduction

The chapter provides a conceptual framework for this study. In the first section this chapter explores the interlinkages between shipping, trade, and development. It is done purposely to place shipping into the mainstream of discussion on the development process of Small Island Developing States (SIDS). This chapter also reviews literature on models and theories of transport, and development, relevant to the study. It highlights various shipping related studies carried out in the small islands context particularly in the South Pacific region. In the final section of the chapter, a schematic model as framework for studying shipping is provided.

A conceptual framework is necessary in setting the parameters for this thesis and also able to highlight the assumptions underlying the critical role of transportation, particularly inter-island shipping, in the development process of SIDS.

2.2 Conceptual Framework and Literature Review

2.2.1 Trade and Development Interlinkages

As mentioned in Chapter One, transport and development are closely interwoven (Wisconsin Department of Transportation, 1999) and so the transport system affects development and development in turn affects transport. Generally speaking, the higher the level of development, the higher the level of transportation and vice versa. Against these backdrop, the volume and nature of transport are explained by the level and structure of economic activities (Vickerman and Quinet, 2004: 13). Transport, especially shipping, is a central dimension of the national and global production systems that are constantly reshaping development and is therefore a topic of universal importance. The transportation system is the lifeline of

development, especially in this era of globalisation and trade. It is more so in Small Island Developing States.

With the inception of the World Trade Organization, (WTO), world trade increased at unprecedented levels. WTO, a successor to General Agreement on Tariffs and Trade (GATT) established in 1995, commits its 147 member countries to a number of universal eventualities including improved living standards, achieving full employment, sustainable development, and the expansion of production and trade of goods and services around the globe (Narlikar, 2005:2, Kelly, 2007:1). As a world body espousing neoliberal economics, [2] it encourages developing countries to engage in trade liberalisation to make them at par with the developed countries. To achieve this eventuality a key element in the WTO Agreement is the call for member countries to reduce their tariffs and barriers to trade substantially and to abolish unfair trading practices, to create a level playing field for trade for its members (Narlikar, 2005; Peet, 2009). The underpinning principle of such an approach is comparative advantage, which allows specialisation to the effect that those countries that engage in free trade benefit mutually in terms of quality, and cheaper variety of goods and services. Specialisation, the freeing of trade from tariffs and other governmental restrictions, creates a competitive world market that raises economic growth that has trickle-down effects. Within the last two decades due to the influence of WTO, the World Bank, and IMF, (dubbed the unholy trinity), the world economic bodies that foster trade liberalisation and deregulation, we have seen many developing countries shifted from an import-substitution stance to export-led industrialisation regimes (Giuliani, 2008).

Trade liberalisation and deregulation have increased the mobilisation and diffusion of technology and foreign direct investments (FDI) on the part of multinational corporations (MNCs) and transnational corporations (TNCs) across the globe. This has impacted on the increase in economic activities that is exhibited in rising national output that caused the increase in world trade hence the traffic flow of goods and services. This therefore increased the demand for both maritime transport and inter-islands shipping. UNCTAD (2011b:2) point out that there is a "strong correlation between industrial activity, GDP growth, merchandise and sea borne trade", a result that was well supported by Vickerman and Quinet (2004).

[2] The dominant school of economic thought, founded on the theories of 18th, 19th and 20th century classical economists, most notably Adam Smith, that hold the belief that competition leads to an efficient allocation of resources and regulates economic activities that establish equilibrium between supply and demand through market forces; however, it departs markedly from that view point in its analytical approach, which emphasises the use of mathematical techniques (Drislane & Parkinson, 2002).

According to IMF estimates, global growth in 2011 was 3.8 per cent with the main driver coming from the large emerging economies of China and India as their regional integration with neighbouring economies deepened. In addition, by the increasing South-South investment, hence trade, radically boosted import demand of developing countries to a recorded growth of 60 per cent and 56 per cent in loaded and unloaded goods respectively (UNCTAD, 2011b). Tapped as the engine of growth and trade, emerging economies' of both BRICS[3] and non-BRICS[4] had fueled the amount of exports from developed economies, thereby aiding their economic recovery from the 2008 global deep-recession. Developments in the world economy and merchandise trade are also driving development in sea borne trade with an estimated growth of 7 per cent (UNCTAD, 2011b). These emerging economies are anticipated to lead global growth in 2012 and beyond, which will continue to support and sustain global demand.

2.2.2 Shipping, Trade and Development

The demand for inter-island travel is largely a derived demand depending on the demand for other goods and services. In other words, peoples' demand for goods and services will intensify the demand for travel. As shown later, in transportation, passenger demand includes the journeys that people take for business, education, leisure and the consumption opportunities such as shopping, visiting relatives, and tourism. The demand for cargo, on the other hand, may arise from the purchases of goods and services by intermediate and final users who require the delivery of the inputs to the place of production and the distribution of products from the place of production to the final goods and services market. Therefore, as the economy grows and income rises, demands for transport are generally expected to increase. This observation is illustrated by the Economic base theory. Inter-island transport services supply occurs through a combination of providing and using the infrastructure, depending on the mode of transport. For instance, an increase in the number of aircraft and or vessels on the network, an expansion of airports or ports all constitute an increase in the supply of inter-island transport. Improvements in the operations and management of the inter-island services speak to an increase in the usage of the network. To facilitate economic growth, inter-island transport must be affordable, accessible and reliable (Hope, 2008).

[3] BRICS refers to the larger emerging economies: Brazil, Russia, India and China (UNCTAD,2010:25).
[4] Non-BRICS include all the smaller emerging economies of Qatar, Saudi Arabia, Chile, Indonesia, Oman, Nigeria, South Africa, Thailand, and Vietnam (UNCTAD, 2010:25).

In light of the foregoing discussion, Figure 2.1 helps us to visualize the interconnectedness between shipping, trade, and development.

Figure 2.1 Interlinkages between Shipping, Trade and Development[5]

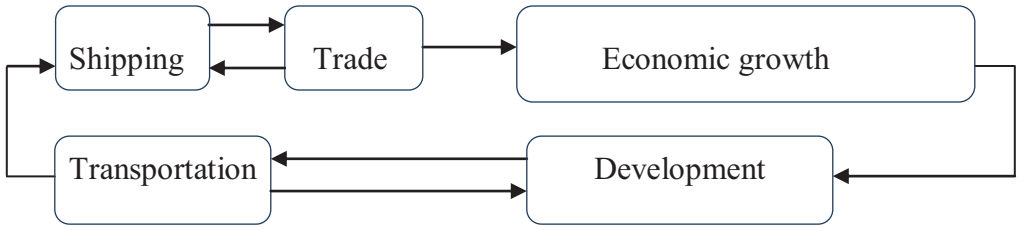


Figure 2.1 demonstrates the interlinkages between shipping, trade, and development. Explicit from Figure 2.1 is the proposition that development is the end result of economic growth, which itself is derived from trade. Economic development concept which refers to the material aspects while development is a broad and multifaceted term which refers to a host of things such as growth in income and wealth, equitable distribution of income, decreased infant mortality rates, increased literacy rates, and other indicators of the quality of life in a community or state (Wisconsin Department of Transportation, 1999). Clearly, trade is the engine that drives economic growth and development, which leads to the overall progress of a community or a nation. However, for trade and movement of goods, services and people there is a need for an effective and efficient transport system. Transport system is the backbone of an economy and a prerequisite for economic development. Essentially, in the case of SIDS, transport system refers mainly to inter-island shipping, which together with good transport facilities such as ports and roads supports and sustains economic growth. An improved transport system benefits the user of the transportation network in terms of reduced costs, faster shipment of goods, increased income, and increased mobility. The reliability and increased frequency in transportation in general and inter-island shipping in particular, also enables individuals to find employment, which in turn leads to increased production, hence trade. Trade in return is the main driving force for stimulating high demand for transport, especially inter-island shipping. This is because as individuals, communities or regions produce more, there is always a necessity for movement of raw materials and commodities to the market and final users.

[5] See Inter-island shipping issues and strategies: A pilot study on the alleviation of poverty in remote island communities in Indonesia (UNESCAP, 2009:21).

Urbanisation today is a major force among other factors that are contributing to mobility in the developing world. Studies (Masika *et al.*, 1997; UNESCAP, 2010) on the urbanisation process reveal that urbanisation and urban growth are rising. Within the Asia- Pacific region urbanisation is growing at around 4 per cent with 2 per cent in Asia and 2.3 per cent in the Pacific (ibid.). Factors such as lack of access to employment and income, landlessness, poor services in health and education, and boredom in the rural areas are normally cited as the push factors that trigger rural–urban migration. On the other hand, the attraction to the bright lights, availability of essential and administrative services concentrated in one or two urban centres act as the pull factors to major urban centres. However, given the limited capacity of most developing countries in their rural hinterlands, cities attract the rural immigrants' population. These occurrences, particularly in low middle income countries like Solomon Islands, give rise to the constant cyclic mobility of the rural populace between the rural and urban destinations which consequently further induce increasing demand for transportation, in particular inter-island shipping. Given this scenario, this study posits that the people in the rural areas that produce tradable goods put greater demand for shipping than those who are poverty ridden or the employment seekers. In this regard it is paramount that SIDS need to improve the inter-island shipping sector in order to support the rural populace not only to participate in undertaking economic activities but also to share the benefits of economic development.

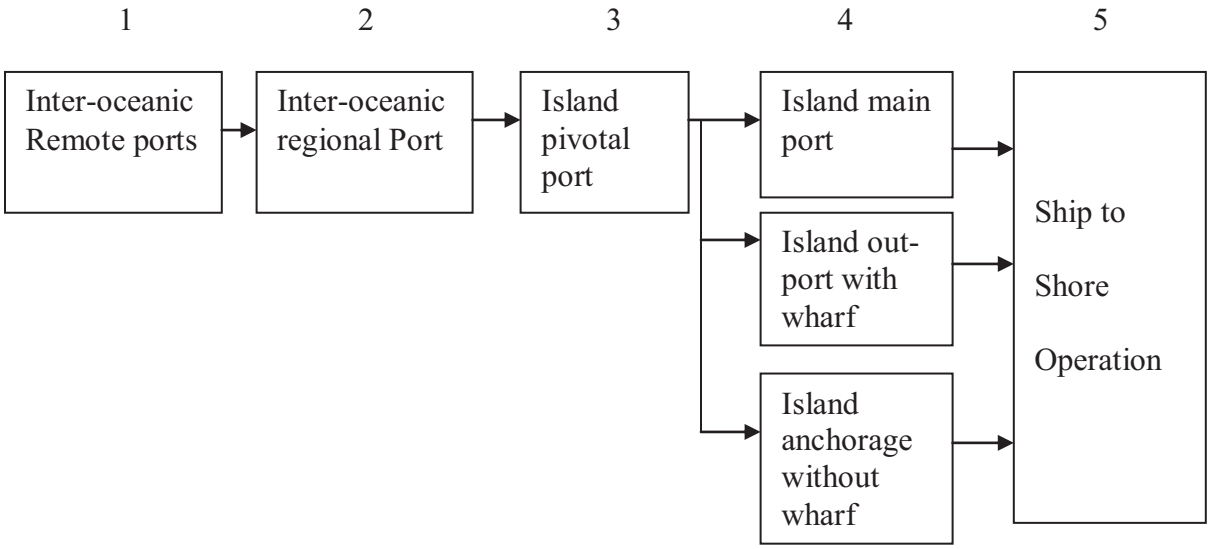
In the context of the SIDS both international and inter-island shipping are paramount in trade. Within the development process of SIDS, inter-island shipping is the linchpin that ensures trade to take place between the different islands themselves and or between the different islands and the pivotal ports (export ports). Without effective and reliable inter-island shipping services, trade would be greatly hampered. This would result in the unequal distribution of the benefits of development, leading to uneven levels of development in the country. This research is borne out of this proposition. The next section looks at shipping at the international, regional, and national levels to draw a broad picture of the shipping service networks.

2.2.3 International, Regional and Inter-Island shipping systems

The discussion of the maritime shipping system was clearly expounded in the works of Brookfield (1979); Brookfield and Hart, 1971). In great depth, Brookfield (1979) discussed the maritime shipping system as involving five strands. He also distinguished between two types of shipping operations, the conventional and containerized methods. Conventional shipping is the

method involving ships designed with holds which can load almost any type of loose cargo, such as drums, sacks, crates, and pallets. These ships are designed with their own winch and or derricks for loading and unloading. With the containerization method smaller quantities of goods are stacked into the containers and sealed or locked then loaded onto the specially designed containerised vessels, trucks or rail using cranes mounted on wheels or rails. A similar but opposite process applies when unloading cargoes using containers. This method makes it possible for goods to be carried using different modes of transport including road, rail, water and air. Figure 2.2, shows the different strands in the containerized operation.

Figure 2.2 Changes in shipping Service from Interoceanic to Island levels Containerized Operation



Source: Adapted from Brookfield, 1979:9.

Brookfield (1979) identified four types of ports: inter-oceanic remote, inter-oceanic regional, island pivotal and island main ports. The first layer is international maritime shipping, which moves exports and imports to and from the inter-oceanic remote ports (for example, Rotterdam, Southampton, Antwerp and San Francisco) to the second tier, which consists of the interoceanic regional ports (such as Melbourne, Sydney, Singapore and Tokyo) and the third tier that include island pivotal ports (such as Suva, Port Moresby and Honiara) from where goods are moved to the fourth tier, which is the island main ports. The vessels that operate in the fourth tier, often sail to out-ports with wharves[6] or jetties and to a large number of places where goods

[6] Wharf refers to a structure built on the shore of, or projecting out into, a harbour, stream, etc. so that vessels may be moored alongside to load or unload or to lie at rest (Macquarie Concise Dictionary, 1994).

are discharged and loaded onto the ships using dinghies[7]. This forms the fifth and final tier within the maritime shipping network, that is, the moving of goods from the ship to the shore using workboats.

In some cases, goods unloaded at the pivotal ports await transshipments to the remote or to the smaller island nations' ports. For instance, from 1982 to 1988 Pacific Forum Line's (PFL) chartered Moana Raoi operated a feeder service to Kiribati and Tuvalu with transshipments via Suva (The Fiji Times, 2004: 17). Currently the Chief Container Service through Pacific Agencies is offering transshipment services to some of the major and minor Pacific ports via Auckland and Brisbane. Besides, the Pacific Direct Line (PDL) provides three quarterly services between New Zealand and Tuvalu, Wallis and Futuna, Tonga, and Samoa while the Neptune Line and Sofrana Line operate fortnightly services between Australia and New Zealand, and the South Pacific (ADB, 2007; UNCTAD, 2011b). In most circumstances, when the goods reach the island pivotal ports within the South Pacific region, inter-island shipping becomes the key mode through which goods and people move, and provides services between the various islands and the import and export ports (island main ports) and between the island main ports and the pivotal ports.

The inter-island shipping forms the feeder transport network to the international and regional maritime networks. Inter-island shipping becomes a complementary and essential service to trade within the island countries and its absence greatly restricts trade only to the island main ports and other islands in their proximity. Similar observations exist regarding the maritime shipping system and the complementary role played by inter-island shipping as further discussed below.

Given this framework, and since trade and shipping are intertwined, any discussion on trade has a close bearing on shipping due to the geographic separation of continents by the oceans and seas. At the level of international shipping, in 2002 world sea trade reached 5.88 billion tons of loaded goods (UNCTAD, 2003) and increased to 8.3 billion tonnes of both loaded and unloaded in 2010, all of which were carried by containerized liners (UNCTAD, 2011b: 176). This increase in seaborne trade is facilitated by a number of factors including: purposely built container vessels, larger vessel size, and improved handling facilities in ports. Worldwide the carriage of traded goods by sea borne transport is done along the three main east west

[7] Dinghy means a small rowing or sailing boat (Macquarie Concise Dictionary, 1994).

containerized routes (Trans–Pacific, Europe–Far East, and trans–Atlantic) and the secondary North–South and intra–regional routes. Of these sea routes the largest East–West route is the trans–Pacific whose trade was estimated to be about 12–14 million TEU[8]. In 2010 container flows in the dominant leg Asia to North America increased by 19 per cent, 14.3 million TEUs while in the opposite route trade flows increased from 7 million TEUs to 8.6 million TEUs, that is an increase of 23 per cent, which shows a widening imbalance of container flows (UNCTAD, 2011b: 176-178). This imbalance could be attributed to two factors: the relocated production factories in Asia, especially in China, as well as India and China's increasing industrialisation that supplied the US market; and the poor demand from Japan for North American goods (ibid.). Along the Asia–Europe route, an estimated 13.5 million TEUs were bound for Europe and only 5.6 million TEUs were transported by sea on the reverse route, an increase of about 18 per cent and 2 per cent respectively. This shows a widening trade imbalance along this route, particularly in the volume of Chinese exports to European markets. In the trans–Atlantic route, which is the smallest of the east-west routes, trade bounced up 13 per cent to 3.2 million TEUs whereas on the reverse route it was only 2.8 million TEUs. The trade imbalance along this route also was reported to have widened since 2002 (UNCTAD, 2011b: 176-178). These trade flow trends show the growing importance of emerging economies in world trade and particularly in seaborne trade.

The North–South and intra-regional routes are concentrated around the major production and consumption centres of Europe, the Far East and North America. The North–South routes were estimated to carry about 15 million TEUs but at times expanded and contracted in accordance with the economic conditions prevailing in the regions linked by them. In the routes linking Europe to Sub Saharan Africa, southwards flows increased by around 27.5 per cent, while those heading north expanded at about half that rate, in spite of political upheavals in some countries of West Africa. In the long-distance route from Europe to Oceania, Southward flows expanded by about 2 per cent, with a negligible growth recorded in the opposite direction (ibid.). The trade flow in this leg starts from the interoceanic ports such as Rotterdam, Hamburg, Antwerp and Dunkirk and end at Auckland, where the service is connected by other vessels to Suva, and returns to Auckland where exports are transshipped to Europe. Given these traffic flow scenarios a recent study (UNCTAD, 2011b) identified a great opportunity emerging as new

[8] TEU- Twenty-foot equivalent Unit, which refers to the standardised size of containers of twenty or forty feet long with height and width at eight feet each. The container capacity of a ship is given in twenty-foot equivalent units (TEU), thus a forty-foot box equals two TEU (Abrahamsson, 1980: 78).

markets are opening up. Hence in the assessment of flexibility of container shipping, the Cape of Hope route stands a great chance of becoming a viable and dominant alternative to the Suez Canal route for a number of South-South trade lanes, amongst which may be included West Africa–Oceania, West Africa–East Africa, East Coast South America–Africa, East Coast South America to Oceania (UNCTAD,2011b:25).

Transportation, maritime shipping at the regional level, especially within the South Pacific region, is a great challenge, more so than anywhere else in the world. This can be attributed to the remote and dispersed geographical locations of the SIDS coupled with their widely scattered islands and the thinly spread population centres of this region. Being disadvantaged geographically, these SIDS are faced with impediments that include: high distribution costs, lack of reliable shipping services, expensive transshipment charges, inadequate port facilities, limited maritime administration and diseconomies of scale, especially when negotiating freight rates with shipping conferences. (UNCTAD, 1997). For instance, according to this review the total estimates of total freights costs for SIDS are almost 50 per cent higher than for developed market economies as a result of their geographical location.

Of all the SIDS with the possible exception of the Caribbean group of islands, which are closer to world's main markets such as the USA and Europe and in close proximity to each other, the South Pacific countries, in contrast, are scattered away from the world market. These countries have a unique dependence on sea transport for the domestic movement of goods. Besides, the large island countries such as Papua New Guinea, inland the extensive steep lands, wide swamps, heavy rainfall and irregular often flooded rivers, coupled with widespread liability to landslipping and the rank growth of vegetation, have limited the development of roads. In many of the SIDS in the South Pacific region few large navigational rivers exist. The development of air transport too has long been hampered by mountainous relief and heavy clouds that commonly rises as high as 12,000m (Brookfield and Hart, 1971:335). In Solomon Islands the building of airstrips has also been restricted by the land tenure system and land disputes. To date two airstrips have been closed for over a decade due to land disputes. All these factors explain the major reasons why shipping still remains and will continue to be one of the crucial factors of consideration in the process of development of SIDS. Besides, shipping is relatively cheaper and can carry bulky and heavy goods more satisfactorily than other modes of transport.

In terms of intra-regional shipping services, the SIDS within the South Pacific region are rather fortunate to be provided for meeting their transport needs by various international shipping lines including the Greater Bali Hai Service, Swire shipping, Tasman Orient, New Guinea Pacific Line (NGPL), Chief Container Line, Hamburg Sud, Neptune Shipping and the Bank Line, to name a few and their own established shipping line, the Pacific Forum Line (PFL) (ADB, 2007: 68). The shipping services provided by the Bank Line, for instance, originate at the inter–oceanic ports, calling at the interoceanic or major hub ports and sailing through the ports of Papeete, Pagopago, Apia and then to Suva, where the incoming cargoes are discharged and exports are loaded before proceeding on to Auckland and then go through several major and minor ports in the Melanesian sub–region, such as Noumea, Vila and Santo, Honiara and Noro, Rabaul, Lae and Madang and on to Singapore before heading on to the inter-oceanic ports in Europe. The Bali Hai Service, on the other hand, connects North Asia and Japan with the Micronesian ports of Majuro and Tarawa, Port Vila, Noumea, Lautoka and Suva, Apia, Pagopago, Papeete, and Nuku'alofa. Similar services are being provided by the NGPL, Chief Container Line, and Sofrana Line (ibid.).

The economic growth, social development and environmental sustainability of SIDS depend largely upon the existence of an effective functioning of maritime transport system. Both the efficient maritime transport and port infrastructure development are essential for participation and expansion of trade of SIDS with other countries outside the region. The World Bank (2009:3) succinctly said 'interaction between leading and lagging places is critical for economic growth' and this can only be achieved by such a system. In Solomon Islands as elsewhere, inter-island shipping services lend support to most of the economic sectors: agriculture, tourism, manufacturing, and services.

Myriad theories have been formulated to deal with spatial aspects of socio-economic development. Outlined below are the relevant spatial theories that aim to provide a macro-level view of spatial development and relationships.

2.2.4 Theories of Spatial Development

The foregoing discussion on world, regional, and national shipping service scenarios provides a reflection on the core-periphery model of Friedmann (1966), who is one of the

popular proponents of the diffusionist modernisation theory. In addition, Andre Gunder Frank (1978) in his work on development of underdevelopment clearly highlighted that the metropolitan–satellite (core–periphery) chain relationships exist at both the domestic and international level. Applying Friedmann's core–periphery concept one would clearly see that on the global stage the core would be the major production and market centres of Europe and North America that surround the hub of the inter–oceanic ports. The periphery on the other hand would be the long–distance and remote production areas far from the core. These peripheral areas include the areas within the second and fifth tiers, that is, from the islands pivotal ports to the shores of the remotest islands in the SIDS (Figure 2.2).

In the Asia-Pacific region, the core would be the regional ports in Southeast and North Asia including Japan while the periphery is represented by the more remote and isolated island nations of the South Pacific. Further, the core–periphery relationships as Andre Gunder Frank's (1978) views of Metropolitan–satellites relationship can also be applied to reflect the situation that exists within the national boundaries. Contextually, in Solomon Islands, Honiara is the core and other semi-core urban centres like Auki, Kirakira, Gizo and the more remote or outlying islands as the periphery.

Many of the peripheral locations indeed generally meet the Schultzean hypothesis that 'the further an area lies from the urban center the less promising will be its outlook for development' (cited in Friedmann, 1966:12). Moreover, the core–periphery relationship can be linked to a 'colonial' past. This dichotomy suggests that such a relationship would result in a series of displacements from the periphery to the centre of the principal factors of production: labour, capital, entrepreneurship, foreign exchange and raw materials in unprocessed form (ibid.). Many of the periphery locations also have the characteristics as Friedmann (1966) describes:

> *the periphery remains a producer of primary, chiefly agricultural, materials, the secular trend in the interregional terms of trade will on the whole continue to be favourable to the center. In other words, manufactured goods produced at the center will grow progressively dearer than the traditional exports of the outlying regions.*

In his final analysis, Friedmann (1966) noted that the growing regional inequalities would cause an increase in political pressures intended to reverse this traditional flow of

resources and to help raise the per capita incomes on the periphery to a comparable level of equality with the rest of the nation. This has been long being the focus of many developing countries, which later became so popular with the concept of rural development. The rural development concept, however, is proving to be less effective due to poor transportation systems in the SIDS, especially in Solomon Islands**.**

A general gravity model commonly used in transport development and planning and particularly in showing the flow of commodities and traffic attempts to treat two basic factors that affect the flow or interaction between any two points. The two basic factors being used in this model are population and distance. The underlying assumption of this model is 'the greater the population of the two centers, the greater the interaction; the greater the distance, the less the interaction' (Taafe and Gauthier, 1973; Afeef, 1992; Ashish, and Smith, 1995; Barrett *et al.*, 2005; Rodrigue *et al.,* 2006:168). The model is presented by:

$$I_{ij} = k \frac{P_i P_j}{d_{ij}}$$

where *k* is a constant, P_iP_j is the product of the two populations of the two centres and d_{ij} is the distance between the two centres. Implicit from this formulation is the generalization that the expected interaction between any two locations i and $_j$ will increase as the product of the two populations of the two centres (P_iP_j) increases, and it will decrease as the distance between i and j (d_{ij}) increases.

The gravity model had been applied in a number of ways. For instance, it has been used as a predictor of intercity passenger traffic (Smith, 1960; cited in Taafe and Gauthier, 1973). Its application was also extended to the study of commodity flow both within and between countries, although with some slight variations (Porojan, 2000; Kaluza *et al.*, 2010). Prasad and Yenteshwar (2007:2) used the augmented gravity model to analyse world trade flows and predict trade potential for Fiji using the version for trade.

Given the above model, the provision of shipping services is more regular to the locations that involve short distances and have high population but also where there is high production of saleable commodities. In other words, the transportation cost is a determining factor and it

increases with increasing distance. Dunbar (1981:151) clearly stated 'distance is time and time is money'.

The economic base theory by Schaffer (2010) provides a rational framework for viewing the linkages between increasing economic activities and income that cause a multiplier effect on both basic activities and non-basic activities. According to this theory the regional economy is divided into two contrasting activities, namely basic activities and non-basic activities, with the latter involving the production of goods and services for export to destinations beyond the region's border whereas the non-basic activities refers to those that are carried out for providing for the needs of the residents of a particular region or economy. Intrinsic in this division of activities is the cause–effect relationship that has some implicit implications for transportation; thus an increase in basic activities attracts increasing inflow of incomes into the region or economy, thereby increasing the demand for goods and services, which in turn, raises the number of non-basic activities. In an island context, the increase in incomes and demand for goods and services habitually leads to an increasing demand for interisland shipping, hence increasing mobility.

The relationships between the factors of production as explained in the popular modern theory of economic growth to explain the major determinants of economic growth, following the tradition of Keynes, are given as:

$$Y = f(L, K, T)$$

where Y represents aggregate demand or national output, which depends on three equally important factors: labour (L), capital (K), and technology (T). Any increase in labour, capital and improvement in technology will increase national output or income and the increase in national income is channelled through the process to increase and improve these factors even further. However, Aschauer (1989, cited by Hope, 2008:3; Vickerman and Quinet, 2004:19) argue that another equally critical input factor required to attain economic development is transportation. All economic activities need a certain amount of transport. An effective and reliable transportation system ensures an efficient distributive system, which enhances

production of goods and services and increases mobility and flow of materials, goods and services, and people. Thus in light of this theory this study argues that generally transportation, and in particular inter-island shipping, is critical in achieving the macroeconomic goal of economic growth and development in SIDS as depicted in Figure 2.1. Increase in production, flow of goods and services, and mobility, hence employment, obviously will trigger further demand for inter-island shipping as income increases, which subsequently leads to acquiring improved shipping–related-technology.

2.2.5 Importance of Transport Systems in Developing Countries and SIDS

Existing empirical studies on the impact of transport have largely concentrated on developing countries of South and East Asia, Africa and South American regions (Simon, 1996; Barwell *et al.*, 1985, Ali-Nejadfard, 2000). Many earlier studies on the impacts of transportation in Third World countries focused on road transport, apparently because many of these countries are land based sovereign nations with huge landmasses, thus they rely mostly on road-based transport for enhancing their development aspirations. These countries do, though rely on international maritime shipping for exporting and importing their goods to and from Europe, North America and elsewhere. Very little attention, however, has been accorded to the studies of transport in SIDS, and particularly in Solomon Islands, despite the importance of transport, especially of inter-island shipping, in their process of development.

The importance of transport is widely agreed upon (Pergrum, 1963; Sampson *et al.*, 1985; Simon, 1996; Cuadernos De La Cepal, 1987; Vickerman and Quinet, 2004; Rodrigue *et al.,* 2006; and UNCTAD, 2011b). The overwhelming share of shipping in the carriage of about 95 per cent in terms of volume and almost two-thirds of the total value of international trade establishes its predominance and importance as a system of international transportation (UNESCAP, 2002:2, ADB, 2011b). As a service industry it exists solely to provide for the movement of people and goods as well as for the provision and distribution of services, thus fulfilling one of the most crucial functions in trade related activities and becoming one of the most pervasive activities in any contemporary human society.

However, it is often pointed out that transport alone will not solve the development problems, particularly those of developing nations. Owen Wilson (cited in Simon, 1996:4) writing in his book *Transportation and World Development*, remarked:

> *Comparisons of income and mobility are not meant to imply that Transportation by itself is capable of achieving economic development. It is a necessary condition but not a sufficient element in the development process, and many transport undertakings have turned out to be extremely wasteful of resources because they were not accompanied by other actions to further economic progress.*

In the same vein, Simon (1996:91) advocated the proposition that 'new roads are most often permissive rather than automatic triggers of development'. A number of earlier studies were mainly concerned with the effects of road improvements. Quite often the results were mixed, as road improvements do not directly lead to economic development.

Some studies (Airey, 1985 and Wanmali, 1991 cited in Simon, 1996) of feeder roads in Africa also supported the proposition that the provision of roads is a necessary but not sufficient condition for sustained development. Indeed road improvements mainly resulted in more indirect benefits such as the growth of other amenities like clinics, schools and better housing. These studies, however, found that the population groups who have better access to transport have greater mobility and higher consumption of goods and services (Hoyle and Knowles, 1998). Other similar studies on the effects of road improvement upon local agricultural incomes and access to services (Amadi, 1998; Filani, 1993 cited in Simon, 1996), found that transport cost reduction brings clear benefits in terms of opening up of land resources, higher market prices and modernization of farm practices (Hoyle and Knowles, 1998: 205). Simon (1996) maintained that:

> *the extent to which a transport improvement or innovation promotes development depends very largely on a complex set of interrelationships and local conditions. When new roads form one element of integrated rural development programmes, their impact is particularly difficult to isolate.*

Similarly, having realized the effect of transportation improvement, the Wisconsin Department of Transportation (2004) points out that:

> *to increase economic development, an improvement needs to decrease transportation costs or make transportation more reliable. A proper economic climate must also exist, as well as other support services. With these in place, transportation improvements can be a catalyst for economic expansion.*

Nevertheless, even if the provisions of suitable roads does not directly lead to economic development, it has been argued that they certainly play a major role in the development of Third World nation. (Barwell *et al.,* 1985:2; Vickerman and Quinet, 2004:51).

The importance of inter-island shipping has been highlighted in a study by UNCTAD (1997), which highlighted that the successful implementation of a balanced and quality of growth that ensures there is economic and social development as well as environmental protection. Such a positive outcome is embedded in the successful implementation of the sustainable development programme in SIDS. However, successful implementation of the sustainable development programme in SIDS is 'conditional upon the existence of a functioning maritime transport system' (UNCTAD, 1997:87). The same report further stressed that an efficient maritime transport and port infrastructure are essential for the participation of and expansion of trade in both the large developing nations and SIDS ((UNCTAD, 1997:87).

In the Caribbean context, Hope (2008: 5-6) undertook an exploratory study of trends in passenger and cargo transport and how they relate to economic activities in Tobago. This study employed a number of indicators, namely transport performance, computed as the amount of transport for a given period multiplied by the average distance, transport intensity (a measure of the importance of transport in the economy given as the ratio of transport performance to GDP), and transport investment (a measure involving the country's capacity improvements to existing transport network in terms of increased number of vessels, operating routes, improved management systems, techniques and pricing). The result showed a close association between transport performance and GDP; passenger transport contributed 11 per cent to Tobago's GDP within the period of study. Generally, as this study demonstrated, there is a strong relationship between economic growth and the growth in passenger and cargo transport. Logically, increases in income normally cause high demand in any market, in this particular case, shipping.

India is the twentieth largest maritime country in the world since its peninsula is flanked by the Indian Ocean, with the Atlantic Ocean in the west and the Pacific Ocean in the east and it is strategically located along important world shipping routes. It has a 5,560 km long coastline along which are situated its eleven major seaports while within the Indian Ocean lie India's islands of Lakshadweep and Andaman and Nicobar a group of Islands in the Arabian Sea and the Bay of Bengal respectively, which also form part of its coastal hinterland. These islands covering an area over 8,300 square kilometres are essentially dependent on coastal shipping for

movement of cargo and passengers, between these Islands and the main land as well as for inter-island movement. Overall about 95 per cent of India's trade volume is moved through maritime transport. Therefore, the establishment of a sound maritime infrastructure plays an important role in the pace, structure and pattern of India's economic development. But because it is a continental country, most studies of India's transportation systems are road-based studies. Very few studies are specifically carried out on its islands' transportation system and its impact on these islands (ADB, 2011).

A case study carried out on the Maldives (Afeef, 1992) presented yet another illustration of the importance of transportation for SIDS and the common impediments that retard equal development among the different islands. Like many island states, the Maldives is an archipelago comprising of many clusters of low-lying coral atolls, 1,190 in all, with only 202 inhabited. Located in the mid-Indian Ocean, these islands are scattered in an area 756 square kilometres in length and 120 square kilometres across its widest area. The total land area of Maldives is approximately 185 square kilometres with its capital, Malé located in the centre of the archipelago chosen for its safe harbour and its proximity to good fishing grounds. Being an island nation, its population depends on the sea for its food and income. Over the years, the Maldives has maintained seasonal trade with its larger continental neighbour, a feat which is uncommon within the islands themselves due to the harsh conditions that exist. The concentration of all economic activities and service facilities in Malé is due mainly to the existence of a deep-water facility that serves as an entry port and the presence of the international airport. Currently, there exist only a few scheduled sea transport links between the islands with only one company providing ferry services between Malé and some remote islands; it, however, runs mainly on demand. This study reveals that there is a poor inter-atoll transportation system, which, coupled with lack of economies of scale, prevented both tourism and other basic and non-basic activities from thriving on other islands. The lack of job opportunities in the other atolls creates social discrimination and income inequalities thus preventing growth in other regions (Afeef, 1992: 63-76). Again there is no specific study on the impact of inter-island shipping in the Maldives since there is virtually no inter-atoll transportation, particularly inter-atoll shipping.

2.3. Previous Works Done in the Pacific and Solomon Islands

In the context of the SIDS within the South Pacific region several studies had been carried out (Couper, 1969; Brookfield, 1980; Saggar, 1978; Brookfield, 1979; Dunbar, 1981, 1984; Kami and Dillion, 1982; Gini, 1984; Tuomi, 2005, and ADB, 2008b). The present study reviews the literature on earlier works to identify relevant and similar problems and impediments, circumstances, and trading relationships between the export ports and the rest of Solomon Islands. Previous studies on shipping in the South Pacific region identified and focused on similar shipping related problems (Brookfield and Hart, 1971; Saggar, 1978; Dunbar, 1981; Middleton, 1984; ADB, 2008b). Saggar (1978) specifically explored inter-island transportation problems faced by outer islands in Fiji and presented solutions that would help address such problems. Some of the common problems that were identified as existing within the South Pacific region include: the small size of most islands and their remoteness from the pivotal (major) ports, in the case of Fiji, Suva and Lautoka, lack of alongside shore berthing facilities and other basic infrastructure at loading points, tidal conditions, the existing route network and turn-around time. Still others identified similar related factors like a difficult operating environment, inefficient operations, and subsidisation of routes for social rather than economic reasons, long distances, small populations and far-flung communities and widely varying port facilities with the common problem of insufficient funding for their operations and maintenance (Darjes, 1997; Meyrick, 2007a). While it is true that most shipping problems are common to all the SIDS in the South Pacific region, some of these problems are rather more particular to each of the SIDS. In attempting to provide solutions to alleviate some of these constraints, studies (Saggar, 1978) found that there was an urgent need first to rationalize the existing routes, route patterns and the turn-around time and secondly, to deploy the right types of vessel and to determine the optimal frequency. Dunbar, (1984) pointed out that unavailability of data is one of the major constraints in the South Pacific region while studying inter-island shipping. It is widely recognized that certain information must be provided such as data on the origin and destination of traffic flows both cargo and passengers, volume of inward and outward flows, seasonal pattern of traffic, necessary trip frequency to meet the criteria of adequate and efficient service and the cost of operation of different types of vessel under different conditions (Saggar, 1978).

Couper (1969) did a comparative study of the trading relationship that existed between port towns and their hinterlands in two former British colonies, namely Kiribati and Fiji, and a

former British protectorate, Tonga. Interestingly in the case of Kiribati it was pointed out that access was truly an important locational factor and the result was a tendency for the economic and administrative activities to be concentrated at the places of best access. This was reinforced by the government policy.

Similarly, when Kami and Dillion (1982) studied intra-island shipping in the Ha'apai group in Tonga and the issues relating to private boat ownership and operation they noted some common problems related to boat operators. Moreover, there was evidence that the poor management of shipping companies was a dominant factor for the inadequate provision of inter-island shipping services (Couper, 1969). According to Couper (1969) some of the contributing factors that 'inhibit the efficient linkage of the major ports with that of the islands includes the present-day costs and the uncertainties of sea transport'. Furthermore, the problem of inadequate sea transport varies to some extent between the various islands countries, as evident from his study of the three territories mentioned above.

In terms of the effects of shipping provision on island communities, Dunbar (1981) discovered that the locations close to Vila and Luganville in Vanuatu, which at that time were in receipt of company big-ships services, flourished relatively to the more distant ones that being unable to attract the necessary shipping services found themselves increasingly marginalised.

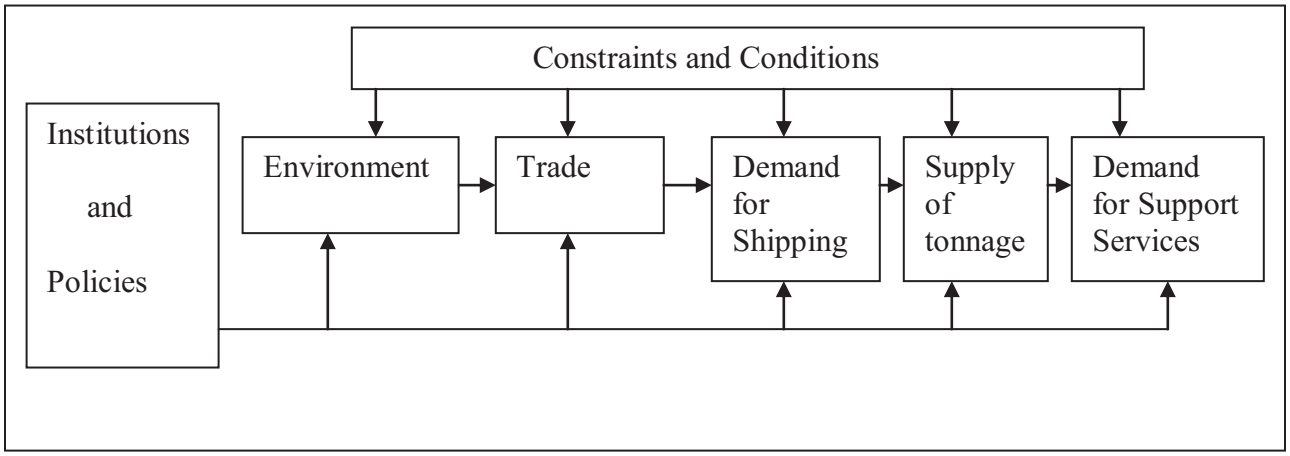
In the context of Solomon Islands few reports were released by the government and had been carried out on the shipping services provided by the government of Solomon Islands and the private sector. McNamara and Perkins (1980) for instance, mainly looked at the existing transport task facilities inventory. While a similar study was undertaken by TecnEcon-Hyder Consulting Limited (1999) specifically concerned with, providing the government of Solomon Islands a comprehensive and integrated sector development plan with an investment and institutional support programme that could be implemented over the next ten-year period. This is yet to be implemented. Tuomi (2005) focuses on the central and critical issues relating to the maritime sector in Solomon Islands and makes proposals for improvements. He argues that this vital service sector is constrained by a number of related factors therefore require a holistic approach in tackling them. In this regard a number of recommendations were formulated covering three key broad areas, namely: a franchising subsidies scheme, rebuilding the domestic shipping industry, and restructuring the government maritime support system.

An ADB (2008b) study of poverty and social issues in Solomon Islands highlighted the risks and potential adverse effects of shipping. Primarily this study aims to identify ways to improve the efficiency, safety, and reliability of the transport sector in Solomon Islands to contribute positively towards achieving economic growth, poverty reduction, and improved living standards particularly in the rural areas. Recent studies by Meyrick and Associates (2007a, 2008b) and ADB (2006, 2007a) focus on improving the efficiency, safety and the reliability of the Transport sector and institutional reforms in Solomon Islands to the effect that it contributes favorably to economic growth and poverty reduction, particularly in rural areas. A more recent study by Mizusawa *et al.* (2011) looked at strengthening the maritime transport sector in Solomon Islands, which aims to bring to the fore the country's strengthening of the maritime transport sector in the areas of institutionalisation, infrastructure development and the provision of shipping services. These studies, however, only served their own purposes and terms of references.

2.4. A Framework for Studying Inter-Island shipping in SIDS

This section introduces a suggestive model for studying inter-island shipping services in the SIDS. The researcher provides a framework for studying inter-island shipping especially in Solomon Islands. Figure 2.3 provides the schematic framework of Abrahamsson (1980) for understanding the ocean transport system.

Figure 2.3 Conceptual Framework for the Ocean Transport System



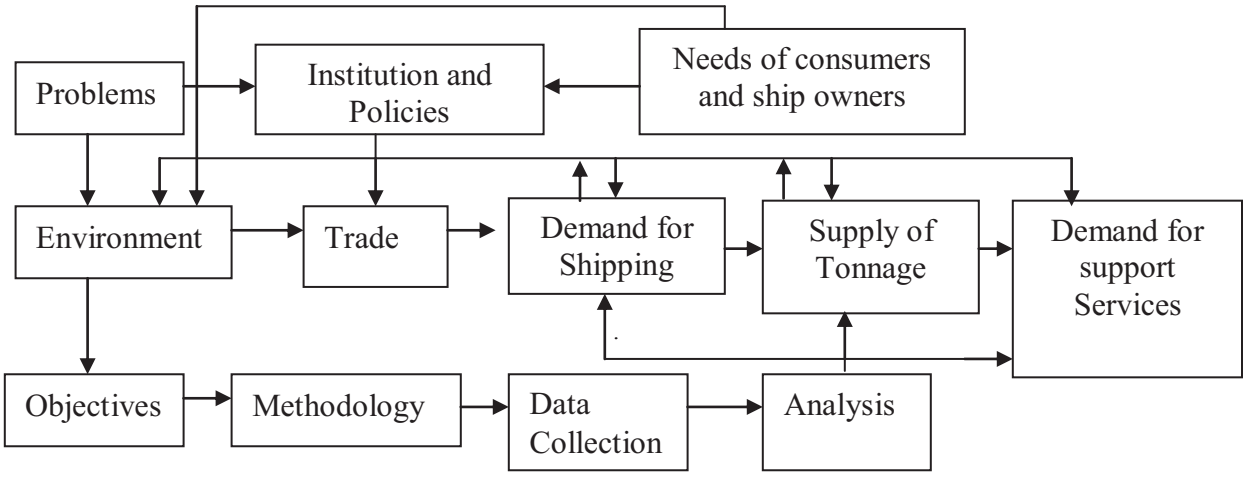
Source: Abrahamsson, 1980: 24.

Briefly examining the basic model it should be noted that the environment is the component that generates trade, which consequently results in demand for shipping. Essentially

such a demand stimulates the supply of domestic and foreign tonnage, which in turn gives rise to the demand for supporting activities. However, according to this model, also superimposed on the sequence of events are constraints and conditions exerted by existing domestic and international institutions and policies that affect ocean transport system.

The framework presented in Figure 2.4 is derived from the conceptual framework for the ocean transportation system developed by Abrahamsson (1980:22-26) as shown in Figure 2.3. This framework provides the sequence of events related to inter-island shipping and the problems that exist within the shipping sector. This is done through the process of environmental analysis where the various components of the environment (economic, social, legal, and physical including the shipping-related institutions and current shipping policies) to see if there is any flaw within the institutional set up or with the policies themselves. More importantly, shipping policies need to take into account of the needs of the users of shipping services and also those of the ship operators. Once a shipping-related problem has been identified and defined then the first step is to set the objectives purposely to help guide the research. Once that is done then the promulgation of the methodology is carried out in order to provide the means and justifications for the collection of data to be undertaken systematically and subsequently analysed. Ultimately, from the analysis the findings can be interpreted and explained, which should be geared towards alleviating the problem that has been identified. Moreover, the analysis component should help in bridging the gap between the demand and supply of tonnage. In addition, the information derived from the analysis should flow back to the institution in order to modify the policies if needs be, while at the same time reveal the needs of the consumers of shipping services.

Figure 2.4 A Schematic Framework for Studying Inter-island Shipping



Source: By the Researcher based on the framework of Abrahamsson, 1980.

2.5 Conclusion

This chapter provides a conceptual framework for this study and a detailed literature review on the previous works done on the subject. At the same time it sets the parameters within which the analysis and interpretations are made. The interlinkages between trade, shipping, and development presented suggest very strong linkages between the three concepts. While many past researches had been carried out on the effects of road transport, mixed outcome studies on inter-island shipping especially in the context of SIDS are limited, underlining its potential use in deepening our understanding of inter-island shipping operation and their importance in Solomon Islands.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In any social science research there are fundamental theoretical and philosophical aspects that lay the foundation as well as provide the direction for the researcher as to what procedures to follow in doing a particular piece of research. It is here that all-important elements such as values, philosophical assumptions, and research methods be harmonised and aligned towards the attainment of the research objectives. Therefore, given this presupposition it is imperative that these fundamental theoretical and philosophical assumptions be highlighted and explained in order to justify the choice of the methods selected and used in this research. This chapter aims at identifying and discussing these theoretical and philosophical assumptions and the overall procedures used in this study. It also outlines the research design adopted in this study.

3.2. Research Methodological Approaches

Social science theories underpin certain theoretical and philosophical aspects. These theories *per se* are dependent on certain key assumptions, which determine and mould their nature. The aim here is to identify and explain these underlying assumptions so as to ensure that they are consistent with the researcher's belief and values. In identifying these fundamental theoretical and philosophical assumptions, this study uses the framework of Burrell and Morgan (1978) who identified these assumptions as relating to ontology, epistemology, and human nature. The ontological assumptions basically concern with whether the 'reality' to be investigated is outside the realms or bounds of individual cognition, that is, it is of an objective nature or whether the 'reality' is simply the products of one's mind. The epistemological assumptions purport to the nature of knowledge itself, that is, it is about what form of knowledge can be obtained and whether "it is possible to identify and communicate the nature of knowledge as being hard, real and capable of being transmitted in tangible form, or whether 'knowledge' is softer, more subjective, spiritual or even transcendental kind, based on experience and insight of a unique and essentially personal nature" (Burrell and Morgan, 1978). Related to these two philosophical assumptions, albeit rather different, is human nature, which is concerned with the relationship between human beings and their environment. Generally, this concept views human

beings along with their experiences as products of the environment, that is to say that human beings are conditioned by their external circumstances. This is in contrast to the other extreme view that human beings are the creator, controller, and master of their environment. It is vital to note that these three aspects have a direct bearing on the type of methodology that one would apply in carrying out research, as Burrell and Morgan (1978) clearly stated: "different ontologies, epistemologies, and models of human nature are likely to incline social scientist towards different methodologies". This means that the researcher's views held in relation to these three concepts has an influence on the type of research technique that is used.

Given the above assumptions in social science it is more agreeable to say that no one particular piece of research is purely objective or value-free. The rationale behind this is that when research is inclined more to the scientific method, which utilises quantitative analysis, there is always a tendency in failing to read what is actually being observed of the very complex human behaviour, resulting in a loss in richness in meaning. On the other hand, using the more naturalistic techniques, in which case the qualitative analysis will be utilised, although providing greater richness in meaning than the scientific technique, would be prone to ambiguity (Wagenaar and Babbie, 2001). Therefore, the research design employed in this study is neither scientific nor purely naturalistic as such; this research uses a mixture of the two research methodology types. However, this study is more inclined to qualitative research.

The methodological approach employed is interpretivist, which requires the researcher to grasp the subject meaning of social action, while the ontological stance is of constructivism, in the sense that a social phenomenon and its meaning are continuously being accomplished by social actors (Bryman, 2004:530). Basically this study concerned with development and human experience, particularly the areas of transportation warrants the use of such approaches. Thus this research relies mostly on primary data and to some extent on secondary data and information. Hence the basic data was generated from the area of study mostly through primary survey.

Besides, the research involves both exploratory and descriptive components. The descriptive aspect aims at "making complicated things understandable" (Punch, 1998:15, cited in Rohorua, 2007:36). Indeed this is preferable to explanation, an approach that may result in oversimplifications; hence this study attempts to describe what is really happening within the

critical service sector under study. The exploratory element is to highlight as well as to cater for the discussion of the various activities, constraints and impediments, complications, and the policies formulated to mitigate these problems but aimed to maximise the positive outcomes derived from this critical sector. More so it aims at exploring the attitudes and behaviours, views, and feelings of key stakeholders in the shipping sector, and above all the conditions within which mobility takes place.

3.2.1 Sources of Data

Research design covers all the necessary essential steps that have to be carried out in order to produce reliable and good quality study results. As indicated in Section 3.1 this study adopted a mixed type of research, that is, the study method employed is neither solely scientific or quantitative nor purely naturalistic or qualitative. Triangulation method refers to the use of more than one approach to the investigation of a social phenomenon or problem in order to enhance the confidence in the ensuing findings (Bryman, 2005). The main purpose of using this method is to ensure the trustworthiness of the data and ultimately the study. As Bryman (2005) quote Webb *et al.* (1966) who propose, 'once a proposition has been confirmed by two or more independent measurement processes, the uncertainty of its interpretation is greatly reduced'. Moreover, Denzin (1970, cited in Bryman, 2005) points out that triangulation is fundamentally associated with research methods and designs but now it encompasses other major forms such as data, investigator, and methodological triangulation. He also distinguished between within-method and between-method, with the former involving the use of varieties of the same method and the latter triangulation involving the use of contrasting methods. Therefore guided by this enlightenment, this study employed largely the between-method hence in terms of primary data collection this study obtained all required information through the questionnaire method, observation-participation technique, case study approach, and semi-structured interviews. The application of the questionnaire method involves the use of both closed and open-ended questions while the semi-structured interview method was utilised as a follow up to probe into the important points and issues that emerged from the questionnaires and interviews. The case study method was used and triangulated with the use of observation. These are further elaborated on in the following subsections.

3.3. Research Design

In terms of data collection for this study, information was derived from both primary and secondary sources. Primary data was collected through the use of the questionnaire method and from personal semi-structured interviews. These two methods are briefly outlined below.

First, structured questionnaires were designed. Altogether, three sets of questionnaires were used in this study. One set was distributed randomly to selected respondents from various households in the designated research areas or villages in the rural constituencies of each of the two provinces under the study, that is, Isabel and Malaita. The questionnaire method was used for the purpose of obtaining primary data about the impacts of shipping on development, especially on the life and welfare of the rural people. Both open-ended and close questions were included in the questionnaire.

Second, another set of questionnaires was prepared and given to the concerned government department, particularly the Marine Department in Solomon Islands, as a way of consulting the concerned officers on matters pertaining to the functions and policies of the government and on the safety operation and the effectiveness and efficiencies of the inter-island shipping sector.

Finally, in attempting to obtain the primary data concerning the viability of the inter-island shipping and for finding out the problems that currently exist within the domestic shipping sector and other issues, the third set of questionnaire was formulated and was given to the two selected shipping companies' managers of the two provinces under study.

The use of semi-structured interviews is purposely to cater for new and important information that pops up but might otherwise be overlooked by the use of the questionnaire method. On the other hand, the open-ended questions in the questionnaire are to elicit information regarding the way respondents feel towards issues the researcher is probing. By using these two techniques qualitative data was collected and analysed. Attempts were also made in using in-depth interviews so as to elicit detailed materials that would be used in qualitative analyses purposely to identify the types of things happening within the shipping industry primarily at the micro level.

The secondary data was obtained through archival research. Library research was carried out prior to the collection of empirical data from the fieldwork that was later undertaken. Essentially library research was undertaken to provide weight to the latter set of data. Secondary sources of information included consultation in books, monographs, journals and various reports, government and non-government, at national and international levels. Secondary data for this study were also collected from various government departments, particularly from the Statistics Office and the Marine Registry Office within the Marine Department and certain information was collected from the two shipping companies' records as well as from other written materials such as reports, journals and library books to help in explaining and describing what has been happening within the domestic shipping industry and about the safety operation of inter-island shipping and to see the trends in the growth of shipping activities. Secondary data was also collected from shipping companies and shipping studies commissioned by the government to help analyze the effectiveness, efficiency and viability of the shipping industry.

The USP library in Suva and the Solomon Islands National library were used to obtain all the required information. The materials consulted consisted of books on transport, transport economics, and transport geography, and other transport related journals and conference papers. Information was also extracted from various reports on transport and shipping carried out at the regional and national agencies. At the national level specific shipping consultation reports were supplied by the Solomon Islands Marine Department. General socio-economic data about Solomon Islands were also obtained from the Solomon Islands Statistics Office, Ministry of Economic Planning, and the Central Bank of Solomon Islands (CBSI). All these sources provided the quantitative data for this study. Secondary information was also acquired through an internet search and various reports of government and non-government and multilateral international agencies such as UN agencies.

3.3.1 Methods of Data Collection

3.3.1.1 Questionnaire

For this research three sets of questionnaires were formulated. The first set of questionnaire was used to probe for information pertaining to the impacts of shipping on

people's livelihoods as well as to elicit information concerning the quality of shipping services currently being provided. The structure of this first set of questionnaires covered aspects such as background information, shipping service provision availability of service and inter-island movement.

In ensuring that the impacts of inter-island shipping on development are realistically discussed and analysed, the key variables used include: each individual respondent's level of income, availability and accessibility of essential services, mobility, and social impacts.

The second set of questionnaires was formulated to gather information from the relevant government officials. The officer-in-charge of the Marine Department was consulted to explore certain issues related to the safety operations, policies, nature, and the viability of shipping services in Solomon Islands. The third set of questionnaire was designed to probe into the actual operations of shipping service provided by the two shipping companies. This was purposely to get the views and feelings of those people and groups that actually operate inter-island shipping services, in order to derive information related to the actual problems they face, the difficulties they encounter and the complaints they receive.

3.3.1.2 Interview

With the use of the interview method, in cases where the respondent could not read or write, a full interview was carried out between the individual respondent and the interviewer, based on the scheduled sets of questionnaires. The employment of semi-structured interviews also caters for the fact that many respondents did not know how to read and write properly in the English language or even in pidgin. Interviews were conducted either in pidgin or in the people's own dialect depending on the level of education each research participant had. Each interview lasted between 15 minutes and 20 minutes or more for the respondents who were illiterate.

3.3.1.3 Observation

This research method is an ongoing one hence it was used prior to and during this study to identify what was really occurring within this important but neglected service sector at the micro level. More profoundly, its usage was to identify behavioural patterns of all key players in this sector, such as individual passengers, ship's officers, shipping managers and government

officials. In this research the role of the researcher takes the role of observer as participant, or according to (Glesne, 1999, cited in Arikan, 2005:79) "the researcher…acts more as observers while maintaining some interaction with study participants".

3.3.1.4 Case study

The use of case studies in social research is to describe discernible relationships that exist in reality which are "useful for adding to existing knowledge to increase our understanding in a field of study (Stake, 2001, cited in Arikan, 2005). Dobson (1999:260) quotes Kilduff and Mehra (1997:456) who argue that "all interpretations of phenomena are equally valid, and the world is so complicated that concepts such as prediction and causality are irrelevant. Everything is related to everything else so the search for causes or origins must be discontinued". It follows that the primary intention of case study is generally to gain an in-depth understanding of the phenomena under investigation in the real-life setting.

Because this research is a qualitative one the intrinsic case study method was employed which leaned more towards the interpretivist paradigm (Dobson (1999:260). Thus a case study of the two shipping companies, namely Isabel Development Company (IDC) Shipping and Malaita Shipping Company (MSC), which provide inter-island shipping services to the two islands, was selected for this study. It was observed that IDC Shipping was established three decades ago, is well functioning and continues to serve Isabel island while Malaita shipping company and other provincial shipping companies set up only a few years back are now defunct. Accordingly, a case study of the two companies was undertaken to probe into the underlying factors that continue to enhance IDC Shipping Company and those that causes the downfall of Malaita Shipping Company. Besides, a case study of the development of two distinctive areas with different levels of shipping services provided by their respective two shipping companies was undertaken largely to assess the impact that inter-island shipping has on development of these identified regions.

3.3.2 Sampling

3.3.2.1 Sampling Design and Data Type

In the design stage of this study the main issue of concern for the researcher was to select an appropriate and representative sample of the respondent population despite time and financial

constraints. Thus multi-stage cluster sampling was used to minimise the biasness in the sample selection. In so doing, the regions within each of the two provinces identified were first demarcated according to the existing constituencies and wards established by the electoral commission. After having divided the study area into the various constituencies along with their respective wards within the two provinces the simple random sampling technique was then applied to select the villages where the actual fieldwork was carried out. The number of villages in each of the constituencies was assigned with a number and these numbers were then put into a hat from which the sampling units, two villages, in each constituency were picked (Walsh, 1996: 115). After carrying out these steps a random sample from the villages where the actual fieldwork was carried out was then selected. Similarly, once these villages were identified from the constituencies, a random sample of respondents consequently was chosen using the same simple random sampling procedures. The selected villages, the total population of each village and the number of respondents from each village are shown in Table 3.2.

Table 3.1 Summary of Samples of respondents by province, constituency, village and Heads of Households, in Solomon Islands

Province	Constituency	Village	Population	Number of Households	Sample of Heads of Household Total
Malaita	East Kwaio	Na'au	745	230	32
	Small Malaita	Sa'a	985	350	14
Isabel	Hograno	Kolotubi	1,539	303	17
	Maringe/Kokota	Ghoveo	650	249	17
Total	**-**	**-**	**3,919**	**1,132**	**80**

Source: Based on Solomon Islands 2009 National Census Data.

As part of the design in this study the selection of the constituencies from the each of the two provinces, Malaita and Isabel, was foremost influenced by the consideration of whether or not an area is currently serviced by shipping services. Therefore, from direct observations and experiences, the Small Malaita and East Kwaio constituencies were chosen on the basis that these two constituencies within Malaita province have long been deprived of regular and efficient shipping service provision. Isabel province, on the other hand, has been observed to be a recipient of regular inter-island shipping service. Generally, most destinations on the island of

Isabel receive quite regular shipping services from the province's own established shipping companies and from other locally and privately owned ships. The two constituencies selected from within the province were Hograno and Maringe/ Kokota.

The selection of Small Malaita and East Kwaio constituencies in Malaita and Hograno and Maringe-Kokota constituencies in Isabel province enabled a comparison to be made between the areas where inter-island shipping services are more reliable and regular as opposed to those areas that are poorly serviced by shipping companies. This step was necessary to evaluate and compare how inter-island shipping services affect economic development and hence the overall development within these two provinces.

3.3.2.2 Sample Size

A total random sample of 80 respondents was studied and enumerated. However, due to transportation difficulties, which prevented the researcher from going to Small Malaita to conduct the questionnaire and interviews, resulted in a set of questionnaires being administered by well-chosen and instructed persons. Because this island is the researcher's home all the shipping related problems and issues as well as the socio-economic aspects of the area are well known to him.

3.3.3 Coding and Tabulation

The data that were collated from the fieldwork were coded using numerical figures to represent predetermined responses, particularly with the closed questions within each of the sets of questionnaires. The open-ended questions as well as the interview responses, on the other hand, were later coded after receiving all the sets of questionnaires and after the interviews. Coding of the responses for both interviews and open-ended questions followed similar procedure as used for coding closed questions. The interview responses were either tape recorded using a mini-tape recorder or were written down by the researcher himself. The taped responses were later transcribed and compared with the written responses to ensure that all responses were similar and to identify for coding purposes the key concepts or common threads emerging from the answers supplied. This was an essential step to ascertain the reliability of the responses.

3.4. Study Area

This study is mainly confined to two of the island provinces of Solomon Islands: Malaita and Isabel. This study focuses only on these two provinces because of the time limitation as well as financial constraints. Besides, each of these two provinces at least has its own local shipping company that is publicly owned and so both are engaged in the provision of shipping services. Moreover, for each of these two shipping companies, Malaita Shipping Company had run into financial difficulties and is now defunct while Isabel Development Shipping Company is rather more sustainable in its operations. Both of these provinces are in proximity to Honiara, yet certain rural areas in these two provinces, especially the southern and eastern parts of Malaita, still lag behind in terms of development due to poor shipping services that are being provided. If this proposition is true it would imply that many remote areas, especially the outlying islands in Solomon Islands, would be worse off, first in terms of the provision of shipping services per se and second, these remote areas of course would be lagging behind in terms of development as few benefits trickled down to them since there would be little trade occurring between these rather remote locations and the core centre of economic and social development, which is Honiara.

3.5. Limitations of Study

In any research there are always some limitations as the result of some critical factors that may have some negative effects upon the effectiveness of doing a research. The critical factors that may have affected the end result of this thesis include: insufficient finance, insufficient amount of time allocated to the collection of data, unavailability of relevant data as the result of poor recording and keeping of the amount of traffic flow of people and commodities between Honiara the various destinations throughout Solomon Islands. The unavailability of much of the relevant literature at the USP main library and elsewhere is also an added problem, which compelled the researcher to rely on the use of internet for relevant sources.

In terms of financial constraints certain locations that were originally earmarked were later altered due to the long distances, high costs, and time involved in travelling to those places and between the villages on the two islands. Since most of the locations are at the receiving end

in terms of the trading of imported goods, limited fuel supply contributed to the high petrol cost and hence to travel between the long distances is expensive. For this study, time was a very limiting factor because first, the researcher needed to travel from Honiara to the two provinces. However, currently to travel to the remote areas such as Small Malaita and East Kwaio on the eastern side of Malaita one must wait for charters, as there were no scheduled shipping trips due to the running down of the main shipping companies that serve the island. Actually, due to shipping problems and lack of alternative modes of transport to Small Malaita, the researcher did not go to the island to do any interviews or conduct the questionnaire. In terms of travelling by ship to the two provinces, there was some waiting time involved before the actual time for the ship to actually sail and in most instances there was no ship available and most time was wasted, thus the use of air transport became a necessity although this was not catered for in the budget as funding was supplied on the basis of ship fares only, which is far cheaper than airfares. Indeed more time and money needed to be allocated for doing field research.

Concerning the collection of data related to the traffic flow of goods and passengers in Solomon Islands currently there is very poor availability of such data as no instrument has been put in place to derive the required data.

3.6. Ethical considerations

Due to the potential impact social research can have on the lives of people being researched, researchers are morally obliged to minimise any damaging impact by taking into account of issues ethical consideration. As Keen (2005:21) quotes Blaxter, Hughes, and Tight (2001:158) “The conduct of ethically informed social research should be the goal of all social researchers”. The researcher took all necessary steps to comply with social research requirements, beginning with a submission to the University Research Committee, a list of ethical consideration issues and items that guided the field work.

During the field work the researcher followed ethical procedures to protect the rights of research participants. Before any actual research activity was performed participants were properly informed of the purpose of this study, the nature of their participation, the confidentiality of the data collected during the interviews as well as their freedom to withdraw

any time from participating in this study. Given the situation where many of participants could not read or write, this information was communicated verbally to research participants.

3.7. Conclusion

This study used a mixed research methodology that is neither wholly scientific nor purely naturalistic. Essentially the conduct of this study relied on the collection of both qualitative and quantitative data, which led to the use of both interviews and questionnaire methods as well as using archival or library research technique in obtaining primary and secondary information that was used in the analysis of the shipping sector and its impact on the overall development of Solomon Islands. Overall, a total random sample of 80 respondents was studied and enumerated and upon which the generalisations about the total population is made.

CHAPTER FOUR

THE SOLOMON ISLANDS: A BACKGROUND

4.1. Introduction

This chapter outlines the physical, socio-economic and demographic aspects of Solomon Islands to give a clear picture of the study area as well as to show and to further explain why shipping is an essential factor of consideration in the development of this small island nation. The chapter briefly discusses the historical aspects of shipping in Solomon Islands and the role of the inter-islands shipping sector in Solomon Islands as well as the problems that persist within the domestic shipping sector. The chapter also highlights the linkages between trade, shipping and development in the Solomon Islands context.

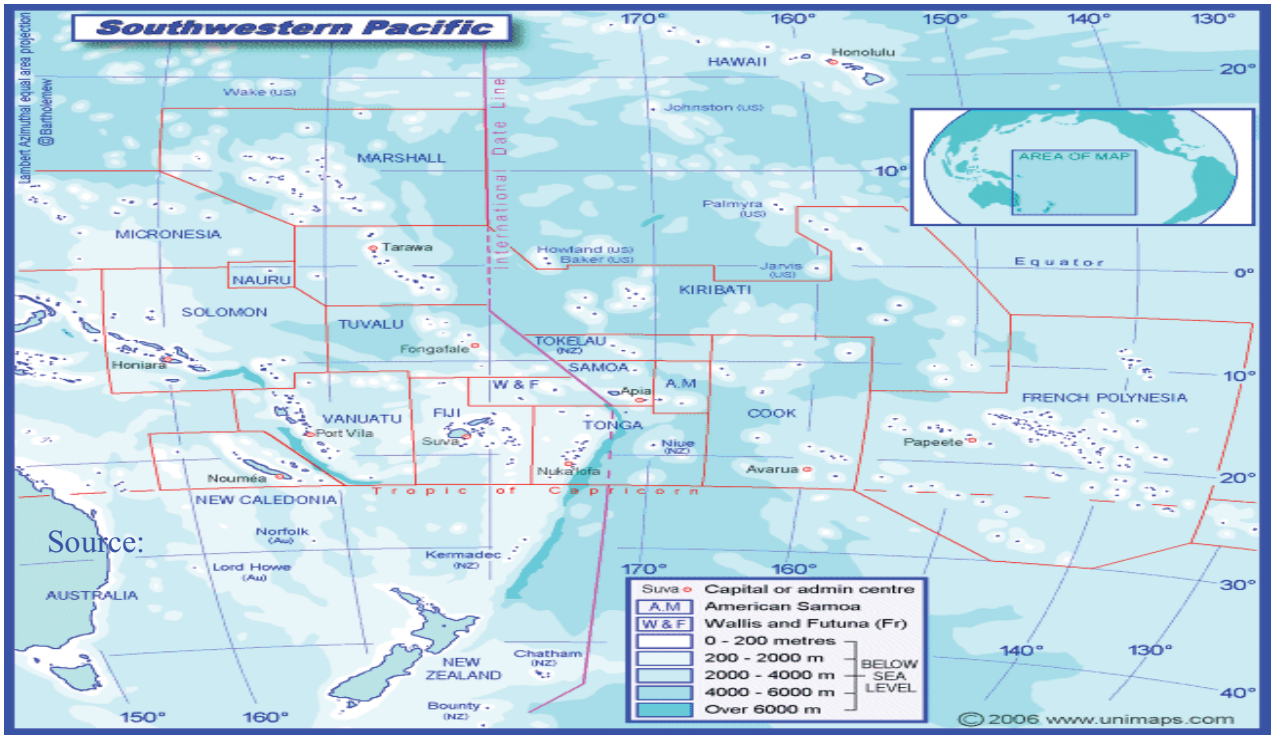
4.2. Geography

This section on geography looks at issues such as location, isolation, weather patterns and scattered nature of the islands that influences transportation and shipping sector that impose constraints in development, especially shipping development Therefore, the following section provides an account of physical and climate conditions in Solomon Islands.

Solomon Islands is an archipelagic Small Island Developing State (SIDS) within the South Pacific region. It extends between longitudes of 170^{o} 30 East and 155^{o} 20 West and latitudes of 5^{o}10' North and 12^{o}45' South. It has a total land area of 28,369 square kilometres making it the second largest island nation in the South Pacific region after Papua New Guinea (Map 4.1).

Solomon Islands is a thickly forested and mountainous island nation, which is located 1,860 kilometres northeast of Australia, its closest trading partner outside its Pacific neighbours. Solomon Islands as a nation comprises six principal islands which include: Choiseul (3,837 km^2), Isabel (4,136 km^2), Malaita (4,225 km^2), New Georgia, Guadalcanal (5,336 km^2), and Makira (3,188km^2) and six secondary islands namely, the Florida islands, Russell islands, Shortland island, Santa Cruz islands, Rennell and Bellona islands(Map 4.2),(Stanley, 1999).

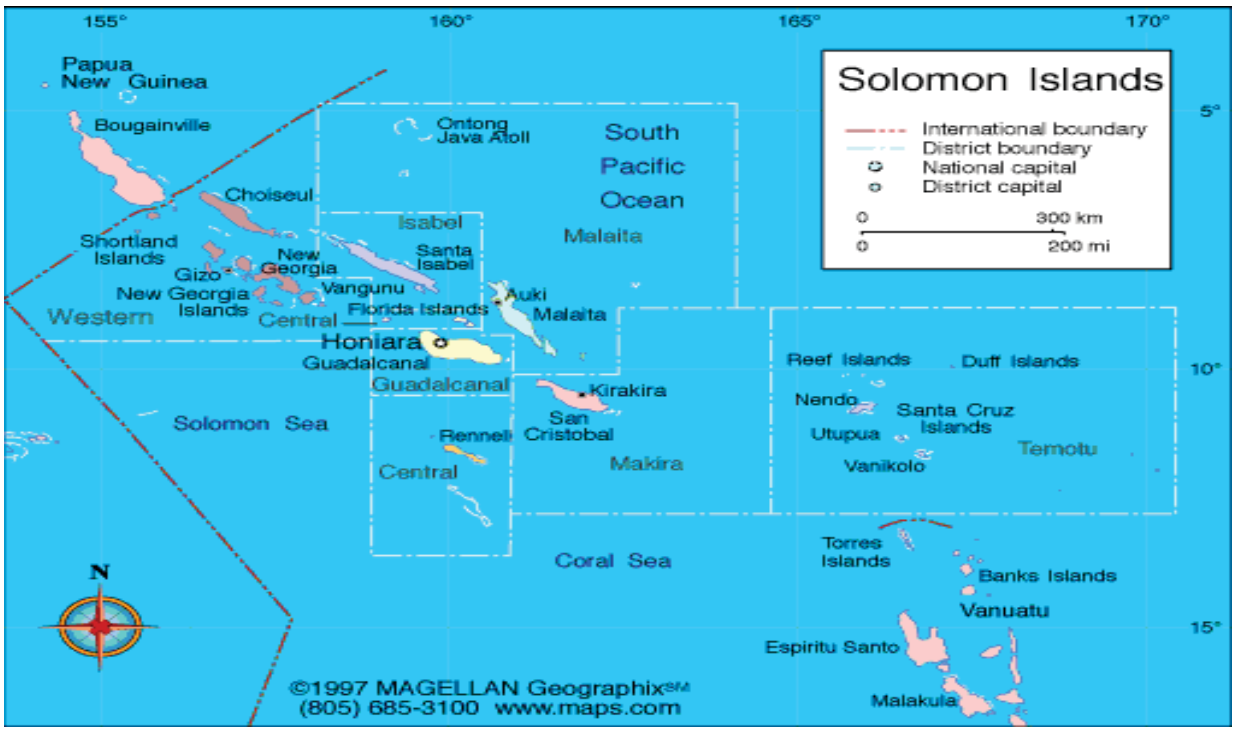
Map 4.1.Southwestern Pacific Map



Source: http://unimaps.com/western-pacific/index.html.

Apart from these large islands there are about 20 medium sized islands and numerous smaller islets and reefs. All the principal and secondary islands, except Rennell and Bellona, lie in a double chain, which stretches more than 1,800 kilometres from the Shortlands in the west to Tikopia and Anuta in the east, and nearly 900 kilometres from Ontong Java in the north to Rennell Island in the south (Stanley, 1999). Apart from the main chain of islands there are 3 groups of outer islands namely, Ontong Java and Sikaiana in the north, Rennell and Bellona in the south and Tikopia and Anuta in the east. These outer islands are often referred to as the 'Polynesian outlets' or 'outliers' since they are inhabited by people of Polynesian race and are located outside the boundary of the Polynesian island countries of the South Pacific region (Bellwood, 1978). Altogether, there are 922 islands in Solomon Islands, out of which 347 are inhabited. Solomon Islands has a total sea area of some 1,632,964 square kilometres with 5,3131 kilometres of coastlines (UNESCAP, 1997). The fragmented and dispersed islands as shown on the Map 4.2 suggest the critical role of inter-island shipping in the country. The high degree of dispersal of islands really poses a major development problem in the areas of transport and communications. The wide spread of the islands within such a sea area limits the use of road transport to connect the rural production to the pivotal export and import port of Honiara.

Map 4.2 Solomon Islands Map



Source: Magellan Geographix (1997).

4.2.1 Weather and Climate

Solomon Islands generally has a warm and humid weather with modifying effects from regular sea breeze. Its climate is more equatorial with daytime temperature varying between 23 and 30^{o}C and average nighttime temperature of about 22^{o}C. Its average rainfall varies between 3,000mm and 3,500mm. The country lies within the region of Southeast trade winds and is also located in the cyclonic zone (McNamara and Perkins, 1980). Cyclone season is between the months of January and April. During the cyclonic season, ships are normally restricted from travelling between the islands due to risks posed to ships and passengers alike. Between the months of December and March rain is normally heavy as this is the period of west to north-westerly monsoon winds. From the months of May to October the South-easterly wind is usually very strong, blowing at more than 40km/hr (Solomon Islands Government, 2011a). It is within this period that the Lee Kwok Kwen Company's MV Solfish 01, sank in the eastern Solomon Sea in July this year when it met very rough seas and heavy swells while on its way to Temotu province. Malaita Shipping Company in 2009 lost one of its ships, MV Ramos III, in a similar manner, while it was anchoring idly outside Ranadi beach in Honiara (Photo 4.1). In the face of

harsh weather conditions it seems that in Solomon Islands losing a vessel may be easier than acquiring one.

Photo 4.1. MSC MV Ramos III rotting at Ranadi Beach, Honiara

Source: Photo by the researcher, 2012.

It is an observed fact that the southern parts of Solomon Islands (South Malaita, the Weather coasts of both Makira and Guadalcanal islands and the eastern parts of Solomon Islands up to the Temotu group of islands as well as for Rennel and Bellona islands) (Map 4.2), are more prone to rough seas, high swells, and cyclones. The normal cyclone route is along the passage of sea in the southern waters of Solomon Islands within which lie the islands of Rennel and Bellona and the weather coasts of Guadalcanal and Makira and up to Temotu. The weather coast of Makira and more so of Guadalcanal is so-called because of the harshness of the weather conditions, most especially that relating to the sea currents and conditions that make the ferrying of cargoes ashore a daunting and dangerous task, let alone travelling to the area. The harsh weather and climatic conditions have considerable impact the duration of each trip to the islands hence, were responsible for high operational costs.

The harsh weather conditions that exist in certain parts of Solomon Islands largely contribute to the unattractiveness of shipping service provision to such areas. This in turn leads to the lack of effective and regular shipping services, hence to disparate levels of development in

Solomon Islands. The foregoing discussion on weather and climate conditions has a lot of implications for inter-island shipping. It is obvious from this discussion that in Solomon Islands as elsewhere, the efficiency and sustained operation of shipping services are critically linked to the weather and climatic conditions that are such impediments.

4.3. Brief History

The Solomon Islands have a long historical evolution process. Solomon Islands witnessed three waves of migration that took place some 5,000 years ago. The first wave of immigrants was the dark-skinned Papuan speakers who were said to have originated from South East Asia. The second wave of migration consisted of people of Austronesians descent who were fair and who inhabited the larger islands of Malaita, Isabel, Makira, Guadalcanal, Central and the Eastern part of the Solomons. The Polynesians was the third group to arrive in Solomon Islands, settling mostly in the small outer atoll islands, which are often referred to, as said earlier, as the 'Polynesians outliers' since they are located outside the boundary of the Polynesian island countries of the South Pacific region (Bellwood, 1980:174-185). The small coral atolls settled by this last group of migrants include Ontong Java, Sikaiana, Tikopia and Anuta, and Rennell and Bellona (Hou, 1999:58) which in today's Solomon Island inter-island shipping context form the 'outer' shipping routes that now are regarded as the uneconomic routes due to their small population size and long distances from Honiara City too small to constitute a substantial market or a high yielding production area.

Alvaro De Mendana and his Spanish crewmembers were the first European explorers to come in contact with the inhabitants of Solomon Islands, in 1568. This was followed by other European explorers. Albeit these explorers made little contact and impact on the lives of the local inhabitants, these events and encounters had tremendous impact on geographical knowledge and the sailing directions, which saw the 1882 publication in the Western Pacific of a trader's manual by Andrew Cheyne, listing harbours and the tradable goods coveted by locals. This consequently led to an increase in the number of ships traversing the area through the Eastern Solomons (Green, 1976: 32). The second group that came to Solomon Islands was the missionaries. These missionaries' pacification work eventually made the islands peaceful and created a very conducive environment within which trade flourished.

Trade was carried out by white traders, who by the mid-1800s were widespread in the Western Pacific region. This expanding trade compelled Britain to police the trading sea route to India and China and their markets, which led to the expansion of trading activities. One factor that laid the foundation for the existence of inter-island shipping in Solomon Islands was copra. Green (1976: 31) points out "The great plantations developed in other parts of the protectorate, and transportation among the islands in the eastern district, partly dependent on the plantations …" This emanated from the production of coconut oil, which was processed and extracted and though contaminated, was shipped to Europe. In the 1840s most traders were small, except Svenson, who was the largest trader in the then Eastern district in Solomon Islands and who established a chain of stations including one at Santa Ana and Ugi. At around 1900, the high world market copra price did encourage many white traders to set up permanent trading stations. In 1905 Burns Philip and Levers established themselves as major trading forces in the region. The former also established itself as a major supplier of steamship transport service along the trading sea route to India and China to the then British Solomon Islands Protectorate.

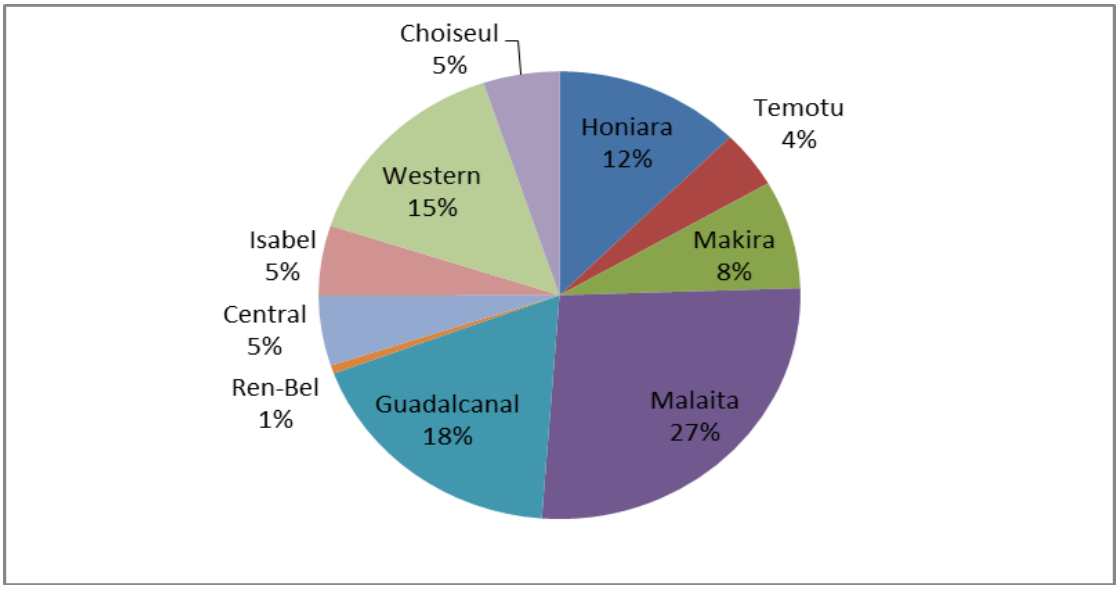
Today Solomon Islands is divided into nine provinces, each having its provincial government and administration. These provincial governments are mandated to run their own socio-economic and political affairs. However, they largely depend on the national government for all their grants, supplies of resource materials, and equipment, thus transportation, particularly inter-island shipping, is still an important factor in their development. These island communities rely heavily on inter-island shipping for connecting and uniting groups of people from different scattered islands with diverse cultures into one political entity. Moreover, many of these nine provinces engaged in small agricultural activities especially copra production and fishing activities and the products are largely sold in Honiara. Therefore the main mode of transport that link these production nuclei is inter-island shipping.

4.4 Demography

According to the 2009 census, Solomon Islands has a total population of 515,870 people (Solomon Islands Government, 2009). The annual growth rate in the population was 2.3 per cent, which by world standard is still regarded as too high. The distribution of the total population of Solomon Islands by province is shown in Figure 4.1. Malaita province has the highest population while Rennell and Bellona province has the lowest population, which is far

less than that of Honiara City. The movement of the population tends to be towards Honiara City and other urban centres, often greatly facilitated by inter-island shipping.

Figure 4.1 Population by Province and Honiara City in Solomon Islands, 2009



Source: Adapted from Solomon Islands National Census, 2009.

A vast majority of the Solomon Islands' population, that is, about 80 per cent, live in the rural areas while the remainder live in the main provincial centres with a majority in Honiara City (Figure 4.2). Solomon Islands' population density is equal to 17 persons per square kilometres (Solomon Islands Government, 2009).

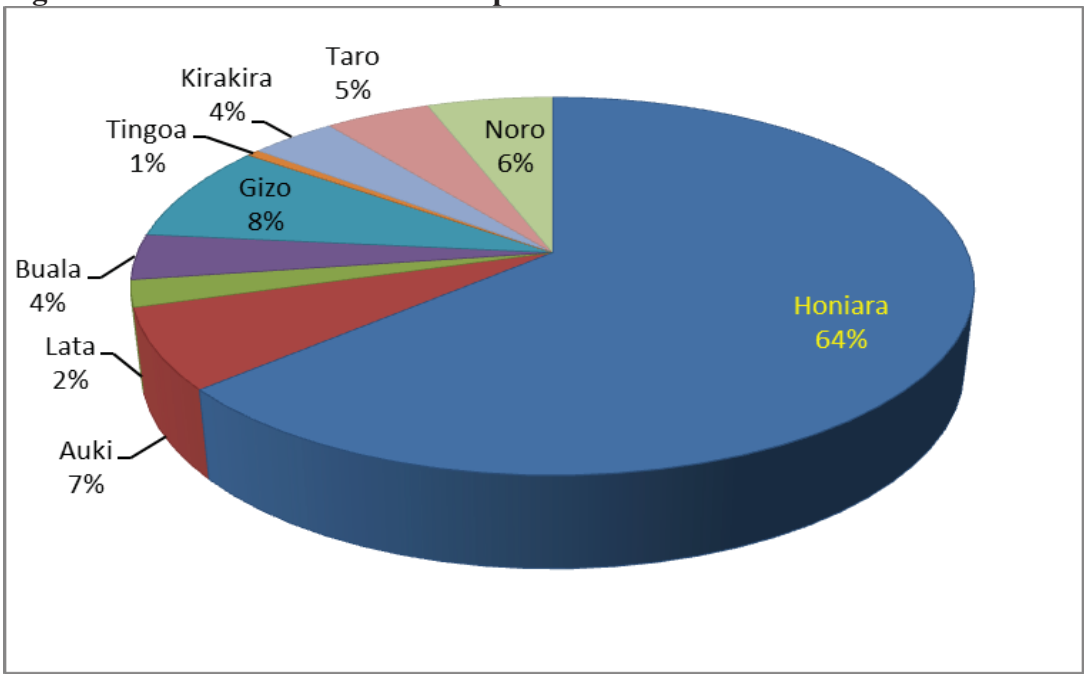
Currently in Solomon Islands there are more males than females, which is in the ratio of 105 males for every 100 females. The majority of the population of Solomon Islands is a very young population with the 0-14 year old category making nearly 41 per cent of the total population which creates a high youth dependency ratio of 85 per 100 in the working-age group. The economically active adult population make up 54 per cent and the remainder is for the 65 years and above and children (below 15 years) group. The life expectancy of Solomon Islanders had improved from 54 years for females and 55 years for males in 1986 to 60 years and 62 years in 1999 respectively. According to the 2009 population Census about 23 per cent of the adult population (i.e. 15 years and over) were illiterate while 77 per cent of the adult population was literate. This indicator has improved to slightly over 84 per cent literacy rate (Table 4.2). This,

however, is a very low result among the Pacific Island countries (Solomon Islands Government, 2009, UNDP, 2011b).

4.4.1 Population Mobility and Urbanisation

The population movements within Solomon Islands can be attributed to internal migration, which is either for social and or economic reasons or by displacement caused by man-made or natural disasters. For Solomon Islands there is little international migration taking place as compared to many other Pacific Island countries. However, internal migration dominates the migratory trends and is largely from rural to urban centres, and mostly to Honiara, the capital where most of the economic and social infrastructure and services are located. Figure 4.2 highlights the levels of urbanisation for the main provincial centres in Solomon Islands with Honiara, the capital city, containing 64 per cent of the urbanised population while other provincial centres and economic based towns such as Noro in the Western province are currently absorbing 14 per cent of the total urbanised population. The Renbel provincial centre, Tingoa, has the least urban population after Temotu.

Figure 4.2 Distribution of Urban Population in Urban Centres in Solomon Islands



Source: Solomon Islands National Census, 2009.

4.5. Economy and Economic Development

The economy of Solomon Islands is narrowly based on few of its natural resources, which include forest products, fish, minerals, and agricultural products such as copra and coconut oil, cocoa, rice and palm oil. The total value of GDP for 2011 amounted to $5,573 million, which was an increase of 7.6 per cent over 2010 (CBSI, 2011: 14). Of its major production sectors, in 2010 agriculture (including fishing and hunting) contributed 26.2 per cent to GDP, while the mining/utility sector contributed another 7.4 per cent in 2010, manufacturing 5.5 per cent, construction 1.9 per cent, trade, restaurants, and hotel 10 per cent and transport and communication 8.3 per cent while finance and other services were 33.3 per cent (Table 4.1).

Table 4.1 Sectoral Contributions to Solomon Islands' GDP (SI$ Million), 2010

Sector	Value ($)	Per centage (per cent)
Agriculture, hunting, forestry/fishing	1,356.8	26.2
Manufacturing	283.3	5.5
Construction	100.2	1.9
Mining & utilities	380.8	7.4
Trade, restaurant, hotel	515.6	10.0
Transport, storage, & communication	427.9	8.3
Other services	1,722.5	33.3
Net taxes	392.8	7.4
Total GDP	**5,179.9**	**100.0**

Source: The Europa World Year Book, 2012:4094.

As depicted in Table 4.1 the Solomon Islands economy is highly dependent on agriculture for the bulk of its exports and for its internal trade and consumption. In 2010 the agriculture sector including hunting, forestry and fishing contributed about 26 per cent of the GDP while almost 20 per cent of the GDP was derived from the subsistence economy, which mostly comes from food production. According to FAO estimates nearly 67 per cent of the labour force, including informal sector were engaged in agricultural activities (Europa, 2012:4094).

4.5.1. Trade and Inter-Island Shipping in Solomon Islands

Figure 4.3 shows the forestry sector still remains the dominant export earner for Solomon Islands, contributing about 46 per cent of total export receipts in 2011. This was the same

picture that emerged during the aftermath period of the ethnic tension. Logging had been the mainstay of the Solomon Islands economy. In Solomon Islands the total fish catch had increased by 32 per cent to 28,195 tonnes in 2011. Fish exports accounted for 11 per cent of the country's total foreign exchange during the period. Correspondingly, total earnings from fish products rose 73 per cent to $341 million in 2011, the highest in the post-conflict period. This performance resulted from increased real exports by Soltuna Fishing and Processing Ltd (SFPL) of 28,195 cartons exported to Europe and other Pacific islands countries. In terms of log production actual export volume for 2011 indicated an increase in total log production of 45 per cent to 1.9 million cubic metres. These forest products were exported mostly to mainland China, Taiwan, South Korea and India. The foreign exchange earnings received from these exported round logs increased by 46 per cent to $1,457 million.

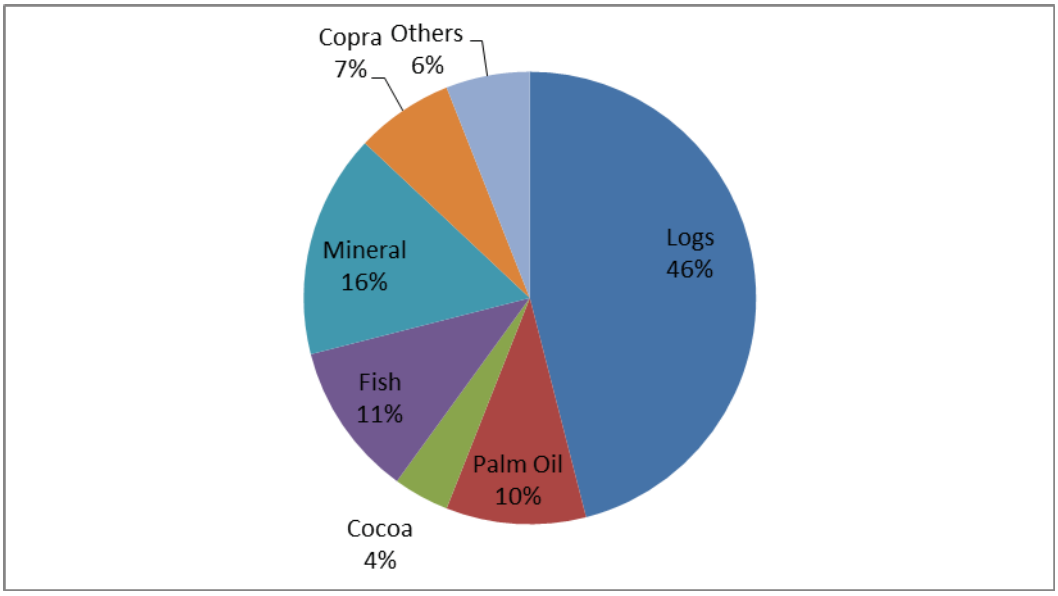
With the improvement of inter-island shipping, copra, did remarkably well with a record of 35,565 tonnes although still below the 2008 output of 38,979. Total cocoa production had performed relatively well with a marginal growth of 1 per cent to a record of 6,100 tonnes. Receipts from the exports of cocoa increased to $119.2 million, which accounted for 4 per cent of total exports (CBSI, 2011). Obviously the increase in these activities greatly impacted on the increasing demand for transportation, inter-island shipping as the movement of people, goods and material is an inextricable part of all production, distribution and consumption related activities. This trend is anticipated to rise as the economic growth for 2009–2016 is projected to rise (UNCTAD, 2011b).

On the other hand, Solomon Islands' imports, which consisted mostly of manufactured goods, machinery and transport equipment also contributed towards the increasing demand for shipping transport services. The revitalization of Gold Ridge mining, which is expected to be fully operational in 2012, may increase the demand for inter-island shipping in the future.

The actual imports in 2011 in Solomon Islands rose by 12 per cent. This is due to the marginal rise in consumer demand, growth in economic activity and significant increase in donor inflows as some of these were used to finance imports during the year. The increase in economic activities led to a rise in most import categories with major movements in fuel (21 per cent), food (2 per cent), chemicals (80 per cent), and miscellaneous items (1 per cent). The only

exception is for plant and heavy equipment with a fall of 26 per cent, which is largely due to one-off investment payments made in the mining and telecommunication infrastructure sector in 2010 (Solomon Islands Government, 2012).

Figure 4.3 Export Receipts in Solomon Islands by Commodity in 2011



Source: Adapted from CBSI, 2011.

For the exportation of local commodities the three major export ports in Solomon Islands are Honiara in Guadalcanal, Yandina in the Central islands' province and Noro in the Western province. Honiara port handles almost all exportable commodities while Yandina handles mostly copra and oil products of the Russell Islands Plantation Limited and copra from the nearby islands such as Isabel, Savo, and parts of Guadalcanal. Noro port largely concentrates on the exporting of fish and fish products of the Soltuna Fishing Processing Limited. Honiara as the major import port handles bulk of import products, which are then distributed to other islands through inter-island shipping.

Overall, Solomon Islands had achieved a favourable balance of payments position in 2011. This remarkable recovery was the result of positive developments in the current account, sprung from a negative balance in 2010 to a positive balance in 2011 due to several factors such as improved global economic growth, emanating particularly from emerging economies, increased foreign direct investment (FDI) due to Solomon Islands' significant improvement in its "ease of doing business" ranking, and increasing donor-funded capital projects, favourable

commodities prices leading to rising exports, and improved interisland shipping services. This in turn increased the level of official external reserves from $2,144 million at the end of 2010 to $3,034 million. The recorded positive balance mentioned here represents about 10 months' worth of imports of goods and non-factor services (CBSI, 2011:7). This situation created a positive economic climate for further increase in production, which essentially would have more implications for increasing transport demand throughout the country, especially for inter-island shipping

The preceding discussions suggest that economic undertaking, including production, exports, imports, the movements of people and materials, and the distribution of goods and services, generates a combined driving force for the increasing demand for both international and domestic inter-island shipping services. Moreover, given the expected increase in economic related activities, demand for transportation, and inter-island shipping in particular, is tipped to rise in the future.

Though the growth of Honiara City and other urban centres was rapid in recent years, still we find almost two-thirds of the entire population engaged in the subsistence sector, mostly in the rural areas. By 2009 there were about 63,732 persons residing in Honiara, with an estimated 23,000 in formal employment, while the balance of 40,732 were mainly family members, school push outs, lius[9], and visiting wantoks[10] (Solomon Islands Government, 2009). This concentration of a high proportion of formal employment in Honiara reflects the concentration of most of the key economic and administrative activities and the essential services in Honiara, as mentioned earlier.

It has been recognized that the lack of infrastructure has to date impeded economic development that should otherwise provide employment for the large number of unemployed people. In recent years there was hardly any maintenance or development of land or marine transport infrastructure due to lack of funding and understaffing of the Ministry of Infrastructure Development (MID). Because of the importance of such infrastructure the government plans to invest substantially in upgrading of transport particularly on roads and bridges and air transport and more specifically the, shipping related infrastructure.

[9] A name used for unemployed persons, which literally means a wandering person with no purpose.
[10] Wantok or one-talk refers to people who speak the same tribal language and who come from the same villages, district or province country or region.

In 2002 the Asian Development Bank (ADB) awarded a US$10 million loan in an attempt to rehabilitate the infrastructure damaged during the ethnic tension. A feasibility study was carried out under ADB's Initial Poverty and Social Assessment and Road Improvement (sector) project that eventually led to the construction of a state of the art bridges built over major rivers on Makira in the areas surrounding Kirakira town (ADB, 2008a). This was done under the current Asian Development Bank's Transport Sector Development Project, a partnership with Solomon Islands, Australia and other donors helping in upgrading Solomon Islands land, sea and air transport infrastructure to support economic activities and social service delivery. Under this partnership some rural communities will directly benefit from the new or upgraded wharves, which are being built at Waisisi and Uhu in Malaita, Ngasini, Ringgi, and Keru in the Western and Isabel Provinces at Tatamba. These will help boost economic activities and increased job creation, and provide people with better access to basic social services such as health and education (Solomon Star, 2010:1).

4.5.2 Road, Infrastructural Development in the Case Study Area

In terms of road transport, a 110 kilometres of town roads serve the Honiara City and its surroundings. Countrywide there are 1,270 kilometres of roads, 884 kilometres of which serve Guadalcanal and Malaita. Because of the geographical size and scattered-ness of the islands along with the limited infrastructure that exists in Solomon Islands, the current level of development of the country is quite low as compared with other countries within the region. Thus the current National Coalition for Rural Advancement (NACRA) Government has planned to add an additional 100 km of new dirt road and 50 kilometres of tar sealed road each year (Solomon Star, 2010:1).

For the two provinces under study in terms of infrastructural development, Malaita is more developed compared to Isabel, particularly on the West coast of the island, which faces Honiara, and more so those areas surrounding Auki town, the provincial centre of Malaita province. On this side of the island there are slightly better roads, which connected West AreAre with Auki and Auki with the northern part of Malaita. This means that road transportation is functioning well along the west coast of Malaita Island. In contrast, on the eastern side of the

island there is hardly any road existing that links East AreAre and East Kwaio. There is, however, one existing road that runs across the island from Dala on the Western side of the island to Atori, which is on the opposite side of Malaita. At the time of this study, this road was not in use by vehicles because of its poor condition, which is a common feature of all rural roads. This means that the only means of transport to the eastern side of Malaita is through shipping and air transport. The only airstrip, that is located at Atoifi, that serves the constituents of East Kwaio.

Of the major development activities, East Kwaio has a hospital run by the Seventh Day Adventist Church, a primary school, and a community high school. From observation, the people living in the coastal villages have good permanently constructed houses with iron roofing and some homes have solar powered lighting. Up in the highlands are pagan villages where the villagers choose to live their normal traditional life style, seeking to benefit from the modern technologies, particularly for medical treatment, only when the need arises. It has been observed that people who allow themselves to be integrated into the modern economic system and lifestyle would be more mobile than those that are not because of the need for interactions mostly related to trade activities.

In Small Malaita constituency there is a road that runs from Afio substation to Olusu'u harbour near Sa'a, where the research was carried out. The only hospital serving the people in the southern part of Malaita is at Afio while a number of clinics are thinly spread on the island, which is a normal feature of the development taking place in the rural areas in Solomon Islands. In Honiara, on the other hand, every residential area has one clinic. Being separated by sea from the rest of Malaita province, Small Malaita is connected only with Auki by sea transport, that is, either by ships, which is now rarely the case, or by canoes powered by outboard motor engines. There is, however, one airstrip at Parasi that served the people of the southern part of Malaita but as mentioned elsewhere is still closed due to land dispute.

In Isabel province on the other hand there is no major road linking all the villages with the provincial centre located at Buala. For the whole island there is only one hospital and a number of clinics spread throughout the island. In many of the villages there is a mixture of permanent and semi-permanent houses and traditionally built houses, a feature that is similar to

that of Small Malaita. The picture painted here is typical of all the rural areas in Solomon Islands in terms of infrastructure development, demonstrating that the rural areas are lagging behind the main city of Honiara.

4.5.3 Natural Resource Endowment in the Case Study Area

In terms of resource endowments Isabel Island is well endowed with natural resources, which allow its people to produce goods such as betelenut, cocoa, copra, ginger, coffee, root crops and vegetables, kava as well as forest and marine products. Similarly, Small Malaita produces most of these products, except products such as ginger and coffee that do not grow well because of poor soil. In contrast, East Kwaio does not produce most of these local products. Copra, which is a popular commodity, and widely produced throughout the archipelago, is not produced in that region of Malaita. Hence from experience and direct observation it can be said that where there is more a greater variety of plentiful resources available in a particular region there is always a high demand for transportation, especially shipping, as the result of increased production of local produce.

4.5.4 Levels of Development

Table 4.2 presents some key development indicators for Solomon Islands. The country's GDP per capita, was US$2,312, (SBD10,3332) in 2011, which is one of the lowest in the Pacific region.

Table 4.2 Selected Development Indicators in Solomon Islands, 2011

Indicator	Value
GDP per Capita (US$)	2,312
Urbanisation Level (per cent)	19.7
Life Expectancy at birth (Year)	67.9
Employment Level (per cent)	23.0
Literacy Rate (per cent)	84.1.
Human Development Index (HDI), 2011	0.510
Percentage contribution of Industrial Sector to GDP (per cent)	10.1
Percentage contribution of agriculture to GDP (per cent)	28.3

Source: ADB, 2011 and UNDP Human Development Report, 2011a and 2011b; The Europa World Year Book, 2012: 4094.

Despite the country having more natural resources than many other countries in the region, Solomon Islands is categorised as a low income country implying that in terms of these indicators it is well below other Pacific island countries such as Kiribati and Samoa.

As shown in Table 4.2 only 23 per cent of the Solomon Islands' population were engaged in paid employment; about 65 per cent are not active in paid employment, and 12 per cent are unemployed (UNDP, 2011b).

Solomon Islands is the most fragmented island country among the larger countries in the South Pacific region. The bulk of the total land area of Solomon Islands is divided relatively evenly into at least the 6 large main islands. The Land Resources Survey of Solomon Islands, (Hansell and Wall, 1976, cited in Ward and Proctor, 1980) identified 43 widely dispersed agricultural opportunity areas of about average agricultural potential not exceeding 30 per cent of the total area. These agricultural opportunity areas, covering about 3,381 square kilometres are available and if other conditions such as the expanding labour supply exist, should give prospect of considerable expansion of commercial agriculture in Solomon Islands. However, evidently one of the key requirements for these agricultural opportunity areas to be developed for commercial agriculture oriented towards export production is the provision of effective inter-island shipping services, for both export directed produce and incoming consumer goods (Ward and Proctor, 1980).

4.6. Shipping Sector Development in Solomon Islands

4.6.1 Emergence of Shipping in Solomon Islands

The association between trade and shipping in Solomon Islands began in the middle 1880s when Western traders established their trading bases mostly on small islands. There were two main reasons for this. First, small islands were easier to defend and second, with their small population it was easy to negotiate with and convince them. To be selected as a base, however, such islands had to have a safe anchorage and must be close to central areas where people could produce and sell to the traders. Based on these two criteria Santa Catalina and Ugi in Makira Province and Mbara near Aola on Guadalcanal were selected (Bennett, 1989). In the 1860s and 1870s trading vessels operated from Santa Ana, an island at the eastern end of Makira to Ugi,

Aola, and then on to Roviana in the Western province and back. Another circuit was to take in commodities from Isabel, Vella Lavella, Choiseul and Ngela in the Central province and return to their bases at Santa Catalina and Ugi (ibid.).

However, the establishment of Honiara as the colonial administrative centre prompted the development of its port as the pivotal import and export port. In Solomon Islands during the colonial times and prior to independence a considerable proportion of the inter-island trade was carried on by small 'cutter-boats', which were mostly owned and operated by Chinese traders. At the time of independence only 10 Chinese-owned boats remained while many of these entrepreneurs had left the shipping business. Several reasons were given for the disappearance of the 'Wakus'[11] or Chinese 'beach traders'. First, was the rising costs relative to the freight rates, which were held down by both the government and mission owned vessels for which they received subsidies. Second, it was also because of the aging of both the cutter-boats themselves as well as the captains and the reluctance of the young family members to pursue the trade. And third, the key-determining factor was the high cost of obtaining new vessels and the anxiety about the prospects following the Solomon Islands' independence. For instance, as in Vanuatu at the time of independence, some politicians in Solomon Islands advised Chinese traders to leave their activities in certain areas in order to make way for vessels owned and operated by Solomon Islanders (Ward and Proctor, 1980: 412; Dunbar, 1984).

4.6.2 Inter-island Shipping in Solomon Islands

The type of development scenario discussed earlier that existed in Solomon Islands reflected the typical core–periphery model of development as discussed in Chapter 2. Honiara is the hub of development in the Solomon Islands where the major essential services such as the national referral hospital, the only College of higher education as well as numerous high schools, the only international airport, and the main export port, major business and manufacturing sectors, and communication centres are located in the capital city. In addition, the biggest old oil palm, cocoa and coconut plantations and tourist resorts and hotels are located on Guadalcanal where the capital is situated, hence most infrastructural development occurs on Guadalcanal.

[11] 'Wakus' is a popular term used by local Solomon Islanders that generally refers to Asians, but more specifically to the Chinese immigrants.

In terms of the core–periphery theory of development in Solomon Islands, then, the core would be regarded as the areas surrounding Honiara, the capital city, which hosts the main export and import port as well as providing the platform for the major economic and social activities and infrastructure. This also includes the surrounding islands and areas in proximity of the capital city. The periphery in this case would include everything else, out to the remote provinces of Rennell and Bellona and Temotu and many other remote locations like Ontong Java, Sikaiana, Small Malaita, and Santa Ana (Map 4.2).

Both centripetal and centrifugal forces, exist that dictate the movement of goods, people, and services toward and outward from Honiara, which has direct and strong implications for the demand for shipping services and the traffic flow of goods and people between Honiara and the rest of the country.

4.7. Conclusion

This chapter outlines the physical, socio-economic, and historical account of Solomon Islands. As discussed in this chapter shipping plays a crucial role for the movement of goods and services in Solomon Islands due to the high degree of fragmentation and the dispersal of islands. Besides, this is because of the fact that there is a high concentration of all development infrastructure, essential services, and major economic activities in Honiara and on Guadalcanal. In addition, Honiara is the host to the pivotal import and export port of Solomon Islands, which essentially creates the need for inter-island shipping services for the transportation of goods and commodities from and to Honiara. Hence in Solomon Islands, trade and inter-island shipping cannot be divorced since all the islands are widely scattered and a large proportion of its population lives in the rural areas, mostly on the major and secondary islands while some are living in the remote areas of this archipelagic nation.

CHAPTER FIVE

RESEARCH FINDINGS

5.1. Introduction

Inter-island shipping is indeed one of the determining factors of the development of the widely dispersed islands of Solomon Islands. Thus it is vital to highlight the possible impacts it has on the development of rural areas in Solomon Islands in particular to demonstrate the crucial role it plays in the development process of the SIDS within the Pacific region.

This chapter deals mainly with the analysis of data collected during the fieldwork and discusses the findings and results of this study. In so doing, it discusses the concepts probed into by this study in an attempt to highlight the impact of shipping on development of SIDS. Discussion of the underlying reasons for rural people moving between Honiara as the focal point and other islands are also discussed. Internal migration is one of the dominant processes of people moving from one place to another within the national boundary. The third section of this chapter focuses on shipping as the major mode of transport used in Solomon Islands, particularly with regard to the condition and effectiveness of the two shipping companies identified in this study.

5.2. Documentation analysis

5.2.1 Inter-island Shipping in Solomon Islands

After independence the Solomon Islands government became the major provider of inter-island passenger and cargo shipping, with some additional services provided by missions and private shipping companies. The distribution of imported manufactured goods and the transportation of copra have been major components of trading activities. In addition, government ships operated under the government's Marine Division also engaged the transportation of government personnel and officers especially doctors who from time to time tour the provinces, as well as moving people within the islands from one region to another, due to lack of proper roads on the islands. These government marine fleet mostly operates on shipping routes that were more remote and that they proved to be uneconomical for private and

profit-oriented ship owners. The mission ships were mainly engaged in the operation related to their respective church activities.

However, in the early 1990s, after having realized the huge amount of debt incurred in running its shipping fleet and with the imposition of the Structural Adjustment Programme (SAP) imposed by the International Monetary Fund (IMF) and World Bank, the government of Solomon Islands decided to privatise its national shipping fleet. The first step was the corporatisation of its shipping fleet as what was known as National Shipping Services Limited (NSSL). The ownership of all registered vessels before and after the privatisation is outlined in Table 5.1 which indicates the greater participation of government in shipping services provisions before the privatisation of its marine fleets.

Table 5.1 Ownership of Vessels before and after the Privatisation

Ownership	Before (1991)	After (2002)	Current (2012)
	Number of Vessels	Number of Vessels	Number of Vessels
Government	19	5	2
Private	186	123	194
Total	**205**	**118**	**196**

Source: TecnEcon-Hyder Consulting, 1999; Solomon Islands Marine Department, 2012.

Prior to privatisation, the government was operating 19 vessels, which included mixed type vessels, three patrol boats, and a couple of landing craft or barges. Currently, the present the government is operating only two patrol boats, which are mostly used for surveillance purposes. The large numbers of registered vessels are still privately owned and are operated for economic profits.

While the government has rid itself of the burden of subsidising its shipping services, the ensuing years after the privatisation exercise proved to be so difficult for most people in the remote and outlying islands. Currently the irregularity of inter-island shipping services is becoming a critical problem in many remote areas in Solomon Islands, as a lot of shipping companies are really finding it difficult to sustain their shipping service operations. Many quasi-government shipping companies are now out of service. Malaita Shipping Company (MSC), which provided shipping services to the most populated island of Malaita and had been serving

one of the most profitable routes in the country, the Honiara–Auki route, ran into great difficulties in meeting its financial obligations and has now been liquidated. Similarly, Transwest Shipping Company (TSC) and Temotu Shipping Line (TSL), the two quasi-government companies like Malaita Shipping Company, that owned MV Tomoko and MV Temotu respectively, faced the same problems and are both defunct.

Photo 5.1 The Failed Transwest Shipping Company, MV Tomoko.

Source: Photo by the Researcher, 2009.

This thesis attempts to probe into some of the underlying factors that are hindering the efficient operation of inter-island shipping as well as to probe reasons for the successful operation of certain shipping companies such as the Isabel Development Shipping Company. Malaita Shipping Company, Transwest Shipping Company and Temotu Shipping Line had been operating for less than a decade whereas Isabel Development Company Shipping has been operating for the last thirty years and it continues to flourish.

In total there are 196 registered vessels including the 38 dump barges (DB) in Solomon Islands, with the majority of ships being within the 30–120 gross registered tonnage range. The classes of registered motorised vessels comprised 16 cargo, 19 fishing, 36 passenger and cargo,

23 passenger, 1 tourist, and 38 tug boats, 23 landing craft, and 2 patrol boats (Solomon Islands Marine Department, 2012).

Table 5.2 Gross Registered Tonnage of all Ships in Solomon Islands in 2012

Gross Registered Tonnage (GRT)	Number of Registered Vessels
Less than 30	19
31–60	27
61–90	31
91–120	19
121–150	10
151–180	14
181–220	10
221–400	27
401–600	14
601–800	13
801–1000	7
More than 1000	5
Total	**196**

Source: Solomon Islands Marine Department, 2012.

After the privatisation, the Marine Department of the Ministry of Infrastructure Development (MID) has been responsible for performing the regulatory functions and navigational aids (UNESCAP, 1997: 39; Interview with Director of Solomon Islands Marine Department, 2012). The Division is responsible for the safety operation of all ships in terms of providing navigational aids and in times of need provides rescue and coordinates natural disaster related operations. In addition the division is charged with the implementation of the government's marine policy, which is outlined in the next section.

5.2.1.1 Privatisation of Marine Shipping in Solomon Islands

The status of shipping in Solomon Islands especially after the government's privatisation exercise in 1995 is that the inter-island shipping services overall are deteriorating, most especially during the aftermath of the ethnic tension. Today shipping in Solomon Islands is slowly gaining momentum as the world economy tilts towards Southeast Asia and Asia, in particular China. Currently, the Marine registry office is registering at least two domestic ships in a month. At the international context, there is observed to be more than one ship at a time berthing at Honiara Harbour waiting to discharge its imported cargoes which was never seen

before (Personal interview with Director of Marine, 7 August 2012). However, care must be taken when interpreting these results as this research was undertaken mostly on two distinct areas that are not the most economic routes in Solomon Islands. As mentioned elsewhere many ships are competing to service the two most economic routes, Honiara–Auki and Honiara–Western province, while partially neglecting the other inner routes[12] and ignoring completely the outer routes[13].

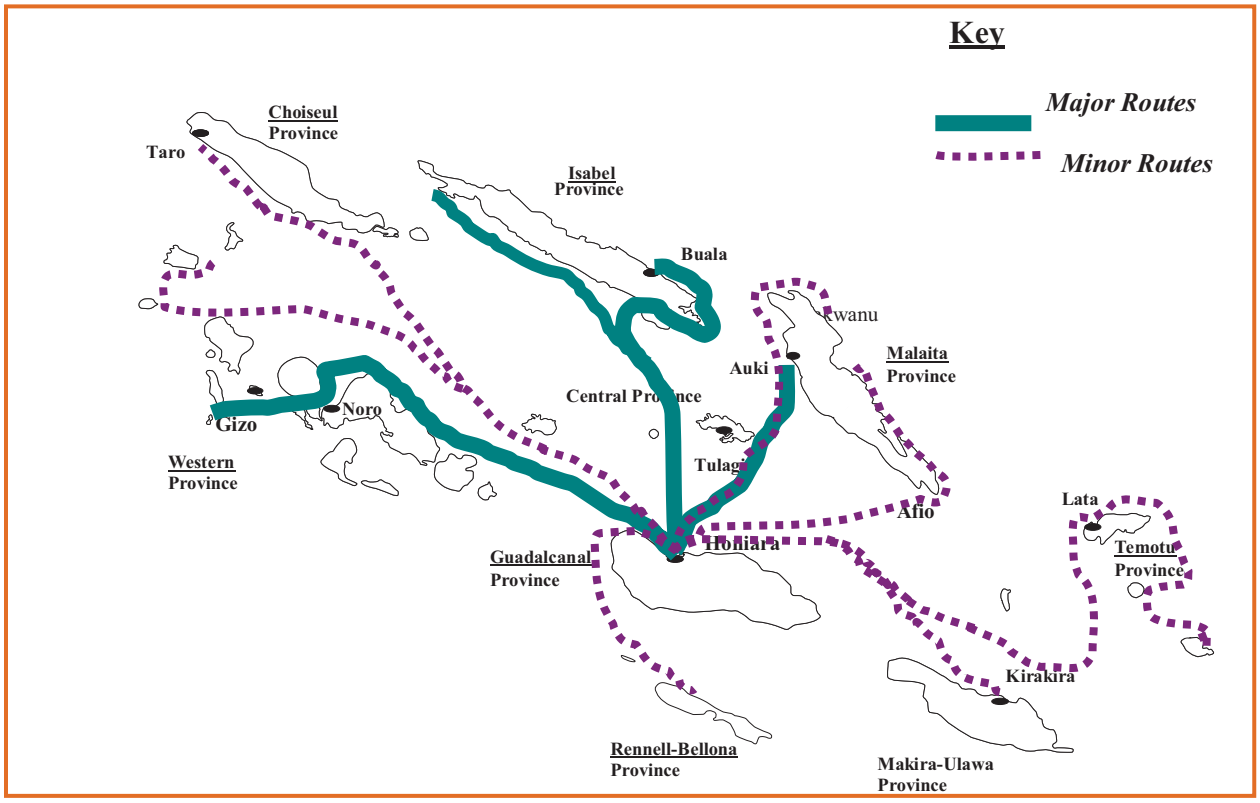
5.2.1.2 Shipping Routes

Along some of the shipping routes, such as the Honiara–Auki one, which involves a relatively shorter distance and the Honiara–Gizo route, which although the distance involved is rather long (Table 5.4) connects parts of the Central Islands province with the many islands in the Western province and the industrial Noro port experiences congestion almost all year round. Given such scenario one wonders why so many companies serving such routes were not being able to make supernormal profits. The two shipping companies that serviced these two routes Malaita Shipping and Transwest Shipping of the Western province that operated MV Tomoko are both now bankrupt. Currently the Honiara–Gizo route is serviced by MV Kosco, owned by Transol Shipping, and other ships on irregular basis. Map 5.1 shows the major and minor routes and the intensity of trade traffic of goods in the late 1990s. Currently there are no updates on local data available pertaining to the traffic flow of goods between Honiara and other islands, from either the Ministry of Finance Statistics office, Solomon Islands Port Authority (SIPA) or the Marine Department.

TecnEcon–Hyder (1999) identified two major types of routes, namely: the major, which is also the most economic route[14] that is are shown by the solid green line and the minor shipping routes shown by dotted line (Map 5.1). Previously the major shipping routes are the Honiara–Gizo and Honiara–Auki which accounted for about 48 per cent of total volume of local traded goods (TecnEcon–Hyder, 1999; Harbour Master office, 2012). At present, the Honiara–Buala sector has established itself as a major trading route, which is now sustaining the successful operation of IDC shipping to Isabel.

[12] Refers to the shipping routes to islands surrounding Honiara, Guadalcanal
[13] Includes shipping routes to the remote outlying islands such as Ontong Java, Sikaiana, Rennel-Bellona, and Anuta and Tikopia in the Temotu province.
[14] Economic routes are the ones that can be run cheaply, while an uneconomic route is one where you get nothing in return for what you spent to provide the service.

Map 5.1 Major and Minor Traffic Flow routes in Solomon Islands, 1990s



Source: By Researcher based on TecnEcon–Hyder (1999).

According to TecnEcon–Hyder consultants' (1999) estimates, of the major shipping routes Honiara–Auki boosted a traffic flow tonnage of greater than 60,000 tonnes of goods whilst the Honiara–Gizo route accounted for 40,000–60,000 tonnes of traded goods and Honiara–Isabel flow was 5,000–20,000 tonnes of goods. The minor shipping routes accounted only for less than 5,000 tonnes of goods.

5.2.1.3 Shipping Problems in Solomon Islands

Despite the economic viability within this sector, a number of shipping companies in Solomon Islands are really finding it difficult to sustain their shipping service operations. Earlier study (Gini, 1984) found that one of the major constraints within the domestic shipping in the Pacific region is the widespread problem of aging and inefficient fleets. In Solomon Islands as in other Pacific island countries this problem of having old vessels still persists. Table 5.3 shows distribution patterns of vessels according to their period of operations. Out of the total number of

the registered ships, 43 vessels, i.e. about 21 per cent, have ages of up to 20 years old while 31 ships or 15.8 per cent of registered vessels are more than 31 years old. This has greater implications for the problem of high operation costs for most old vessels. For instance, it was reported that since 1996 and during the ethnic tension, Malaita Shipping Company (MSC) was losing $175,000 a month on operational costs (The Solomon Star, 2004). This was due to the deteriorating physical condition and aging of its fleet of ships.

Table 5.3 Distribution Patterns of Registered Vessels by Age in 2012

Age of Vessel (years)	Number of Registered Vessels	Per centage
5–10	40	20.4
11–20	69	35.2
21–30	43	21.9
31–40	31	15.8
41–50	9	4.5
More than 50	4	2.4
Total	**196**	**100.0**

Source: Solomon Islands Marine Department, 2012.

Reuben Moli, a former Malaita premier, once remarked that Malaita Shipping Company for 10 years of its operational life never made any profit (The Solomon Star, 2004:6), a view that was supported by Johnson Houma, the revenue collection manager in the Auki Treasury office (Personal communication with Revenue collection manager, 2012). This was the result of the many problems that are inherent to the shipping sector.

One of the major problems facing quasi-private shipping and private shipping companies is the payment of ship fares, especially when they are paid on board the vessels. As one observer remarked, the main problem in destroying Malaita Shipping Company was what he termed as "free handshake" fare. This practice usually happened when the ships' crew members collect fares from passengers. This practice has been with the MSC for quite some time. The researcher also recorded that during the time of collection of fares, the shipping crew collect whatever amount the passengers give to them. The researcher witnessed on one occasion that two local traders from South Malaita had their cargoes taken to one of the ship's crew's room to avoid the payment of freight, in return for a carton of beer that was consumed during the voyage to the island. At times certain individuals simply refused to pay their fares and behaved aggressively

when asked to. As a result a security firm was engaged on each of the Ramos'[15] trips, especially during the aftermath of the ethnic tension, to ensure passengers' compliance with payment of fares and freights.

Another major problem facing Malaita Shipping Company and many private shipping firms in Solomon Islands has been poor management and lack of discipline on the part of the office personnel. Certain individuals are more concerned about their pay than the amount of efforts exerted on their job (Researcher's interview with former Assistant Operations Manager, MSC). Moreover, for the Malaita Shipping Company there were huge political interferences by the provincial premier and certain provincial members on the management of the company's affairs. This was simply because MSC was actually registered by some key politicians and the provincial government executive through an SINPF loan guaranteed by Malaita NPF members' contributions. During the whole registration process the Malaita provincial ordinances, the Malaita Development Authority (MDA) stamp, and resources were abused to fulfill all required formalities. The MDA in return was awarded a 99 per cent token share in the MSC while MSC had a 1 per cent share. Throughout the life and operations of MSC, politicians could simply take free passage or give names of their relatives, supporters, and cronies to the shipping clerk for passengers to have free rides on any MSC ships. In terms of record keeping all information pertaining to the operations of the company was kept and controlled by the management in Honiara and very little information or records were sent to MDA in Auki, which was the major shareholder of the company (Researcher's interview with Former Acting General Manager of MDA, 2012). Edward Leanafaka, the Manager of Endro Endeavour Shipping Company, also remarked that the cause of the poor management of MSC was lack of cooperation and respect for its policies and regulations (Hemming, 2004).

Because of these problems and due to the lack of loan repayments to the Solomon Islands National Provident Fund (SINPF), in 2004 Ramos 2 was once put on tender and caused the near collapse of the Company at that time. This threatening situation went on up until the company was liquidated. While that may be the case for some shipping companies, some shipping companies such as the Isabel Development Company Shipping (IDCS) and other privately owned ships continue the provision of shipping services quite profitably and so are

[15] Ramos is the name of the MSC's ships. Its three ships named as Ramos 1, 2 and 3.

meeting their obligations, yet as mentioned earlier are doing so by concentrating only on the more economic routes at the expense of the smaller outlying islands that are really experiencing some difficulties in developing their rural communities.

IDC Shipping in comparison with Malaita Shipping Company enjoys a cordial working relationship with their provincial government in Buala. This stems from the fact that IDC Shipping operates on a private shipping ownership model where its founders sold shares to all interested individuals and community based organisations, which created a real sense of ownership on the part of the Isabel populace. Its six member board of directors comprised of the most prominent and educated leaders and elders from Isabel Island both at home and in Honiara. Overall, there were only a few individuals who want to be free riders on the company ships but have to pay their fares when demanded to. There is little practice of the 'free hand shake fares' among the crew of Isabel Development Company ships.

IDC Shipping continues with its successful ship operation. During the last three years, 2009, 2010, and 2011, IDC Shipping company made total profits of $186,000, $3 million and $2 million respectively (Researcher's interview with IDC Shipping Manager, 2012). IDC recently acquired a second–hand 191 GRT cargo boat, MV Arnavon, (Solomon Islands Marine Department, 2012) which was purchased mostly from its profits in preparation for its participation in the newly approved shipping franchising scheme that will ensure safe, effective and efficient, reliable shipping services to the remote and uneconomic routes identified in the country under the franchising scheme. This is another a remarkable achievement for IDC Shipping, as the ship was largely bought with the company's own funds, expanding its 2-ship fleet to 4-ship fleet, with two passenger vessels and two 191 gross tonnage cargo vessels, which now servicing Temotu province and some parts of Western province (ibid.).

5.2.1.4 Ageing Ships, Funding Problems and Shipping Company Bankruptcies

Apart from the major problems outlined above this study identified the aging of ships as another problem associated with the shipping sector. Indeed this problem is more serious than financial problems for purchasing of new ships. Rather it is to do with how the scarce funds were allocated and used for the provision of shipping services.

Currently whatever funds have been made available by the government of the day are being politicised (Researcher's interview with Director of Solomon Islands Marine Department, 2012). Several cases mentioned here provide evidence of the misallocation, hence a total waste of funds, especially when politicians were authorised to have access and used these funds to purchase bucket boats. Shortland Shipping (Shortland constituency), Renbel Shipping Company (Rennel and Bellona constituency), Atebimo Shipping Company (East Guadalcanal constituency), and Haura Shipping (West Makira constituency), to name a few, were set up using Rural Constituency Development Funds (RCDF). The irony of these shipping companies is that although they were set up with the use of public funds, yet they ran as family businesses of the respective members of Parliament even after they were voted out of parliament; foremost among these are the shipping companies that are operating poorly in Solomon Islands. Renbel shipping is bankrupt with huge losses and has since joined the ranks of MSC, TSL and TSC as another failed shipping company, while the other mentioned shipping companies, from observation, are certain to be out of business soon.

5.3 Survey Analysis

5.3.1 Household and Socio-economic Background in Malaita and Isabel

A household survey was carried out to establish household characteristics and general socio-economic conditions of people in two particular provinces of Solomon Islands in Malaita and Isabel, in a comparative manner.

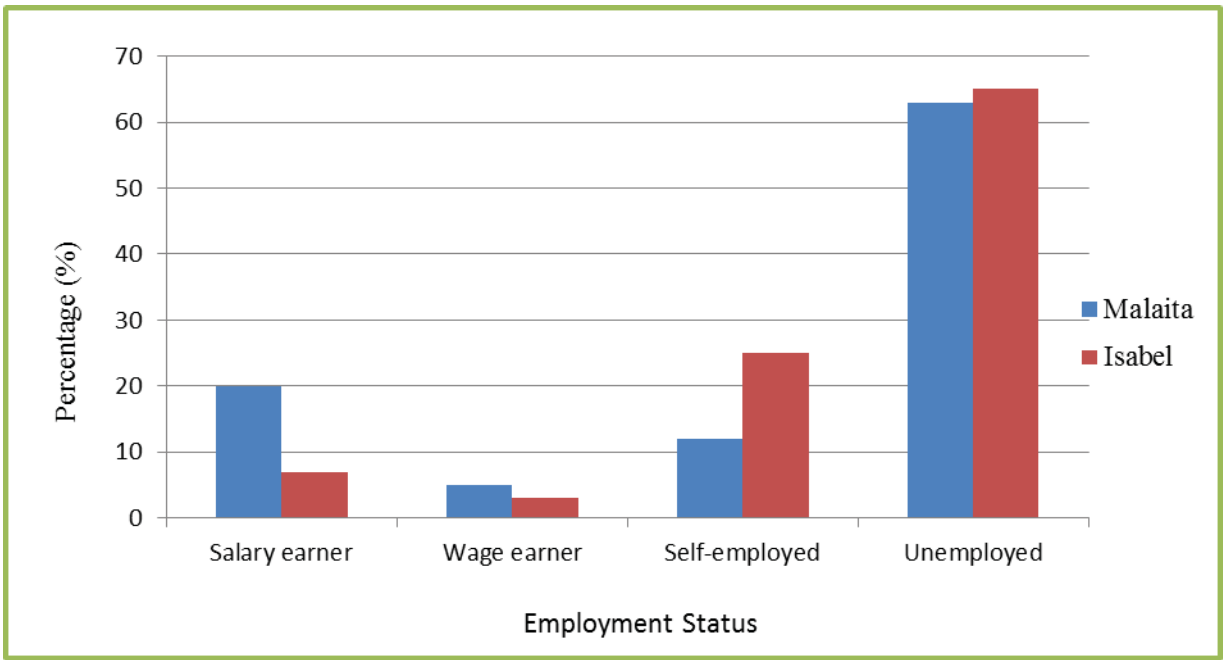
5.3.1.1 Employment status

In terms of employment patterns for Malaita and Isabel provinces, a large proportion of the respondents for both provinces reported that they were unemployed (Figure 5.1).

According to the Household survey (2012), of the two provinces, Isabel showed a very high per centage of unemployment, that is 65 per cent, while Malaita province accounted for 62 per cent The employment status of the two populations showed that Malaita had 20 per cent compared to 6 per cent in Isabel of its rural populace engaged in the salary earning category in formal sector. The presence of the community high schools and clinic, especially in Sa'a on Small Malaita, is the main income source for the salary earners. In Isabel one of those interviewed earned a salary from working as a nurse and the other individual was managing a

community wholesale business, particularly in Kolotubi village. In the wage earning category both the provinces showed a low per centage of workers in the wage sector, representing 4 per cent and 3 per cent for Malaita and Isabel respectively. This category is made up only of persons who are working for others, such as chain saw operators and truck drivers. Figure 5.1 shows Isabel had 25 per cent and in Malaita 12 per cent of the household heads were self-employed. For the self-employed heads of households, the respondents include village trade storeowners, petrol dealers, truck owners, and small farm holders.

Figure 5.1 Employment Status of Household Heads in Malaita and Isabel Provinces in Solomon Islands, 2012



Source: Household Survey by Researcher, 2012.

In many countries of the South Pacific region, such as Solomon Islands, Fiji and Papua New Guinea, the local people own almost 95 per cent of the land hence rural dwellers have the chance to earn at least some cash despite being unemployed. In Solomon Islands, their sources of cash is mainly from sales of produce such as root crops and vegetables, fish, sawn timbers, and agricultural products that are derived from their natural resources from both land and sea.

5.3.1.2 Age

The age of the household heads interviewed in Malaita and Isabel range from 18 years to 65 years. Of the respondents who participated, about 41 per cent and 59 per cent were females

and males respectively. In both the provinces internal migration is a rapid and ongoing process. This has been facilitated by inter-island shipping services. A large, young and active population is moving to Honiara and other parts of the country. As a consequence, the majority of the non-migrant rural population comprises very young and old people.

5.3.1.3 Income level

This distribution has an impact on the level of production of goods and services in the rural areas. The proportion of the household heads that earned cash is shown in Figure 5.2.

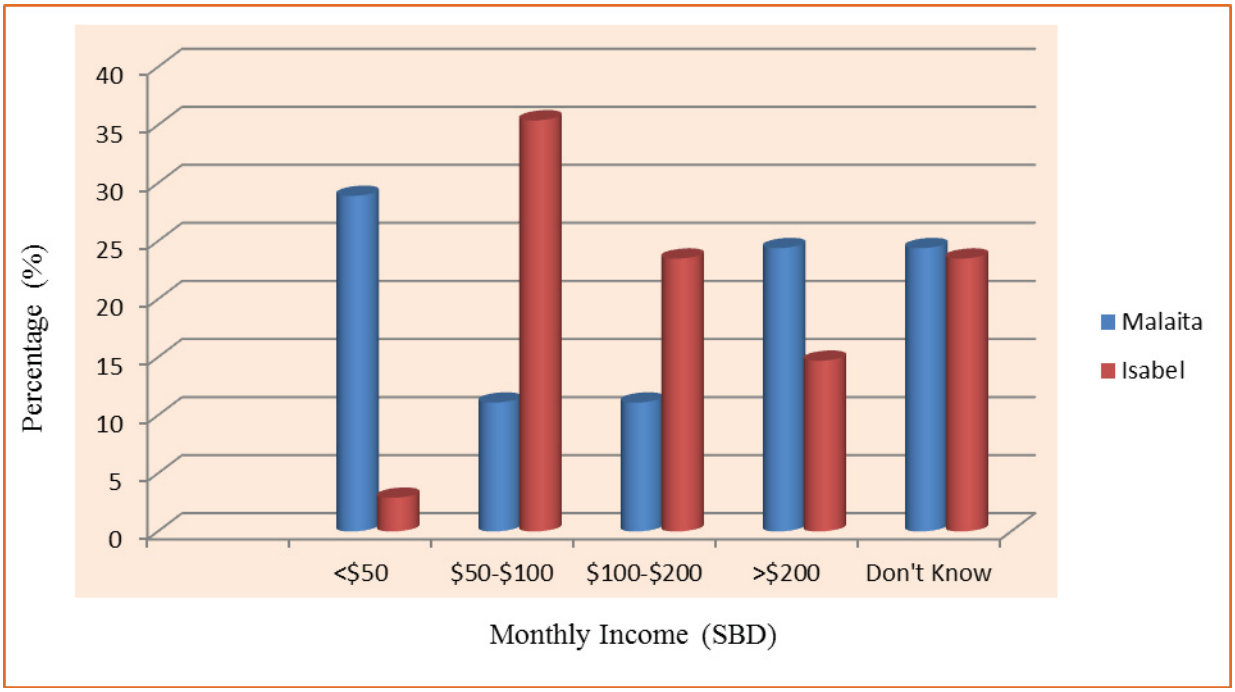
As indicated in Figure 5.2 the proportion of heads of households that earned less than SI$50 was higher in Malaita (29per cent) than Isabel (3per cent). The household heads that earned income between $50 to $100 was higher in Isabel (35per cent) than Malaita (11per cent). The household heads earning between $100 to $200 was higher in Isabel (23per cent). The proportion of household heads earning more than $200 was higher in Malaita (24per cent) compared to Isabel (15per cent). As noted earlier this rather high per centage for Malaita was attributed to the existence of rural community high schools that provide employment for qualified individuals in Solomon Islands. The increased production in Isabel is due to the effective and regular shipping services provided by the province's shipping company. This had enabled the people of Isabel to have access to regular weekly and fortnightly shipping services. This encourages people to produce more for sale. As a consequence greater demand was created for shipping services. This is reflected in the high income earning capacity of the people within the two constituencies under study in Isabel province.

In the two constituencies in Malaita where the study was carried out only Small Malaita produced a wide variety of goods for sale largely in the domestic market and in Honiara. The locally produced goods in Small Malaita that are sold domestically are: copra, fish, crabs, vegetables (mostly cabbages), sawn timbers, root crops such as yams, pana and potatoes. East Kwaio, on the other hand, mostly produces vegetables and root crops and fish for sale particularly in its own locality. This explains why a small per centage of the respondents in Malaita stated that they travel to Honiara to 'sell their goods'.

There exists high correlation between increased goods production and shipping services. The increase in production and the regularity of shipping provision to the islands also explains

an increasing mobility of the rural population to and from Honiara. This is more so in the case of Isabel province as depicted in Figure 5.3.

Figure 5.2. Monthly Income of Household Heads in Malaita and Isabel Province



Source: Household Survey, 2012.

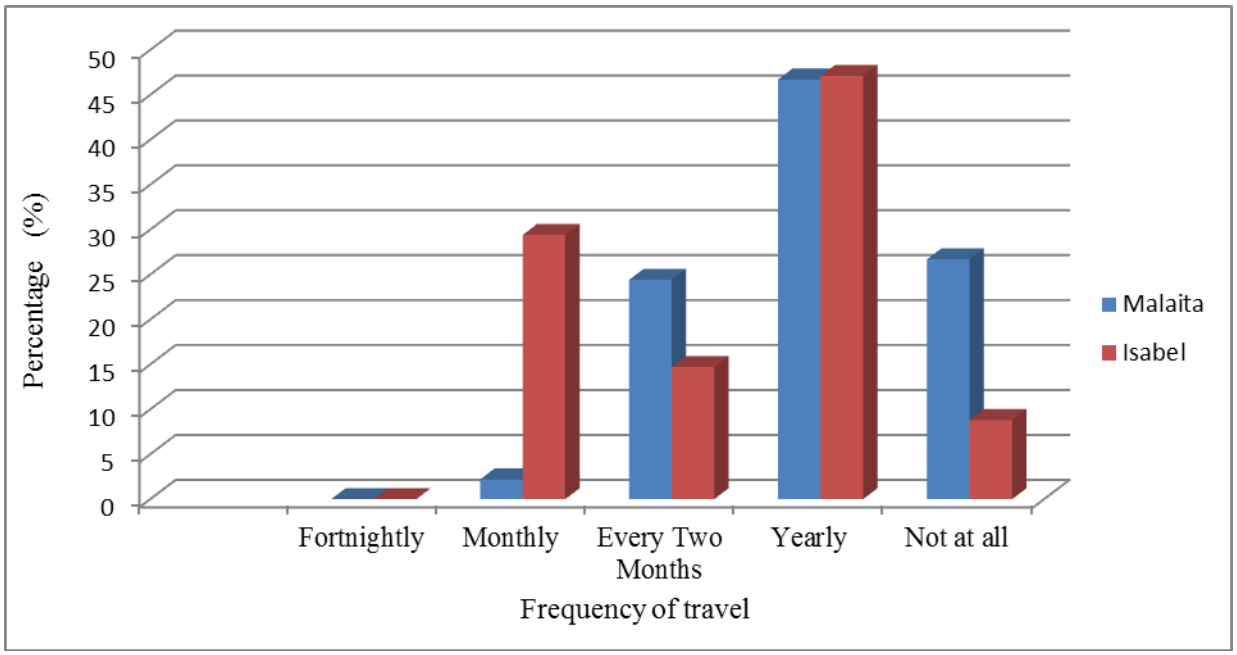
5.3.1.4 Frequency of Travel

Figure 5.3 shows that few individual members of the households travel to Honiara on a fortnightly basis from either province. However, the frequency of travel on a 'monthly' basis from Isabel is greater than Malaita. About 29 per cent of the household members including male and female in Isabel travel to and from Honiara, the majority of whom were males. The corresponding figure was a mere 2 per cent in the case of Malaita. This was mainly in the case of Small Malaita constituency.

However, 24 per cent of the household members in Malaita said they travel to Honiara 'every two months'. In contrast, 15 per cent of the household members in Isabel travelled to Honiara over every two-month period. An equal proportion of 47 per cent of the household members in Malaita and Isabel responded travelling to Honiara on yearly basis. The main reason given for a high per centage of household members in Malaita travelling to Honiara on a yearly

basis is because of work commitment on the part of those who are formally employed and also for the reason of low production of local produce for the market. About 27 per cent of household members in Malaita and 9 per cent in Isabel responded that they never travel to Honiara.

Figure 5.3 Frequency of Travel by Ship to Honiara by household members from Malaita and Isabel Provinces



Source: Household Survey, 2012.

5.3.2. Population, Distance, Costs and Shipping Tonnage Relationships in Solomon Islands

In order to establish the rise of inter-island shipping, this section attempts to establish population, distance, and volume of tonnage relationships; distance, transport costs, and tonnage relationships; and the relationships between distance, transport costs and number of passenger moving into and out of Honiara city. Here the patterns emerging from these relationships are highlighted and expounded to show the significant role of inter-island shipping in Solomon Islands. These relationships are deduced from Table 5.4

5.3.2.1 A Three Case Scenarios: Population, distance, volume and cost relationships

In proving the stated hypothesis that 'the greater the distance between two islands; more the transportation costs; the lesser the frequency of inter-island shipping services' it is more

apparent in Solomon Islands that for this particular hypothesis it is a positive statement. In terms of transportation costs again it was less expensive to transport both goods and people to Isabel than to the Southern part of Malaita. Against these major hassles as we have seen from our earlier discussion MV Isabella and Estrella are making twice-weekly shipping services to the island of Isabel while Ramos 1 only called at the Afio port on a fortnight basis and sometimes it even reduces its trips to South Malaita to only once a month because of the high fuel and oil costs was related to the rather long distance involved (Researcher's interview with Former Operations Supervisor, 2012). Accordingly it has been suggested by the operations supervisor that for this route the government should step in and subsidise the costs of fuel and oil. Thus, we can say that the hypotheses is accepted as distance and high fare and freight charges limit the frequency of trips between any two locations as in the case of South Malaita, one of the remote places in Solomon Islands. This is also evident in the case of Temotu province as noted earlier regarding their shipping company.

In considering inter-island shipping in Temotu province in terms of transportation costs, distance, and the frequency this particular province is as said earlier remained at the mercy of private charter boats and mission ships. The distance to Temotu from Honiara is the longest between any island in Solomon Islands and Honiara, that is, 685 km and in association with such a distance are the very high freight costs of SI$900 per ton and passenger fare SI$450 (Table 5.4). It is a common feature of the fare and freights that they are both distance-sensitive, which means that the longer the distance the higher the freight rates per ton and also the higher the fare per person. Consequently, at the moment ships only called at Lata, the provincial capital of Temotu, if lucky on a monthly basis otherwise there is always very high uncertainty about the shipping trips to Temotu. Their very own shipping company as mentioned already was serving the people of Western province instead, whereas the principal aim of establishing Temotu Shipping Line (TSL) was to serve the shipping needs of the people within Temotu province. Evidently, this is an exemplification of how distance played a critical role in influencing the transportation costs and in turn the frequency and operation of inter-island shipping services in Small Island Developing States like Solomon Islands.

Within the framework of the general Gravity Model as outlined in Chapter 2, which expressed that 'the greater the population of two centres the greater their interaction and also a

function of distance, i.e. the greater the distance the less the interaction'. Table 5.4 shed some light on these relationships.

Table 5.4 Distance, Traffic Flow of Goods, and People and Transport Costs in Shipping Sector in Solomon Islands

Province	Island main port of call	Distance from Honiara (km)	Inter-island shipping connection between	Number of passengers (2011)	2009 population	Annual cargo tonnage by sea (2011)	Freight tonnes between Honiara and the islands (2011)	Transportation costs (2011)	
								Per tonnage SI$	Per passenger SI$
Malaita	Afio	164	South Malaita–Honiara	2,533	12,742	4,079	3,138	520	200
Isabel	Buala	147	Isabel–Honiara	13,783	26,158	12,742	13,149	790	243
Temotu	Lata	685	Temotu–Honiara	3,004	21,362	6,664	4,067	900	450
Western	Gizo	404	Western–Honiara	15,213	76,649	17,998	-	800	320
Central	Tulagi	44	Central–Honiara	-	26051	11,816	-	210	120
Makira	Kirakira	248	Makira–Honiara	4,096	40,419	16,460	5,439	530	280
Renbell	Tinggoa	257	Renbell–Honiara	884	3,041	2,293	-	-	230
Choiseul	Panggoe	432	Choiseul–Honiara	2,445	26,372	9,777	1,967	880	480

Sources: By Researcher based on TecnEcon–Hyder Consultant, (1999); Harbour Master (2012); Microsoft Encarta, 2011. - Unavailable data.

Given the background information about the areas of study within the two provinces, as Table 5.4 shows in 2009, the population of Isabel and South Malaita were 26,158 and 12,742 respectively while that of Honiara city is 64,609 people. Here South Malaita is used because of the availability of the required information and at the same time it is also an area of this study. It is also worthwhile to mention here that in Solomon Islands the unavailability of data for this sort of study is a hiccup for making proper analysis. Nevertheless, where such information is available it can be utilised sufficiently to explain and address the key issues of this study. Thus,

from Table 5.4 in terms of distance we know that the port of Buala in Isabel is relatively closer to Honiara, and it is 147 km than from Honiara to Afio port on Small Malaita, which is 164 km. Hence, in relation to the population, distance and tonnage there was more traffic flow in terms of the movement of freight tonnage, in 2011, that is 12,742 tonnes between Honiara and Isabel province than between Honiara and South Malaita, which was merely 3,138 tonnes (Table 5.4). Therefore, in this instance given the large population and a shorter distance, there were more interactions (traffic flow of goods) between Isabel and Honiara as compared with Honiara and South Malaita, which involved a relatively small population and longer distance, as compared to Isabel Province.

In terms of the distance, transport costs, and number of passenger relationships a closer examination of Table 5.4 reveals that there was not a neat pattern emerging as in the case of distance, population, and tonnage flow relation. Here we take three case scenarios to highlight this result.

(i) Scenario One

Considering the case of South Malaita with Isabel we can see that Isabel has a relatively shorter distance, 147 km to Honiara than South Malaita to Honiara, which is 164 km. Yet the fare to the port of Buala in Isabel is slightly higher, $243 than that of Honiara to Afio, $200. The result of this in terms of the number of people moving between Honiara and Isabel and Honiara to Malaita was 13,783 and 2,533 respectively. Here we see a situation in which there is a shorter distance yet a relatively higher fare and there was a very high traffic flow of people moving between Honiara and Isabel. On the other hand, from Honiara to South Malaita there is a rather longer distance with relatively lower fares yet there was very little traffic flow between these two locations. This was mainly because of other factors such as viability of shipping operation and demand for shipping services, volume of traffic flow and available space.

The development of inter-island shipping depends upon many factors such as: population and population growth of islands, levels of development of island, production of goods for export, educational level of population, resource base potentials (natural and human resources), distance from the markets and capital city, port facilities, natural harbour, demand of local market for goods and services, distribution system, economic viability of sector, and infrastructural facilities.

(ii) Scenario Two

Further we look at the case of South Malaita and Honiara in relation to that of Honiara and Makira province. The distance between the latter is 248 km as compared with that of Malaita to Honiara, which is 164 km. The associated fares involved were between Honiara and Makira the fare charged is $280 and between South Malaita and Honiara is $200, the flow of passengers between these two destinations was 4,096 passengers for Makira and 2,533 passengers travelled between Honiara and South Malaita. In this particular instance, we saw that the distance between Makira and Honiara is longer than that between Honiara and South Malaita yet the former destination has lower fare charges than the latter destination and the related passenger traffic flow was that Makira with a longer distance and relatively high fare resulted in more passengers that travelled to Honiara. The primary reason is that there is an increase in ship size (gross tonnage) for Makira whereas it is the opposite for South Malaita. Moreover, this shipping route Honiara–Makira also includes the traffic flow to Kirakira, which is the provincial centre for Makira province where a lot of economic and social activities take place whereas the South Malaita shipping route is mainly to a rural location where less economic and social activities exist hence there is less interaction between these two locations.

(iii) Scenario Three

Between Choiseul and Honiara the distance is 432 km while the fare is $480 and the resultant passenger flow was 2,445. Therefore, as indicated here, between Makira and Honiara there is a shorter distance and low fare and there is more passenger flow than between Choiseul and Honiara. Choiseul provincial due to its remoteness caused by this long distance factor is being considered and included in the reserve list of trade destinations that are potential candidates to be covered under the new franchising scheme arrangement.

5.3.2.2 Distance, Transportation costs, and Tonnage relationships in Solomon Islands

Table 5.4 in relation to the distance, transportation costs, and tonnage of shipping relationships reveals that there exists a much neater pattern. There was a linear relationship that surfaced in the sense that the shorter the distance, the lower the freight rates per tonne the higher the tonnage carried between two locations. For instance, Isabel with a distance of 147 km to Honiara and $790 per ton resulted in a tonnage flow of 12,742 tons. In comparison to Temotu with a distance of 685 km from Honiara but with a $900 per tonnage boosted only 4,664 tonnes

of goods in 2011. Still Makira that has a much longer distance of 248 km from Honiara and freight per tonnage cost of $530 which despite the longer distance, slightly cheaper freight induced a traffic flow of 16,460 tonnes of goods to the island. Whereas Choiseul Island is 432 km and the associated freight costs of roughly $880 per tonnage resulted in a flow of only 9,777 tonnes. In certain areas in Solomon Islands, where despite a high population, the shipping services provided is poor due to the long distances involved and low production of goods.

5.3.3. Mobility Patterns

Figure 5.4 and Table 5.5 explain some of the main underlying factors that motivate people to travel to Honiara, which demonstrate their increase mobility[16]. The people in Isabel seem to be travelling more frequently, almost on a monthly basis, than those from Malaita. This is no doubt because they produce more for sale in the market and transport is readily available.

5.3.3.1 Reasons for Increased Mobility

So far we have discussed the basic attributes of the heads of households surveyed and the frequency of their travel to Honiara. The following discussion looks at the major reasons why people in rural areas travel to other islands, particularly to Honiara. Needless to say Honiara is the core of all the economic and social development activities, government administration and other institutions: financial, non-governmental organizations (NGOs), overseas missions and embassies, and it is where there is the largest concentration of urban dwellers.

Table 5.5 Reasons for travelling to Honiara by Households members from Malaita and Isabel

Reasons	**Malaita (N = 45)**	**Isabel (N = 35)**
Visit friends/relatives	40.0	32.4
Sell goods	2.2	38.2
Purchase cargoes	8.9	11.8
Education	4.4	0.0
Buy goods	17.8	8.8
Others	4.4	8.8
Never travel	22.2	0.0
Total	**100.0**	**100.0**

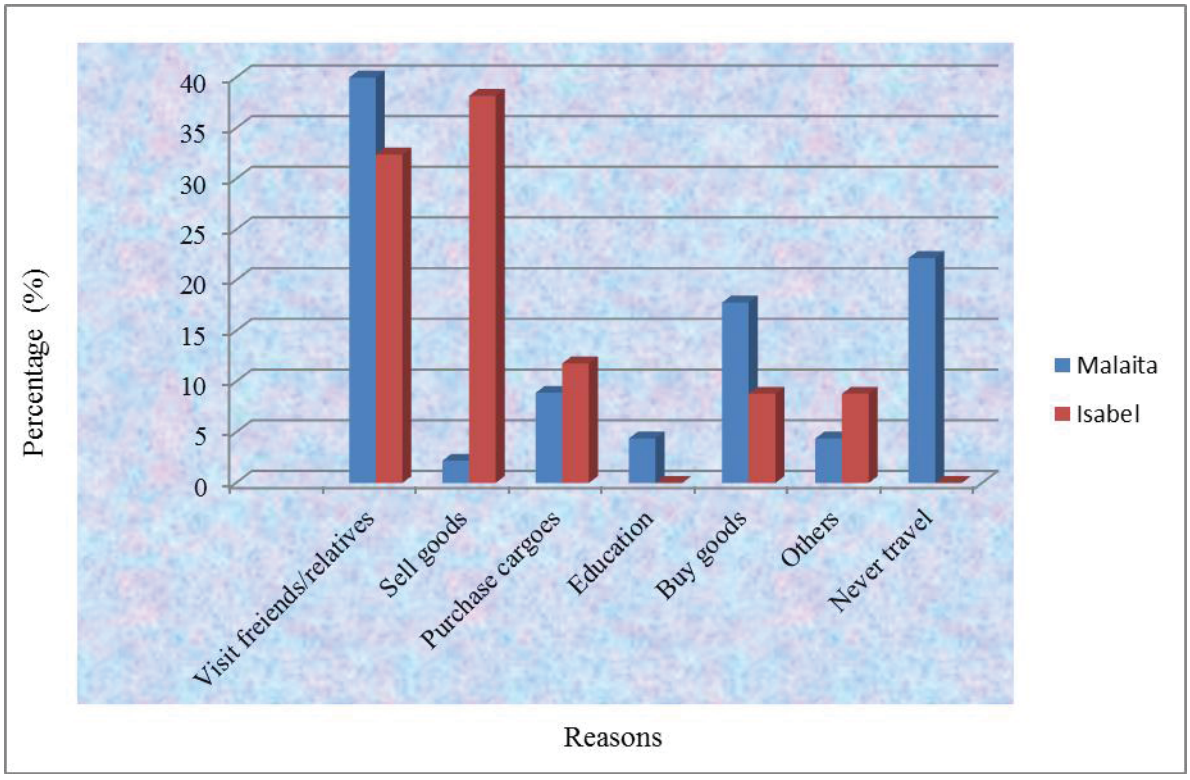
Source: Household survey, 2012.

[16] Mobility means the movement of an individual from one point to another.

Table 5.5 shows that overwhelmingly, the movement of people from Isabel to Honiara City is for visiting friends and relatives and trading; for the purpose of selling their produce in the market and buying goods. About 38 per cent of respondents in Isabel said travelling to Honiara is for the purpose of selling their produce. Another 20 per cent travel to purchase cargoes and other goods. In contrast, only 2 per cent household members travel from Malaita for selling goods.

A large proportion, (about 40 per cent) from Malaita travel to Honiara for the purpose of visiting friends and relatives and shopping. This may be due to the factor of strong 'wantokism' of the populace in Malaita. However, little more than one-fourth of respondents in Malaita said they travel to Honiara for purchasing goods.

Figure 5.4 Reasons for Travelling to Honiara by Household members from Malaita and Isabel



Source: Household Survey, 2012.

Due to the large concentration of development infrastructure and essential services, the job market and the pool of labour supply for the industrial sector, government administration and private organizations, and the presence of the main trading port, Honiara City acts as a

centre of attraction for the rest of the country. The city thus creates a national market for all goods and services both local and imported that attracts the rural people to travel to Honiara.

As mentioned earlier, Isabel is well-endowed with both land and marine-based resources. In Isabel province, particularly from Kolotubi, the local produce that is sold in Honiara includes: betlenut, cocoa, copra, ginger, root crops and vegetables and recently, kava. Ghoveo, a coastal village is located on the windward (east) side of Isabel Island. The people mainly rely on the sea for most of their income. These people mainly catch fish and sell them either in Buala, which takes about half an hour's travel, or sell at Honiara market. In East Kwaio, on the other hand no one sells their produce in Honiara. The area represents an insignificant proportion in Malaita travelling to Honiara.

Photo 5.2 Sprawling Kaevanga port, Isabel province

Source: Photo by the Researcher, 2009.

Another reason for going to Honiara, as shown in Figure 5.4, is to purchase cargoes, as Honiara is the pivotal import port in Solomon Islands. The proportions of respondents in this category were 9 per cent and 12 per cent for Malaita and Isabel respectively. Those who gave

reason for movement to Honiara to purchase cargoes are the small storeowners. Indeed, all small trade storeowners in Solomon Islands obtain their cargoes from Honiara. In Hograno district in Isabel, the villages with large wholesale businesses are Kolotubi and Kolomola, situated in the hinterland of the island, while their businesses are booming at their port of call at Kaevanga. At this port, the regular weekly shipping service that runs from Kaevanga to Buala boosts the local market. Whenever their company ship comes on its twice-weekly service, the people there would sell their goods to the passengers travelling to Buala or to Honiara. Only 4 per cent of the respondents in Malaita mentioned that they travel to Honiara for education purposes. No one travels to Honiara from Isabel for educational purpose. Another reason reported was for 'buying goods'. About 18 per cent responded in Malaita, as compared 9 per cent in Isabel said they travel to Honiara for buying goods. This is mainly because of the teachers teaching in rural Secondary schools, who are used to travelling to Honiara to buy goods, as they think the goods are much cheaper there than in the rural areas. The 'other' category includes mostly community leaders, who often travel to Honiara for seeking financial assistance from aid agencies and organizations, and from their members of Parliament.

The results reflect that most of the Malaita households travel to Honiara mainly for purchasing their basic necessities and other goods and visiting their relatives. The rate of resource exploitation has a close bearing on shipping services. The two constituencies under study demonstrated the more remote areas in Solomon Islands producing fewer goods to offer to Honiara market. By contrast, Isabel province offers varieties of local produce that are sent to Honiara market. In other words, the resources exploitation in Malaita is seen to be very limited as compared to Isabel province, and this generates less mobility to demand for shipping.

5.3.3.2 Mode of Popular Transport

Table 5.6 shows that road transport is not a popular mode of transport for the respondents travelling between Honiara and other islands in Solomon Islands. It is used only when travelling in and around Honiara and in other large islands such Malaita and Makira, particularly along their west coasts where roads facilities are available. The main mode of transport used when travelling to and from Honiara for most of rural people was of course shipping. Table 5.6 shows that in Isabel province 97 per cent of the respondents travelled to Honiara by ship as compared to 58 per cent from Malaita. Although the distance between Isabel and Honiara is greater than between Malaita and Honiara, the main reasons for the higher percentage of Isabel people using

shipping services include the easy access, regularity of shipping services, relatively cheaper fare compared with other modes of transport, and the capability of ships carrying bulky goods. Other reasons are due to the long distance and the huge open sea between Honiara and Isabel, such that no one dares to risk their life travelling by canoe.

Table 5.6 below shows the popularity of modes of transport used by people in travelling from Malaita and Isabel to Honiara City.

Table 5.6 Mode of Transport used when travelling between Malaita and Isabel Provinces to Honiara City (per cent)

Mode of Transport	Responses (per cent)	
	Malaita (N = 45)	**Isabel (N = 35)**
Ship	57.8	97.1
Aeroplane	2.2	0.0
Canoe	2.2	0.0
Either plane/ ship	13.4	2.9
Never Travel	24.4	0.0
Total	**100.0**	**100.0**

Source: Household Survey, 2012.

In Malaita, about 2 per cent of heads households responded that they used canoe to travel to Honiara and another 2 per cent travelled to Honiara by plane. Another 13 per cent of people interviewed stated that they used both 'ship and plane'. Those who travelled using both these modes of transport in Malaita are mainly the small business trade storeowners in and around Atoifi where they have easy access to an airstrip and there is a bi-weekly flight linking Honiara, Auki and Atoifi provided by Solomon Airlines. These small business owners usually get information through radio wireless and radios about the charter boats. They mostly rely on shipping charter, as Malaita Shipping is now bankrupt and had failed to provide the regular service to the Northeast and East Kwaio regions of Malaita.

Whenever the East Kwaio business owners learned of any charter boat coming to their area in the week ahead they would travel to Honiara by plane to meet the charter boat and return

to their home with their cargoes on board the incoming charter boat. Such an expensive exercise is not only counterproductive for the small business owners but is also a great concern for the rural dwellers because of the increased prices of goods in the rural retail shops. Still others who could not afford such a luxury ride would simply take a two-day walk; sleeping in the villages in the interior of the island before going down to Auki, the provincial capital of Malaita, the following day and catching a boat to Honiara from there. Such a hectic effort is also a major reason that hinders the mobility of the rural populace in many parts of Solomon Islands. The main reason why people of East Kwaio often choose to travel by plane to Honiara is because it is less expensive to fly there and purchase the cargoes and return than to stay in Honiara waiting for the time for any ship to sail to East Kwaio.

In Malaita, mostly in East Kwaio, 24 per cent of those surveyed indicated that they never travel to Honiara. In contrast, the household members in Isabel are more mobile.

From the shipping development viewpoint, the main reasons for travelling to Honiara and other islands is selling of local produce in the local market as well as the exporting of goods to overseas markets. These are the main driving forces creating high demand for shipping in Small Island Developing States such as Solomon Islands.

5.3.3.3 Preference of Market

In order to establish linkages between level of economic interactions between Malaita and Isabel provinces with Honiara respondents were asked to reflect upon the market they choose to sell their produce. Table 5.7 shows that in Malaita, 56 per cent stated that they sold their goods within Malaita only. About 29 per cent of respondents mentioned that they sold their goods in 'Honiara' while another 16 per cent revealed they 'never' sell anything. Similarly, in Isabel province, 24 per cent mentioned that they sold their goods within Isabel, 18 per cent sold their commodities in both 'Isabel and Honiara'.

A large proportion of respondents, i.e. about 56 per cent, stated that they sell their produce in Honiara City. Only 3 per cent of the Isabel respondents indicated that they 'never' sell any goods. This analysis reveals that Honiara city is the main market for most of the households of Isabel province who travel to Honiara for selling their produce. In contrast, Malaita people are less mobile and sell their produce largely in their local market. This suggests

that the demand for shipping services created between Isabel and Honiara is greater than Malaita and Honiara.

It is also evident from Table 5.4 that the flow of people and goods were greater between Isabel and Honiara than between Malaita and Honiara. A kind of circular movement[17] takes place between the provinces of both Malaita and Isabel, and Honiara City.

Table 5.7 Household Responses about main Market of Sale of their produce in Malaita and Isabel Province

Area	Malaita (N = 45)	Isabel (N = 35)
Isabel	-	23.6
Malaita	55.5	-
Honiara	28.9	55.9
Malaita & Honiara	0.0	-
Isabel & Honiara	-	17.6
None	15.6	2.9
Total	**100.0**	**100.0**

Source: Household Survey, 2012.

5.3.3.4 Reasons for choosing Honiara Market

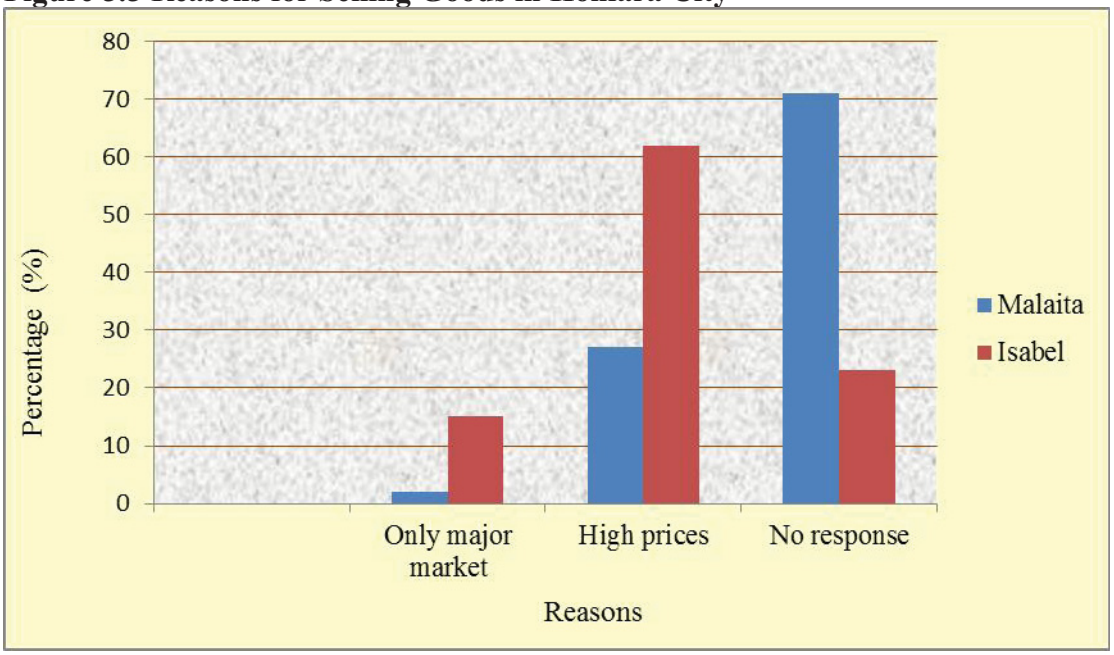
The main reasons people from Malaita and Isabel provinces opt for selling their produce in Honiara are shown in Figure 5.5.

About 2 per cent of Malaita respondents said that Honiara is the only major market available where they can sell their locally produced goods, while 15 per cent of households from Isabel province responded in the same vein (Figure 5.5). Household heads from both provinces nominated the high prices as driving the choices of Honiara City as the market place. About 62 per cent of Isabel province and 27 per cent of Malaita respondents felt this way about the higher returns, which outweighed the travel costs. Clearly, the major reason why people opt to travel to

[17] A circular movement refers to a regular movement of people to and fro from the provinces to Honiara city to sell their produce and return to the provinces with cash and then to go back to the main city with more produce and so forth.

Honiara to sell their goods is because of the higher returns which create increasing demand for shipping services.

Figure 5.5 Reasons for Selling Goods in Honiara City



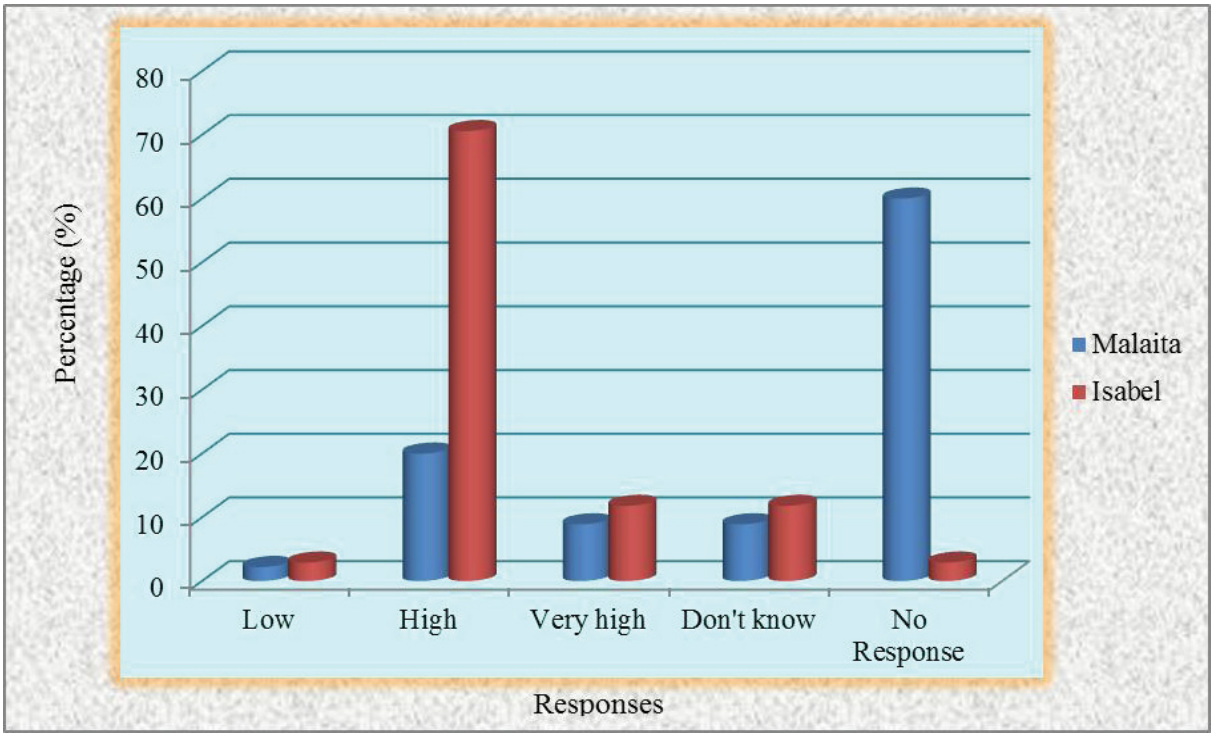
Source: Household Survey, 2012.

5.3.3.5 Profit Margin

As indicated in Figure 5.6, a large proportion of people of Isabel (i.e. 71 per cent) who travelled to Honiara City to sell their goods mentioned that they received a large profit margin when they sold their goods in Honiara. In the case of Malaita, only 20 per cent responded that they get higher returns. In the 'very high' category, the responses were 9 per cent and 12 per cent in Malaita and Isabel respectively. The proportion of those who did not respond at all to this question was higher in Malaita than Isabel. About 60 per cent for Malaita and 3 per cent from Isabel province did not respond. This reflects the fact that the people of Malaita, especially in East Kwaio, are less mobile. This is mainly because they are mostly subsistence growers and produce mainly for their own consumption and for the local market only, which is located at the wharf at Atoifi, a port of call. Moreover, the people of East Kwaio produce very little products for sale in the market. Surprisingly, copra, which is a very popular commodity in Solomon Islands, is not produced in most villages in East Kwaio. Coconut trees do not grow as well there as in many other parts of the Solomon Islands, which explain why many people from East Kwaio, are working in major plantations throughout Solomon Islands.

Figure 5.6 shows the responses related to level of the profit margin when selling in Honiara City.

Figure 5.6 Responses about the Profit Margins by Selling Goods in Honiara by the people of Malaita and Isabel Province



Source: Household Survey, 2012.

5.3.3.6 Migration to Honiara City

Human migration is one of the contributing factors towards the increasing flow of people to Honiara city and between the different islands. While people in Solomon Islands travel to Honiara mainly to sell their goods, purchase cargoes and buy consumer goods, there are other causes for people's movement to and from Honiara. Table 5.8 shows the responses of the households whose family members had moved to Honiara and elsewhere on a long-term basis.

Table 5.8 Household Responses about Migration to Honiara City from Malaita and Isabel Province

Response	**Per centage (per cent)**	
	Malaita (N = 45)	**Isabel (N =35)**
Yes	51.1	47.1
No	48.9	52.9
Total	**100.0**	**100.0**

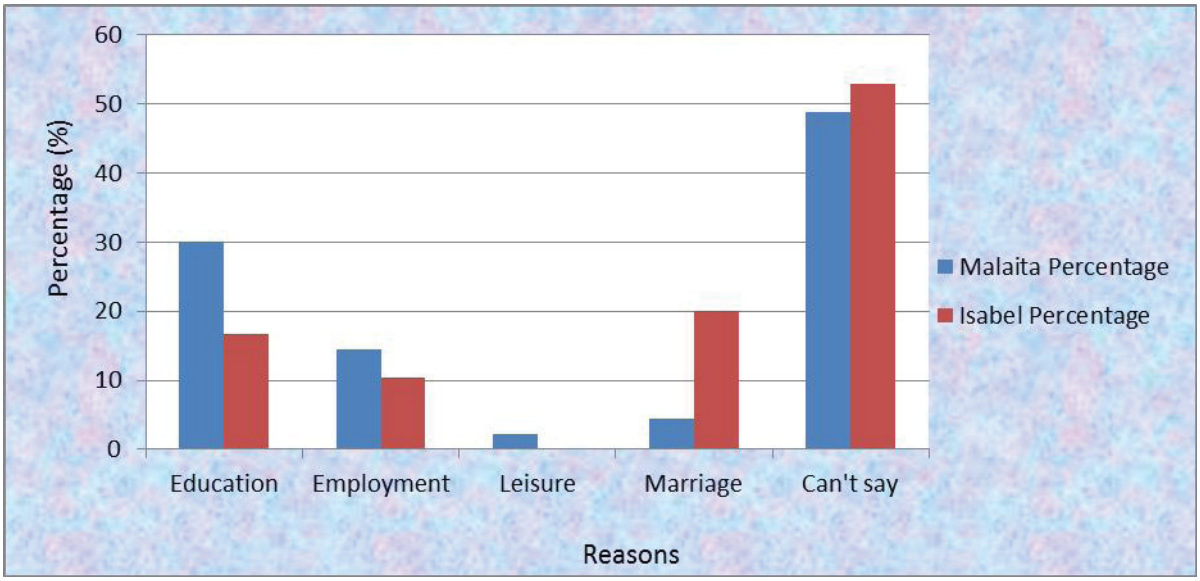
Source: Household Survey, 2012.

For those respondents from Malaita province on the question of family members had moved to Honiara, 51 per cent said 'yes' and 49 per cent responded with a 'no'. In the case of Isabel, these figures were 47 per cent and 53 per cent respectively. Clearly this showed that migration is a common phenomenon among the people of Malaita and Isabel in Solomon Islands. As the development process continues and spatial interaction increases, the migration process is expected to expand further in the future.

5.3.3.7 Purpose of Movement to Honiara

The underlying factors for the increased migration of people from rural to urban centres are outlined in Figure 5.7**.** The major purposes for people's movement to Honiara from the two provinces were recorded as: education, employment, leisure and marriage. About 30 per cent and 17 per cent of sampled households in Malaita and Isabel respectively responded that their family members migrated to Honiara mainly in search of better education services.

Figure 5.7 Purposes of Movement by family members to Honiara City



Source: Household Survey, 2012.

The proportions of households whose family members migrated to Honiara for employment purposes were 15 per cent from Malaita and 10 per cent from Isabel province. Leisure is one of the least purposes for which people move to Honiara. Only 2 per cent moved to Honiara from Malaita for leisure purposes while none did so from Isabel. Marriage was also

another reason why people moved to Honiara. Nearly 4 per cent for Malaita and 20 per cent for Isabel province moved to Honiara for marriage-related reasons. Marriage, employment, and education purposes mainly induced migration to take place towards Honiara another, the process which contributed significantly to high demand for inter-island shipping services in Solomon Islands.

From the foregoing discussion the important point is that, given the resources endowment, people's attitude towards development, particularly the operation and management of public enterprises as well as the organization of the people in the rural areas in the two provinces under this study, we can see that the people in the two constituencies in Isabel province participate more in trade, hence they travel more often than the two constituencies under study in Malaita province. In other words, the mobility of people from Isabel was higher than that of villages in the more remote constituencies of Small Malaita and East Kwaio. Moreover, the income of households in Isabel province is much higher than that in the two Malaita constituencies. This is due to the fact that the people in the constituencies in Isabel utilise their resources more and produce more goods for sale in both the home market and the Honiara markets. Their shipping services between Isabel and Honiara are very much effective in enhancing their trading activities for Isabel.

5.3.3.8 Rural and Community Development

In terms of community development, as this study revealed, Isabel province is not blessed with good infrastructure such as roads, port facilities including wharves, decent sanitation facilities, and air transport links. Few villages have access to banking services while communication is not a problem due to the existence of internet and mobile services. Despite those setbacks some of the villages in Isabel province can boost huge wholesale businesses and village cooperative stores. Quite interestingly, many villages around Isabel also have their own village credit schemes for which they have their own offices, manned by the local people themselves. These trade-related activities boost the income and welfare of the rural people. In Kolotubi village, for instance, the villagers who owned the cooperative village stores, also purchase and export products such as cocoa and copra and sell them either in Honiara or at Yandina. The cooperative store in addition to the purchasing of these two major commodities also pays bonuses or dividends to all the shareholders. Over the years the money generated from the trading activities within the village itself has transformed into the wholesale business that is

currently flourishing at their port of call. None of the trading activity taking place in Isabel did exist in Malaita province. Therefore the study found a marked difference between Isabel and Malaita provinces in terms of resource utilisation, development, accessibility to regular supply of goods and shipping services.

5.4. Shipping Services Problems and Challenges

An earlier discussion looked at the nature of shipping in Solomon Islands and the shipping related problems. Here, the focus is on the conditions, quality and effectiveness of the two provinces' shipping companies, the Isabel Development Company Shipping (IDC) which runs MV Isabella and MV Estrella and Malaita Shipping Company (MSC) that ran the three Ramoses, (1, 2, and 3).

One of the purposes of conducting of household survey was to elicit information pertaining to the quality of the shipping services being provided by the two identified shipping companies.

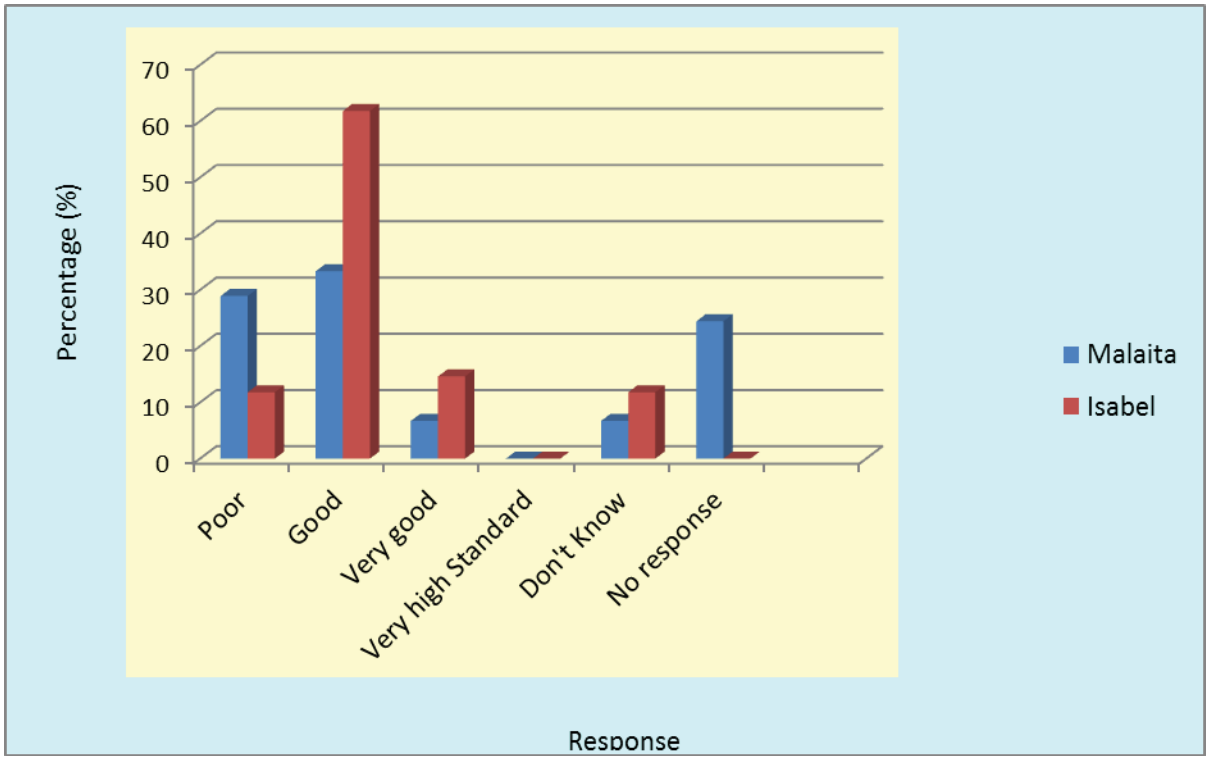
5.4.1 Conditions of the Shipping Vessels

Figure 5.8 shows that the responses about the physical condition of the two respective shipping companies. Clearly, as indicated, IDC Shipping maintains its vessels, MV Isabella and MV Estrella, which were rated with 76 per cent in the response category of both 'good' and 'very good' in terms of the conditions experienced on board the ship while travelling to and from Honiara. This is indeed a rather true reflection of the way the shipping officers and crew of this particular company look after and maintain the company vessel. It does also show the attitude of the users of the services of this particular company. For example, rarely would one find graffiti on any of the walls of MV Isabella or MV Estrella, which is the easiest defacing thing one would have done to public assets. Besides the facilities provided on board were also well looked after and were used properly as compared with those of the Ramos fleet.

Figure 5.8 shows that nearly 29 per cent responded that the condition of the vessel of Malaita shipping company was 'poor' as compared to only 4 per cent that responded for the case of MV Isabella and MV Estrella of Isabel Development Company. About 40 per cent of respondents responded either 'good' or 'very good' for Malaita Shipping Company. This is a

reflection of the poor maintenance of the Ramos fleet as well as a reflection of the 'no-care attitude' of most of its customers. Besides, another major contribution to the poor state of these vessels was the ageing of the vessels themselves. For instance, Ramos fleets were 15 to 23 years old and Isabella fleet was 23 years old.

Figure 5.8 Conditions of the Shipping Vessels in Solomon Islands



Source: Household Survey, 2012.

The problems generally experienced by the two shipping companies, from customers' viewpoint, were: high charges, congestion, poor service delivery, and very time consuming in terms of both travelling to the islands and unloading of cargoes from the ship to the shore.

5.4.2 Customers' Satisfaction

In this study the consumer satisfaction aspect was also covered by the household survey as an indicator to measure effectiveness of Company Ships. According to the Survey (2012), the two major problems encountered by customers of the two concerned shipping companies were: 'very high charges of fares and freights' and the problem of 'congestion'. Generally, many users

of shipping services in Solomon Islands perceive the fares and freights being charged by shipping companies as very expensive.

Table 5.9 provides the responses as experienced by the consumers in the islands.

Table 5.9 Customers' Responses about the Problems experienced when travelling on Company Ships

Problem	Percentage	
	Malaita (N = 45)	**Isabel (N = 35)**
High charges	73.4	67.7
Congestion	2.2	2.9
Poor service	2.2	2.9
Time consuming	2.2	0.0
High charges/congestion	17.8	26.5
Don't know	2.2	0.0

Source: Household Survey, 2012

Table 5.9 shows that about 73 per cent responded in Malaita and 68 per cent in Isabel that the fares and freights charged by the two respective shipping companies were too high. Similarly, 18 per cent of the respondents in Malaita and 27 per cent of the respondents in Isabel responded 'high charges and congestion' as the main problems associated with Company Ships.

Many of the respondents expressed congestion as one of the major concerns in and endangering the safety of the passengers. Indeed from the researcher's experiences and observation it was noticed that congestion on inter-island ships is a great concern in terms of passengers' safety. Many shipping companies tend to carry more than the accepted maximum limit of number of passengers, especially during the peak periods, which are during the Christmas and after the New Year seasons in December and January and between the months of June and May.

Photo 5.3.Typical inter-island shipping congestion in Solomon Islands

Source: Photo by James Ashley, 2004.

5.4.3 Shipping Crews' Behaviour

Relating to the quality of service being provided by the two shipping companies' ships a question was asked to ascertain the behaviour of shipping crew.

Table 5.10 highlights the customer service delivery on the part of the shipping officers and crew in terms of their conduct and their interactions with passengers.

An analysis of shipping crew behaviour reveals that both of the company ships' crews were seen as friendly, with the *Ramos* fleet accorded 60 per cent by the Malaita respondents and MV Isabella and MV Estrella with 41 per cent (Table 5.10). Nearly 44 per cent of the Isabel respondents stated the behaviour of shipping crew was helpful, compared to only 4 per cent for Malaita respondents.

Table 5.10 Responses about the Behaviour of Shipping Crews

Behaviour of Crews	Percentage	
	Malaita N = 45	**Isabel N = 34**
Unfriendly	4.4	8.8
Friendly	60	41.2
Very Friendly/Helpful	4.4	44.1
Don't Know	31.2	5.9
Total	**100.0**	**100.0**

Source: Household Survey, 2012.

Overall, MV Isabella and MV Estrella deliver a relatively better service for their customers than does the Ramos fleet. The crew of the latter sometimes were observed drinking on board during some of the two larger Ramos (Ramos 1 and 3) trips with some of the passenger friends and or wantoks. This sometimes resulted in the compromise of the payment of fares and freight.

5.4.4 Shipping Services during Ethnic Tension in Solomon Islands

In terms of the effectiveness of the service provision on the part of the two shipping companies' vessels, the test is whether the vessels were calling at the two islands' ports of call during the height of ethnic tension in Solomon Islands between 2000 and 2003. The responses are outlined in Table 5.11.

Table 5.11 Responses about Company Ship calling at Ports during Ethnic Tension in Solomon Islands

Response	Percentage	
	Malaita (N = 45)	**Isabel (N = 35)**
Yes	42.2	73.5
No	57.8	26.5
Total	**100.0**	**100.0**

Source: Household Survey, 2012.

For the two shipping companies' ships their calling at the two respective islands ports of call depends on whether the port of call is located on the island. As shown in Table 5.11 for the Ramos fleet, the responses in terms of 'yes' and 'no' are in the proportions of 42 per cent and 58 per cent respectively. The 42 per cent responding in the 'yes' group are mainly those from Small Malaita while the 58 per cent represented those respondents in East Kwaio. The responses in Isabel, on the other hand, are in the proportions of 74 per cent in the 'yes' category and 27 per cent with a 'no'. The 74 per cent of those who responded in the 'yes' group reflect those from Kolotubi village and the 27 per cent are those respondents from Ghoveo village, which is located further down east of Buala, the provincial centre of Isabel. During the ethnic tension between Malaita and the Guadalcanal militants the ship did not sail to the ports of call in the areas under study in Malaita, primarily for the safety of the passengers. For Isabel the determining factor could be attributed to the manager's decision, as it was relatively safer to travel to the island than to Malaita during the aftermath years of the ethnic tension.

Overall both shipping companies could be said to be quite effective in attempting to serve their customers even during period of ethnic tension. Given such circumstances, however, as the results show, Isabel Development Shipping Company was much more effective in delivering the services to the people of Isabel than the Ramos fleet. MV Isabella and MV Estrella as mentioned earlier, served the province on a twice-weekly basis. The twice-weekly service was mainly for the Honiara–Kaevanga–Buala sector and Honiara–Babahaero–Kaevanga route that is the trip around the southern end and to the northern end of the island of Isabel respectively, for the third trip run, along the eastern side, that is from Honiara–Buala–Kia sector. Isabel Development Company Shipping is continuing to serve its people more effectively and is growing stronger in its operations (Researcher's Interview with general manager, IDCS).

Malaita Shipping, on the other hand, served on a fortnightly basis for the routes of Honiara–Makwanu–Atiofi and Honiara–Manawai–Afio. Currently, however, Malaita Shipping Company no longer provides services to these routes as the Company is bankrupt and out of service. Thus, these two routes are left at the mercy of the privately owned shipping companies.

Photo 5.4: IDC Shipping, MV Estrella loading cargoes at Point Cruz wharf, Honiara

Source: Photo by the Researcher, 2009.

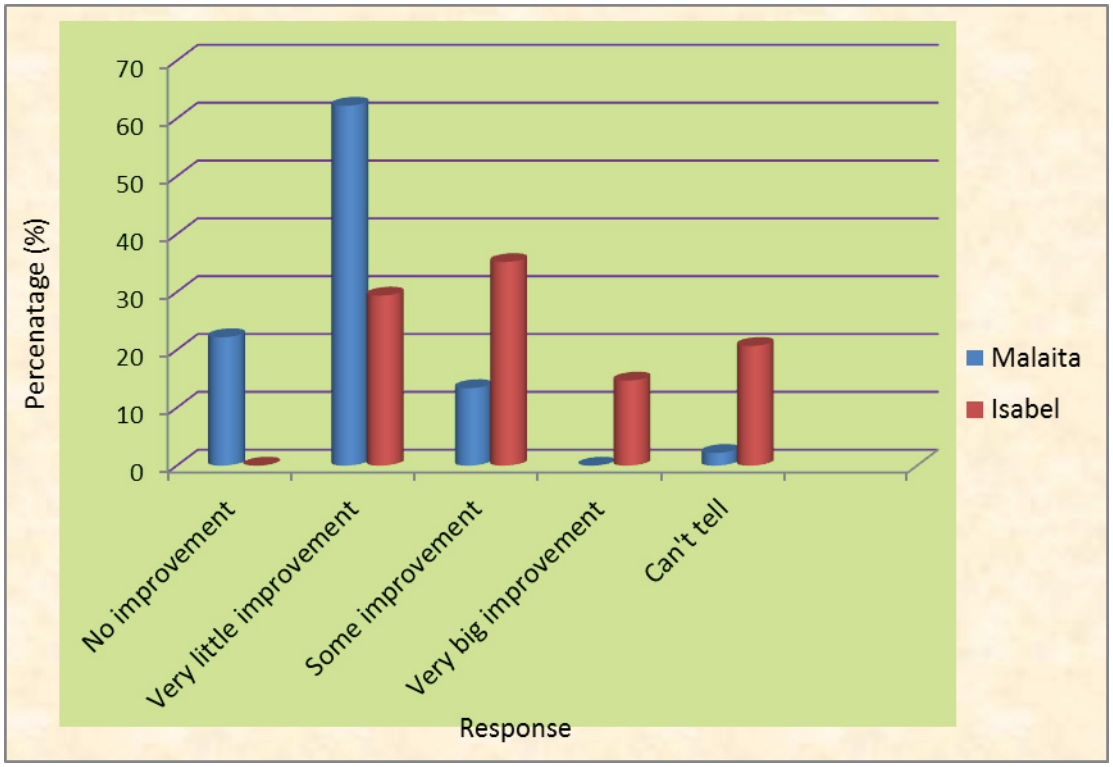
5.4.5 Improvement in Shipping Services

Figure 5.9 presents the responses from participants from Malaita and Isabel about the status of the inter-island shipping service provisions in Solomon Islands after privatisation. The scale in this category ranged from 'no improvement, to 'big improvement' in shipping services after privatisation of government's shipping fleet.

About 22 per cent responding in Malaita said there was no improvement in shipping services after privatisation in 1995. There was, however, no response in this category for Isabel Shipping Company. On the other hand, 62 per cent of households in Malaita felt that there was 'very little improvement' after the privatization of the government's shipping fleet. Similarly, 29 per cent echoed the same voice in Isabel province. The respondents from Malaita stated that there is continued deprivation of shipping services to the two remote parts of Malaita province. This means that the poor shipping services experienced for the last few decades are still prevalent in these two places and the situation is only worsening. A few respondents stated that

there were 'some improvements' in terms of the inter-island shipping provisions. About 13 per cent from Malaita and 25 per cent from Isabel province responded with 'some improvement'. In the 'very big improvement' category, none responded in Malaita while 15 per cent did so in the two constituencies from Isabel province (Figure 5.9). Obviously, in relative terms, Isabel continues to enjoy the regular shipping services provided to the island. Since the establishment of Isabel Development Company shipping more than thirty years ago, it has been providing regular shipping services to the people of Isabel province. For these respondents there was very little difference between before and after the privatization of the government ships since their own shipping company provided most shipping services to the island.

Figure 5.9 Improvement in Shipping Services after the Privatisation of the government's Marine shipping fleet in Solomon Islands



Source: Household Survey, 2012.

5.5. Government Shipping Policy

Because of the importance of shipping transport to the country's economy, two successive governments since 2008 saw fit to reform the transport sector, in particular, the shipping service sector to the effect that it is effective, efficient, reliable, equitable, and most

importantly, safe for public usage and consumption. Underpinning all of these reforms is a comprehensive law reform agenda including regulations under the Shipping Act 1998 and the more recent Maritime Safety Administration Act, 2009. Under this reform agenda was the creation of Solomon Islands Maritime Safety Authority (SIMSA) which is empowered under the latter Act. Underpinning this reform exercise is the shift of focus of the changes to give clear responsibility for meeting Solomon Islands' obligations to a range of international conventions the country has ratified to such as MARPOL, STCW and International Load Line (Interview with Director of Solomon Islands Marine Department, 2012).

The current Solomon Islands NACRA government's recent policy statement that set the agenda and programme of action for 2012 for the marine transport sector states:

> *building including bridges, wharves, houses etc., by designing and built to safe standards as required in natural disaster prone regions, shipping and all transport industries operate to safe and efficient standards that ensure passenger and cargo safety, and national transport plant that is well planned, affordable and conducive to both economic growth and social wellbeing, and professional care and maintenance of all government housings, materials, equipment, vehicle fleet, plant and machineries.* (Solomon Islands Marine Department, 2012; Solomon Star, Wednesday 30th, 2010: 1).

This policy statement was translated into various *regulatory objectives* for the newly established Solomon Islands Maritime Safety Administration (SIMSA):

1. Shipping (Registration). Regulations for all matters concerning the registration of vessels, the various interests in vessels, by ownership or through marine mortgages. The regulations also provide for the first time protection of the rights of Solomon Island seafarers who travel overseas to bring vessels to the Solomon Islands for registration.

2. Shipping (Navigation Aids). Regulations for the placement, maintenance and operation of navigation aids, and revised light dues to ensure sufficient revenues from domestic and foreign vessels to cover the cost of maintaining marine navigational aids. With the new network of lights and buoys constructed under recent EU projects, the priority now is to ensure that new laws adequately provide for their protection and upkeep, and to expand the network of lights in due course.

3. Other new Regulations will apply a system of pilot certification, and regulatory controls over research vessels that operate in Solomon Island waters.

4. Revised Regulations have been prepared to apply all aspects of the Convention on Seafarer Training, Certification and Watch keeping (STCW) and to the training, certification and engagement of seafarers in Solomon Islands.

5. Other new and amended regulations will follow later this year, with emphasis on some much needed regulation of small craft and in relation to marine pollution.

   Other work agendas are stated below:

   a. Establish and operate the National Transport (Trust) Fund (NTF).
   b. Develop efficient, reliable, safe, and cost effective inter-island shipping
   c. Implement the franchise shipping services similar to the one used in both Papua New Guinea and Fiji.
   d. Formulate and implement the National Transport Plan (NTP).

SIMSA was created and empowered under the Maritime Safety Administration Act 2009 after a long and extensive consultation was undertaken by the Marine Department and the Ministry of Infrastructure Development since June 2009, supported by the Asian Development Bank and the European Commission.

In recognition of the importance of transport in general and inter-island shipping in particular, for the country's social and economic development, the SIMSA through the Marine Department has started implementing the shipping franchising scheme that encourages private shipping operators to provide regular shipping services to uneconomic routes already identified. Under this scheme, all eligible ship operators are contracted to provide regular service to designated remote areas at a price ranging from $50,000 to $70,000 per 4-day period and depending on the route serviced. The government has subsidized each ship's voyage operational costs but the ship owners are expected to charge reasonable and appropriate freights and fares to customers. At the end of voyage all contracted ship-owners must submit details of their earnings to the franchise shipping scheme coordinator at the Ministry of Infrastructure Development. This requirement is purposely for monitoring, evaluating and later for revising the scheme's operation. In addition to the above policy, the authority is planning to formulate a system of a special pool of funds to be used purposely to help successful ship operators to purchase new

vessels to reduce the aging of ship problem (Researcher's interview with Director of Solomon Islands Marine Department, 2012).

In striving to ensure the efficient and safe operations of all the registered ships in Solomon Islands the Marine Division is guided by the Shipping Act, 1998 and the Maritime Safety Administration Act 2009. The Shipping Act, 1998 laid down all the administrative procedures, rules, and regulations to be followed as well as the powers of administrators and personnel within the Division, such as surveyors, when conducting the affairs of the Division. In addition, generally the Act provides the requirements for the ship owners and officers to adhere to when operating services to the public.

The Maritime Safety Administration Act, 2009, on the other hand, gives clear responsibility for meeting Solomon Islands' obligations under a range of international conventions. Under this Act a comprehensive analysis and revision of the fees and charges will be applied by SIMSA to both domestic and foreign vessels. Apart from these two pieces of legislation the other regulating instruments are the International Load line Convention of 1966 and it's supplementary, which concerns with the loading of ships with goods and people. That is, once loading has proceeded to the point where the loading line has reached the water level, loading must cease. MARPOL 73/78 refers to the International Conventions for the Prevention of Pollution from ships as yet another regulatory measure that ensures the prevention of environmental damage on the part of ship operators. This was converted into the Shipping (Marine Pollution) Regulation 2010. As the result ships and their equipment are subject to periodic and unscheduled inspections to ensure their continued compliance with the technical and physical aspects of the MARPOL 73/78 (Heathcote, 1997:133). The STCW Convention 95 is the International Convention on Watch Keeping for Seafarers was translated into the Shipping (STCW Code) Regulation 2010. Its basic aim is to 'promote safety of life and property at sea and the marine environment by establishing in common agreement international standards of training, certification and watching for sea farers' (Interview with Director of Solomon Islands Marine Department, 2012; Solomon Star, June 30, 2010:1).

5.6. Conclusion

Inter-island shipping plays a crucial role in the development of SIDS. As such it cannot be separated from the development programs of an island nation such as Solomon Islands. From

different scenarios linking distance, transport costs and volume flow through shipping fleet, no linear pattern is emerging as to what really determine the number of passengers and goods moving between Honiara and the various destinations in Solomon Islands. In Scenario One we find Isabel province with a shorter distance and higher fares has more people moving to and from Honiara than between South Malaita and Honiara with longer distance and lower transport costs. The Second Scenario showed yet another picture in that Makira with a longer distance to Honiara and higher fares than Honiara to South Malaita resulted in more passengers that travelled between Makira province and Honiara. Then in the Third Case Scenario, we have Makira, which has a shorter distance to Honiara with lower fare than Choiseul had more passengers that moved to and from Honiara City.

The discussion in this chapter has revealed that inter-island shipping has a profound impact on development, economically, politically, and socially, of SIDS, and particularly on Solomon Islands. For instance, within the areas of study in Isabel province the villagers who have very much reliable and effective shipping services as highlighted in this chapter have relatively higher levels of income as well as having increased mobility, compared with the rural people within the two constituencies in Malaita province. Without effective, reliable and regular shipping services there would be very little interaction between the people of different islands. This would cause a general feeling of being isolated and alienated and so totally different from the rest of the other islands. Socially, inter-island shipping helped to bring in new ideas from outside as the result of more interactions taking place between different people of different islands. New structures, which are more business oriented, are emerging to support the economic activities in the rural villages. In the four constituencies under this study there were very insignificant negative social impacts that result directly from shipping as well as and more positive developmental impacts.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

Inter-island shipping in Small Island Developing States such as Solomon Islands is of paramount importance more so than anywhere else in the world. It is a crucial factor that determines a region's level of development, which in turn affects the level of shipping services in that region. This chapter draws conclusions from the findings of the study on the impact of inter-island shipping in Solomon Islands.

The provision of inter-island shipping in an island state such as Solomon Islands has contributed tremendously to the enhancement of trading activities and the marketing of local produce in the urban centres and in overseas markets, which has led to economic development of rural areas as revealed in the case of Isabel province. It is an axiom that any lack of shipping could only be very detrimental to the process of development of islands in SIDS. Because of the important role played by inter-island shipping in the development process of SIDS this thesis sought to bring to light its impacts on the development especially in Solomon Islands in its early stage of development. This is purposely to bring domestic shipping services into the mainstream of discussion of development and into the overall planning programme of the country. Central to this study is the concern about the extent to which inter-island shipping really affects the level of development in Solomon Islands and whether there is any strong relationship between the level of shipping services being provided and the level of development in an area. In addition, this study looked at whether there is any possibility that rural development can thrive in the absence of inter-island shipping services.

In attempting to study the impact of inter-island shipping provision on the development of Solomon Islands a qualitative research methodology was employed. This strategy was carried out in two separate localities in each of the two provinces of Malaita and Isabel by way of conducting questionnaire and unstructured interviews. In so doing, a sample of 80 respondents were taken to gather their perceptions and problems relating to shipping. Qualitative data was collected and used in analysing the impacts of inter-island shipping on development of Solomon

Islands especially in the selected provinces. In addition, secondary sources of data were also utilised to establish the volume of traffic flow of goods, people, and services between Honiara City and the two islands in question. Besides these methods, the observation method was also employed. This is to identify the trends and patterns of trade and shipping services from Honiara to the two distinctive areas. As noted earlier the two constituencies in Malaita were highly deprived of shipping services while those two constituencies in Isabel were well serviced by their own shipping company. Consequently, this allowed a comparison in terms of the impact of shipping service provision in these different areas within the two provinces.

In a nutshell, Chapter One provided a broad outline of the thesis in setting the context for this study. The main purposes, objectives, and hypotheses that helped guide the research work were clearly spelt out. Similarly, in the second chapter the parameters of this thesis were framed. Here the main linking concepts that provided the basis and theories of this research were presented. In other words, Chapter Two provided the conceptual framework and the literature review upon which the theories and models of transportation were explored and examined that helped identifying the overall research design and methods for this study. Chapter Three presented detailed discussions on the approaches used in proving the stated hypotheses and how the actual research process was carried out throughout the study from the research design stage to the analysis part, which subsequently formed the basis for drawing of the conclusions. The background of the country of study and study areas were dwelt on in the Fourth Chapter where background was brought to the forefront. The socio-economic, demographic, historical and most profoundly the physical aspects of Solomon Islands were discussed in order to give a panoramic view of the country. Chapter Five focused on the analysis of the research findings which highlighted the impacts of inter-island shipping on development in Solomon Islands, particularly with reference to the two provinces of Malaita and Isabel. In doing so, it critically examined the importance of inter-islands shipping in the context of small island states.

6.2 Linkages between Theoretical framework and findings

The influence of the WTO in world trade has enhanced the globalisation process which impacted largely on the large emerging and newly emerging economies especially in the South East Asian region. These processes bring mutual benefits to countries that engage in these processes, in terms of quality and variety of goods and cheaper prices. In Solomon Islands, the Honiara–Auki route is the most lucrative shipping route, thus it attracts heavy competition by

shipping companies, hence cheaper freights and fares exist. This caused the prices of many shops in Auki town to be similar to and in some cases cheaper than in Honiara City. In remote areas, although there are varieties of goods available in the rural shops, their prices are higher than in Honiara City.

Inter-island shipping demand is derived, depending on people's desire for obtaining goods and services that are not available locally, thus increasing their mobility. In light of the economic base theory presented in Chapter 2, it is evident that the increase in the basic economic activities in a particular region leads to an expansion of non-basic economic activities and high incomes. The increase in economic activities and high incomes induces high demand for inter-island shipping, the multiplier effects of which in turn increase the higher demand for shipping services. Indeed, it is observed that the high purchasing power of people in a certain locality increases their mobility and frequency of travel despite high fares and freights. This is demonstrated in the case of Isabel province, where there is high exploitation of resources that is assisted by regular and effective inter-island shipping services leading to an increasing income and sustained shipping services. This supports the findings of Hoyle and Knowles (1998) that communities that have better access to transport have greater mobility and higher consumption of goods and services. In the context of this study this is an implicit result of the existence of inter-island shipping. Similarly, Dunbar (1981) discovered the locations close to Luganville in Vanuatu that had access to regular shipping services developed more than the locations having irregular shipping services.

Trade is clearly the 'engine' of economic growth and development. It is manifested in the case study of the two rural constituencies in Isabel and Malaita. In Ghoveo and more so in Kolotubi and Kolomola villages of Isabel province there exist wholesale shops, cooperative businesses and canteens both at the port of Kaevanga and in the villages. Apart from this, there are credit unions and savings clubs being set up in the villages that create a managerial group of individuals in a rural setting. This feature is non-existent in the case of the constituencies under study in Malaita. A system of dirt roads also connects the ports and the hinterland up to Kolomola, which is situated in the mountains; a region that is well known for producing the bulk of fresh quality kava and coffee in Solomon Islands (Photo 5.2). Apparently inter-island shipping services have greater impact on rural development and incomes, which in turn increase regular and effective shipping services. In Isabel province as this thesis shows, 59 per cent of the

respondents earned incomes between $50 to $200. This was the result of people in the two constituencies in Isabel producing more for sale than the two remote areas of Malaita. In contrast, in Malaita constituencies where the interviews and questionnaires were conducted, only 22 per cent earned similar levels of incomes. About 29 per cent of the heads of households in Malaita earned less than $50 a month as compared with corresponding 3 per cent in the case of the two constituencies in Isabel.

In Isabel, regular shipping services stimulate the increase in production of local goods for sale, resulting in new social and economic structures besides the normal traditional leadership structures that exist in the villages. The new structure that is composed of the traditional and business leaders is simply a positive development in a sense that it focuses on mobilising new business ideas that strengthen the support and the management of village business activities. These observed developments in rural areas support the view expressed by the Wisconsin Transport Department (2004) stating that the existence of support services and transport improvements can be a catalytic factor for expansion of economic activities.

From the above discussion it is appropriate to say that without improved shipping services, trade and rural development would be hampered and the benefits of development will be unequally distributed. As a result many peripheral regions such as East Kwaio, are marginalised. Generally, trade affects economic growth and hence development but trade itself hinges on effective and reliable inter-island shipping services and vice versa. From the modern economic theoretical perspective as outlined in Hope (2008) and Vickerman and Quinet (2004) this study argues that apart from the three key national output (Y) determinants (L,K, T) transportation is also a crucial variable, separate from technology, that needs to be included and specifically treated and considered in this theory.

It is generally observed in this study that most shipping companies provide regular shipping services to locations that involve shorter distance, with high population, high resources exploitation and expanding economic activities. For example, the Honiara–Auki shipping route and Honiara–Isabel shipping routes support this hypothesis. Thus it is of paramount importance that transportation needs to be specifically considered in any SIDS to ensure there is equity in development in different islands.

The traditional shipping problems that were identified and presented in the works of Dunbar (1981), Sagaar (1978), Brookfield and Hart (1971), Middleton (1984), and ADB (2007)

today still persist, hence impeding the proper functioning of shipping services in Solomon Islands. One such critical and widespread problem is that of ageing and inefficient fleets. In Solomon Islands, of the total number of the registered motorised ships, about 44 per cent are more than 20 years old. Apparently this has greater implications for the problem of high operation costs for these vessels as well as for the safety of passengers. This ageing of fleets and high operating costs are exacerbated by the lack of available funds that can be used to purchase new ships to replace the obsolete bucket boats. The Solomon Islands' shipping sector continues to face a difficult operating environment, especially in the shipping routes to the outer islands such as Ontong Java, Sikaiana, Rennel and Bellona, and the Reef islands, Utupua, and Vanikoro in Temotu province. Associated to these problems are the thinly spread population, long distances and high operating cost that renders such routes unviable.

In addition to the formulation and implementation of the new franchising scheme, some new challenges are surfacing that are most likely to reduce the shipping companies' profits. This study reveals that the most critical challenge relates to the imposition of insurance payments for company ships identified and contracted to participate in this exercise. Already ships have been pushing for tax exemption on fuel and spare parts payments to help keep their costs low, but to no avail. Such arrangement was passed in parliament and gazetted. Certain provisions were made under the new Marine Regulations of SIMSA. First, is the constant upkeep of safety equipment such as life rafts and jackets and second is the upgrading of ships' safety certificate for all crew. These two, especially the second requirement, have cost implications for ship operators in Solomon Islands, most of whom are struggling to make profits.

Inter-island shipping has profound impacts on the development of a particular region and country as a whole. These impacts can be categorised as both positive and negative. A number of positive impacts have been identified under this study which can be categorised into three key aspects, namely, social, economic and political. The social consequences of inter-island shipping are that it allows people to build, maintain, and strengthen family relationships through the movements between different locations. This study shows that people move to Honiara for various reasons, including visits to family members and for leisure. Second, inter-island shipping allows individuals and communities to have access to essential social services like education and health. In Solomon Islands the only referral hospital for the entire country is in Honiara City so with inter-island shipping connecting Honiara is crucial. In the same vein, the only higher educational institution in the country and many senior high schools are also located

in Honiara, thus many rural people seek access to them through shipping services. Third, inter-island shipping in Solomon Islands helps share the benefits of development equitably among the different islands in the country. Fourth, inter-island shipping helps young people to move back and forth between village and town and expose them to new and better ideas that could be productively used at home. And finally, schools are able to commence their term on time as teachers and students as well as school rations and stationery usually arrive well before the commencement of academic year.

Economically, inter-island shipping services allow the movement of people and goods used in production and consumption to places where they are needed. Employment is facilitated by shipping services as people are able to move in search of jobs. These allow individuals earn income and meet their basic needs. Goods and services are also carried by inter-island shipping to be traded in places where they are needed. In addition, markets are expanded by the provision of regular and improved shipping services that help increase sales and incomes. People in Isabel are able to sell their produce in the Honiara market, which increases their incomes and helps them come out of poverty. Therefore inter-island shipping services contribute significantly to poverty alleviation. Heavy competition along major shipping routes also helps in bringing prices down and also makes available varieties of goods and services and therefore improves the living standard of people.

Politically, inter-island shipping in the context of Solomon Islands profoundly impacts on nation building through inter-island interactions between different individuals and societies which leads to greater understanding about other individuals and societies. Inter-island shipping helps integrate people and foster social cohesion.

On the other hand, inter-island shipping has also caused negative social, economic, and political impacts on communities that are able to access regular shipping services. One of the negative social effects of inter-island shipping services is that youths engage in unwanted social activities such as production and use of illicit drugs, alcohol, kwaso[18]and marijuana. Other social consequences are teenage pregnancies and youths, especially young girls, being vulnerable to HIV/AIDS infection.

[18] Kwaso is an illegal homemade alcohol produced by mixing of yeast and sugar in water and letting it brew for more than a week before it is consumed. Kwaso has a devastating effect on individuals and communities and in many instances has caused deaths.

One of the economic problems is related to ageing of ships which leads to higher operating costs, especially in remote rural areas. This normally reduces the purchasing power of rural dwellers, which in turn may lead to or exacerbate rural underdevelopment.

On the political landscape, there is no obvious negative outcome being encountered. Environmentally, one physical negative impact is the pollution of waters in bays and its impacts. A good example is the pollution of waters at Kaonasugu bay in Makira due to discharged fuel from ships that contaminates water and kills fish and plant life in the bay, which in turn has had a major impact on small-scale fishing activities of young boys (ADB, 2008a). This has not only environmental consequences but also poverty and food and livelihood implications.

There are strong interlinkages between trade, shipping and development in Solomon Islands. Furthermore, the study found that there is sufficient evidence to support the hypothesis, that the 'greater the levels of economic development, the greater would be the demand for inter-island shipping services'. This was echoed in the case of Isabel province. The second proposition, which states the 'greater the distance between two islands and market places and the more the transport costs, the less the frequent inter-island shipping services' was demonstrated to be positive, particularly when discussing the relationship between distance, transport costs, and frequency of shipping trips to various localities.

Clearly we saw that inter-island shipping plays a crucial role in the process of development of areas where such services are available. This study clearly finds a strong interrelationship between inter-island shipping and development. In other words, the higher the level of inter-island shipping, the higher the level of development and vice versa. Consequently, inter-island shipping cannot be divorced from the development planning programmes of any island nations such as Solomon Islands. As evident in this study, the positive benefits of inter-island shipping far outweigh the negative effects.

6.3 Summary of Findings

As evidenced in Table 5.4, there exist critical relationships between population, distance, and tonnage flow of goods. Given a large population size and a shorter distance there are more interactions (traffic flow of goods). These are as demonstrated in the cases between Honiara and Auki, and Honiara and Isabel as opposed to the destination from Honiara to Small Malaita, where the distance is long and the population is quite small. Similarly, in terms of distance,

transport costs, and frequency of trips it was found that the longer the distance as well as higher the transport costs, the lesser the frequency of trips to that place. Such a result is popular with destinations such as Lata and its surrounding islands in the Temotu province, in Solomon Islands.

As highlighted in the Three Case scenarios presented in Chapter Five in terms of the linkages between distances, transport costs, and traffic flow of passengers through shipping, it was shown that there was no linear pattern emerging between population, distance, and tonnage flow of goods in the context of Solomon Islands.

Solomon Islands' shipping services is viable economic activities, especially along the major routes such as the Auki–Honiara routes, Honiara–Gizo, Honiara–Kirakira, and Honiara–Kaevanga–Buala. This is more so for most of the principal islands that tend to cluster around the island of Guadalcanal where Honiara City is located. These islands contain a bulk of people as well as being well endowed with land based and marine resources, which can sustain the operations of shipping company economically.

6.3.1 Key Findings

The findings concerning the key and specific issues probed by this study are summarised here.

1. With the high resource exploitation and production of goods for sale in the Honiara market, the heads of household from Isabel travelled more to Honiara for trading purposes (that is to sell goods and purchase cargoes and other goods) than did heads of household from Malaita. This was evident with the 58 per cent heads of household from Isabel who responded in these three categories compared to 29 per cent from Malaita. Correspond to this 24 per cent of heads of households from Isabel traveled to Honiara on a monthly basis, largely for trading purposes, while 14 per cent responded for Malaita.

2. A large proportion of heads of household from Malaita travel to Honiara to visit friends and relatives compared to 32 per cent in the case of Isabel. This is the main reason why respondents from Malaita, as we have seen, are less mobile than heads of household from Isabel, who mostly travel to Honiara for trade related purposes. In

the SIDS context this implies an increasing demand for inter-island shipping, which in turn affects production and trade.

3. A large proportion of people from Isabel (i.e. 71 per cent) who travelled to Honiara City to sell their goods did so because of the high prices and returns they could fetch there. In case of Malaita, only 20 per cent responded in that category. In the 'very high' category, the responses were 9 per cent and 12 per cent in Malaita and Isabel respectively. Again this shows that the respondents from Malaita produce less for sale than those from Isabel hence the Isabel people make more frequent trips to and fro.

4. A large proportion (56 per cent) of the heads of household from Isabel and about 29 per cent of respondents from Malaita mentioned that they sold their goods in 'Honiara'. This analysis reveals that Honiara City is the main market for selling of products from Isabel and this is because of high prices and better shipping services. For the respondents from the two study areas in Malaita, one of the main reasons is that it is the only market available to them.

5. Increased production, trade, and mobility also affect incomes positively. As shown in this study 59 per cent of the heads of household from Isabel earned between $50 and $200, as monthly income whereas only 22 per cent of respondents from Malaita earned such monthly incomes. The shipping services between Isabel and Honiara are very much effective and that enhanced their attractiveness to people engaged in trading activities.

6. Shipping is the most popular mode of transport in Solomon Islands due to the archipelagic nature and scattered-ness of its islands. About 97 per cent of respondents from Isabel stated that they travelled by ship when travelling to Honiara and nearly 59 per cent of individuals from Malaita responded in the same category. An insignificant per centage of people from Isabel travel by other modes of transport, compared to 13 per cent of individuals from Malaita, mostly from East Kwaio who have few other alternatives so responded in the 'both plane and ship' category.

7. In measuring the effectiveness of the two shipping companies' service this study finds that during the ethnic tension IDC ships travelled regularly to Isabel ports. This

was evidenced in the 73 per cent of the respondents from Isabel who stated that ships called at their ports regularly, compared to 42 per cent of the individuals from Malaita who responded in the same category. This shows that shipping services to Isabel were more effective than for Malaita during the period of ethnic tension in Solomon Islands.

8. IDC Shipping maintains its vessels, especially MV Isabella and MV Estrella, better than did MSC, which was shown by the high response (76 per cent) in the categories of both 'good' and 'very good' condition on board company vessels, compared to 40 per cent from Malaita. This is a reflection of MSC's poor maintenance of the Ramos fleet as well as a reflection of the 'no-care attitude' of most of its customers. Besides, another major contribution to the poor state of these vessels was the ageing of the vessels themselves.

9. It was generally agreed by the respondents from both Isabel and Malaita that fares and freight charges were too high. Apart from that, a large number of the respondents from both provinces identified 'congestion' as one of the major concerns and problems in inter-island shipping in Solomon Islands.

10. An analysis of shipping crews' behaviour reveals that both of the company ships' crews were generally seen as friendly, with the Ramos fleet accorded 60 per cent by the Malaita respondents and MV Isabella with 41 per cent. In addition, nearly 44 per cent of the Isabel respondents stated the behaviour of shipping crews was helpful and only 4 per cent responded from Malaita. Thus on the whole, MV Isabella and Estrella deliver a relatively better service for their customers than those of the Ramos fleet.

11. There was very 'little improvement' in shipping services since the privatisation of government ships in 1995, as shown by about 62 per cent of the respondents from Malaita who responded in this category This is particularly the case in East Malaita, primarily due to its remoteness. For Isabel there has continued to be effective provision of shipping services by IDC shipping to the island for the last three decades, facilitating trade.

12. Although ships were congested with goods and people, the viability of shipping services is compromised by 'free riders' and collection of free handshake fares obtained by ships' crews as well as because of the 'wantok' system. The financial constraints of many well established shipping companies were exacerbated by mismanagement and misappropriation of shipping companies' finances. The consequence of this is evidenced in the liquidation of some large shipping companies, including MSC, TSL, and TSC.

13. Migration is highlighted as a common phenomenon among the people of Malaita and Isabel in Solomon Islands. It is noted that as the development process continues and spatial interaction increases, the migration process is expected to rise in the future. Of the respondents from Malaita province 51 per cent stated that family members had moved to Honiara and in Isabel's case it was 47 per cent. This study finds that people in Solomon Islands migrated to Honiara for reasons of marriage, education and employment purposes. Such opportunistic population mobility adds to the increasing demand for inter-island shipping services in Solomon Islands.

14. People from Isabel have more access to consumable goods and financial services, particularly for savings purposes, than people in Malaita remote areas.

6.4. Recommendations

Having highlighted all the shipping related problems and in light of the broad findings of this study, this section deals with the recommendations appropriate for alleviating the prevailing problems within the shipping sector and to improve the effectiveness and efficiency of inter-island shipping. These recommendations are directed not only to the government, shipping companies but also to other shipping related agencies concerned with inter-island shipping in Solomon Islands.

Because of the increase in globalisation, trade and urbanisation, the demand for shipping services in general and in particular for inter-island shipping services is bound to rise. Against this scenario as revealed in this thesis, the demand for inter-island shipping far exceeds its supply, which presumably puts more pressure on the existing shipping companies' vessels, which in turn has some direct implications for the safety of the passengers travelling between the

islands. Therefore, from these specific and broad findings this study makes the following recommendations:

1. SIMSA and Marine Department officers strictly enforce the safety laws and regulations particularly in relation to the legal maximum number of passengers allowed travelling on board companies' ships. In doing this it would also lessen the problem of congestion often experienced by inter-island shipping travellers and make travelling more comfortable and safety assured.

2. Related to this, the Solomon Islands Marine Department must ensure that all shipping companies and charterers operating in the country pay a license and above all must also pay or be deemed capable of paying some 'third party insurance' to insure the life of their customers. Currently, anyone who has the money can simply charter a boat and start operating charters without much concern about the safety of passengers.

3. The Solomon Islands government needs to ensure that all the different islands and the different parts of those islands have access to equitable inter-island shipping services. This study has highlighted that the level of development is closely linked to the development of inter-island shipping. Thus to achieve higher levels of development requires that the government, through MID, SIMSA and the Marine Department effectively implements the franchising scheme to routes deemed uneconomical. As well, the government needs to step up the implementation of the tax exemption provision on fuel and oil prices and the duty free importation of engine spare parts on to help reduce ships' operating costs.

4. The MID needs to develop an 'integrated system of transport' where inter-island shipping ports are well connected with better road systems and with the different other modes of transport.

5. This study highly recommended that a proper data recording system for the tonnage of goods and number of passengers carried and their points of origin and destination and other related information be formulated in order to provide high quality and reliable data for studying the traffic flow of goods and people to different parts of the country. This would help tremendously in formulating effective and informed shipping policies. Hence the Harbour Master's office of SIPA and the Marine department need to be fully

resourced in terms of both human and physical resources. Specific laws need to be put in place to give them the power to demand from ships such information.

6. Given the importance of inter-island shipping, it is highly recommended that all provincial shipping companies be established based on the private-ownership shipping model of IDC Shipping. Politicians must be barred from engaging in the setting up, purchasing and management of shipping companies.

7. With the operation of private shipping, companies it is recommended the owner of the ship or a trusted person must take random trips on board their ship to monitor the ship's crew behaviour regarding the collection of freights and fares and their treatment of passengers and to get first-hand information about passengers' complaints.

8. Similarly, the captains of shipping companies must be empowered by law among their other responsibilities on board the ships to supervise and manage their subordinates to the effect that they do not engage in the wantok system and collection of free-hand shake fares and freight. In addition, all qualified captains and crews must wear their normal and appropriate seamen's official attire, as it used to be in the 1970s under the government's marine fleet, to gain the confidence of passengers. It is observed that all students attending the Solomon Islands College of Higher Education (SICHE) Marine School wear uniforms but none was observed to wear uniforms in any of the ships.

9. To curtail this free-hand shake fares and to help improve the collection of revenues of shipping companies there should be a terminal-like infrastructure built in Honiara for ticketing and checking purposes, similar to that of the air transport system. This should be applied mainly for the large passenger shipping companies. The purpose of the port terminal is threefold: the first is to ensure that all fares and freights are paid; second so that relevant shipping data can be recorded, and third to control the number of passengers. This would be a better idea than the current ad hoc practice where passenger simply load their goods and have to go outside of the fence that surrounds the wharf area and have to wait in the sun or rain before they are called to check in at the wharf gate and proceed to board the ship.

6.5. Future Research

This study only focused on the impact of inter-island shipping services on the development of Malaita and Isabel provinces, while time constraints meant that it could not consider similar impacts in the context of the smaller outlying islands that are too far from Honiara city. By studying the problems associated with long distances and smaller populations one would be in a better position to devise strategies whereby effective and regular shipping services could be provided. Besides, specific studies need to be carried out in looking at fare and freight structures and generally at how shipping services provisions could be managed effectively and made more viable. Thus it is highly recommended for a future study to specifically at the case of the smaller outer islands with regard to interisland shipping provision and its impact on them.

BIBLIOGRAPHY

Abramsson, B. J. (1980*). International Ocean Shipping*, Westview Press, Colorado.

ADB (Asian Development Bank) (2005). Annual Report, retrieved on 23rd June, 2012 from: http://www.scribd.com/doc/49450308/ADB-Annual-Report-2005.

ADB (Asian Development Bank) (2006). Solomon Islands: Diagnostic Assessment of Interisland Transport, Technical Assistance Consultant Report, Project Number 38241, December 2006, accessed on 12 August, 2012 from: http://www2.adb.org/Documents/Reports/Consultant/38241SOL/38241- SOL-TACR.pdf.

ADB (Asian Development Bank) (2007). Oceanic Voyages: Shipping in the South pacific, Pacific Studies Series, accessed on 28th July, 2012 from: http://www.theprif.org/sites/theprif.org/files/Oceanic Voyages Shipping in the Pacific.pdf.

ADB (Asian Development Bank) (2008a). Initial Poverty and Social Assessment, Solomon Islands: Road Improvement (Sector) Project, Project Number: 39581 (Grant 49), June 2008. Retrieved on June, 2008 from: http://www2.adb.org/Documents/IPSAs/SOL/39581/39581-SOL- IPSA.pdf.

ADB (Asian Development Bank) (2008b). Initial Poverty and Social Assessment, Sol: Domestic Maritime Support Project number: 40263, August 2008. Retrieved on June, 2008 from: http://www2.adb.org/Documents/IPSAs/SOL/39581/39581-SOL-IPSA.pdf.

ADB (Asian Development Bank) (2009). Annual Report, Volume 1 and 2, accessed on 1st May, 2012 from: http://www.adb.org/sites/default/files/adb-ar2009-v1.pdf.

ADB (Asian Development Bank) (2011). Key Indicators for Asia and the Pacific 2011, accessed on 15th August, 2012 from: http://www.adb.org/statistics.

ADB (Asian Development Bank (2012). Key Indicators for Asia and the Pacific 2011, accessed on 15th August, 2012 from: http://www.adb.org/statistics.

Afeef, A. (1992). Strategies for sustained socioeconomic Development in Small Island States, unpublished Masters thesis, University of Hawaii at Manoa, Honolulu, Hawaii.

Ali-Nejadfard, F. (2000). 'Rural travel and transport and economic development: Problems and prospects-examples from Malawi and Zimbabwe" in Kaumbutho, P.G., R.A. Pearson, and T.E. Simalenga, (eds).*Empowering Farmers with Animal Traction, Proceedings of the workshop of animal Traction Network for Eastern and Southern Africa held on 20-24, September 1999*, Harare.

Arikan, A. (2005). An Interpretivist Approach to understanding technology policy in Education: Sociocultural Differences between Official Tales of Technology and Local Practice Early Childhood Educators, Dissertation, Graduate School of The Ohio State University accessed on 9th September, 2012 from: http://etd.ohiolink.edu/view.cgi/Arikanper cent20Arzu.pdf?osu1124288635.

Ashish, S. and Smith, T.E (1995). *Gravity Models of Spatial Interaction Behaviour*, Springer, Berlin.

Australian Chamber of Commerce and Industry (2003): Maritime Transport, Commerce House, Brisbane.

Barett, R., Sen, S., and Voicu, A. (2005). Theoretical Foundations of the gravity Trade model, Discussion paper, Department of Economics, The University of Birmingham.

Barwell, E. I., Deveen, J. and Howe, J.D.G.F. (1985). *Rural Transport in Developing Countries*, Intermediate Technology Publications, London.

Bellwood, P. (1978). *The Polynesians: prehistory of an Island people*, Thames and Hudson, London.

Bennett, J. A. (1989). *Wealth of the Solomons*: *A history of a Pacific archipelago, 1800–1978*, Pacific Islands Studies Programme, Centre for Asian and Pacific Studies,

University of Hawaii Press, Honolulu.

Berry, R. (1986). *How to Write a Research Paper*, Second edition, Pergamon Press, New Jersey.

Biagini, E. and Brian H. (eds). (1999). *Insularity and Development: International Perspectives on Islands*, Islands Studies, PINTER, London.

Boerne, G. (1999). *Filling the gap: Small Inter-island Caribbean Trading Ships and their Crews*, Seafarers International Research center, Cardiff University, accessed on 21st April,2012 from: Wales in http://www.sirc.cf.ac.uk/index.html.

Brookfield, H.C. (1975). *Interdependent Development*, Methuen & Co, London.

Brookfield, H.C. (ed). (1973). *The Pacific in Transition: Geographical Perspectives on Adaptation and Changes*, Australian University Press, Canberra.

Brookfield, H.C. and Hart, D. (1971). *Melanesian: A Geographical Interpretation of an Island World*, Methuen, London.

Brookfield, H. (1979). The Transport Factor in Island Development, Development Studies Centre Conference on 'Island States of the Pacific and Indian Oceans: anatomy of Development, University of Melbourne, Melbourne.

Bryman, A. (2004). *Social Research Methods*, Second edition, Oxford, New York.

Bryman, A. (2005). *Triangulation*, retrieved on 12th August, 2012 from: http://www.referenceworld.com/sage/socialscience/triangulation.pdf.

Burrell, G. and Morgan, G. (1979). *Sociological Paradigms and Organizational Analysis: Elements of the Sociology of Corporate Life*, Heinemann, London.

CBSI (Central Bank of Solomon Islands) (2011). Annual Report, Honiara, accessed on 12th August, 2012 from: http://www.cbsi.com.sb/fileadmin/publications/ar/AR-2010.pdf.

CBSI (Central Bank of Solomon Islands) (2012). Annual Report, Honiara, accessed on 12th August 2012 from : http://www.cbsi.com.sb/fileadmin/publications/ar-2011.pdf.

Coccosis, H. and Nijkamp, P. (eds) (1995). *Overcoming Isolation: Information and Transportation Networks in Development Strategies for Peripheral Areas*, Advances in Spatial Science, Springer, Berlin.

Couper, A. D. (1969). *The Island Trade: An Analysis of the Seaborne Trade among three Island Group in the Pacific*, PhD Thesis, Australian National University, Canberra.

Cuadernos De La Cepal (1987). *Basic Concepts of Maritime Transport and its Present Status in Latin America and The Caribbean*, United Nations, Santiago.

Dawson, J. and Barwell, I. (1993). *Roads are not Enough: New Perspectives on Rural Transport Planning in Developing Countries*, Intermediate Technology Publication, London.

Darjes, P. C. (1997). 'Ship Financing and the Asian Development Bank'. *Proceedings of the Sub-regional Seminar on Formulation of a Regional Policy to Replace Aging Ships in the Pacific Island Fleets*, 14-17 April, Suva, Fiji.

Dobson J. P. (1999). Approaches to theory use in Interpretive Case Studies: a Critical Realist Perspective, accessed on 11th September, 2012from: cite.seerx.ist.psu.edu/viewdoc/download?doi=10.1.110.722.

Doulman, D.J. (1987). 'Distance-water fleet operations and regional fisheries Cooperation' in D.J. Doulman *(ed) The development of Tuna Industry in the Pacific Region: An Analysis of Options*, East West Centre, Honolulu.

Drislane, R. and Parkinson, G. (2002). Classical Economic Theory retrieved on 17th September, 2012 from: http://bitbucket.icaap.org/dict.pl?term=CLASSICALper cent20ECONOMICper cent20THEORY.

Dunbar, A.C. (1981). 'Transport and Development: Inter-Island Shipping in Vanuatu', unpublished MA Thesis, Department of Human Geography, Australian National University, Canberra.

Dunbar, A.C. (1984). 'Vanuatu: Domestic Shipping in a Newly Independent State, in *Transport and Communications for Pacific Microstates: Issues in Organisation and Managemen*t, (ed) C.C. Kissling, Institute of Pacific Studies, The University of The South Pacific, Suva, Fiji.

The Europa World Year Book (2012). 'Solomon Islands', 53rd Edition, Vol. II, Countries: Kazakhstan-Zimbabwe, Routledge, London / New York.

Faust, P. (1989). 'Shipping Services' in *Trade in Services: Sectoral issues*, UNCTAD, United Nations, New York.

Fernando, N. (1986). *Development Analysis in the South Pacific*, Institute of Social and administration, University of the South Pacific, Suva, Fiji.

The Fiji Times (2004). 'International Shipping Schedules, September 1, Fiji.

Forbes, D. K. (1984). *The Geography of Underdevelopment: A Critical Survey*, Groom Helm, London and Sydney: 55- 61.

Fox, C. E. (1967). *The Story of the Solomons*, Diocese of Melanesia Publications, Taroniara, Solomon Islands.

Frank, A. G. (1978). *Dependent Accumulation and Under-Development*, Macmillan, London.

Friedmann, J. (1966). *Regional Development Policy: A Case Study of Venezuela*, The MIT Press, Massachusetts.

Gini, P. (1984). 'Domestic shipping in the South Pacific', in C.C. Kissling (ed.), *Transport and Communications for Pacific Microstates: Issues in Organisation and Managemen*t,

Institute of Pacific Studies, The University of the South Pacific, Suva, Fiji.

Giuliani, E. (2008). *Multinational Corporations and Patterns of local Knowledge Transfer in Costa Rican High-Tech Industries*, Development and Change, Volume 39, Number 3, May, Institute of Social Studies, The Hague.

Government of Solomon Islands, Solomon Islands National Development Plans: 1980-1984, 1985-1989, and 2001- 2005, Ministry of Planning and Economic Development, Honiara, Solomon Islands.

Green, C. K. (1976). 'The History of Post Spanish European Contact in the Eastern District Before 1939', in *Southeast Solomon Islands Cultural History: a Preliminary Survey*, Bulletin 11, The Royal Society of New Zealand, Wellington, New Zealand.

Harcomb, D. (1986). *Solomon Islands-a Travel Survival Kit*, Lonely Planet, Victoria.

Heathcote, P. (1997). Maritime Law in the South Pacific – Towards Harmonisation, unpublished PhD thesis in Marine Studies, University of the South Pacific, Suva,Fiji.

Hemming, G. (2004). 'Malaitans Blamed for lDownfall of MSC', Solomon Star Newspaper Nation, September 27th, Honiara, Solomon Islands.

Holden, P., Bale, M., and Holden, S. (2004). *Swimming Against the Tide? An Assessment of the Private Sector in the Pacific,* Asian Development Bank, Manila.

Hope K. (2008). The Island Transport System, 40th Annual Monetary Studies Conference Eastern Caribbean Central Bank, retrieved on 20th May, 2012 from : http://www.ccmfuwi.org/files/publications/conference/992.pdf. Accessed

Hou, T. (1999). NGOs and Rural Development in Solomon Islands: A Case Study of

Solomon Islands Development Trust (SIDT), unpublished MA thesis, Centre for Development Studies, University of the South Pacific, Suva, Fiji.

Hoyle, B. and Knowles, R. (1998). 'Transport Geography: An Introduction' in B. Hoyle and R. D. Knowles (eds). *Modern Transport Geography*, Second edition, John Wiley and Sons, Chichester, New York.

Hoyle, B. and Knowles R. D. (1998). Transport Geography: An Introduction in B Hoyle and R.D. Knowles (eds). *Modern Transport Geography*, Second edition, John Wiley and Sons, Chichester, New York.

Hoyle, B. and Smith, J. (1998). 'Transport and Development: Conceptual Frameworks' in B. Hoyle and R.D. Knowles (eds). *Modern Transport Geography*, Second edition, John Wiley and Sons, Chichester, New York.

Hoyle, B., Leinbach, T., Smith, J., and Spencer, A. (1998). 'The role of transport in the Development process: Case studies from Quebec, Indonesia, Zimbabwe, and China' in B. Hoyle and R.D. Knowles (eds). *Modern Transport Geography,* Second edition, John Wiley and Sons, Chichester, New York.

IMO (International Maritime Organisation) (2006). International Labour Conference, Maritime Labour Convention, retrieved from http://www.ilo.org/wcmsp5/groups/public/-ed_norm/normes/documents/normativeinstrument/wcms_090250.pdf. Accessed on 2nd August, 2012.

Jonchay, Y. D. (1978). *The Hand Book of World Transport*, Facts on File**,** New York.

Kaluza, P. K., Gastner, T. M., and Blasius, B. (2010). The Complex network of Global Cargo ship movements, *Journal of the Royal Society Interface*, retrieved on 2nd August, 2012 from:www.rsif.royalsocietypublishing.org/content/early/2010/01/19/rsif.209.0495.full.pdf+html.

Kami, S. and Dillion, R.A (1982). Intra-Island Shipping in Ha'apai in: Issues Relating to Private Boat operation, Tonga Central Planning Department and Statistics, Nukualofa, Tonga.

Karunaratne, N. D. (1982). *Structural Change, Trade Dynamics and Telecommunications in the South Pacific Island Nations*, University of the South Pacific, Suva, Fiji.

Keen, A. (2005). Methodology: Selecting a Paradigm accessed on 9th September from: http://chesterrep.openrepository.com/cdr/bitstream/10034/84834/4/methodology.pdf.

Kelly, T. (2007). The impact of the WTO: the environment, Public Health and Sovereignty, Edward Elgar, Northampton, MA, USA.

Kumar, R. (1996). *Research Methodology: A step-by-step Guide for Beginners*, Longman, Melbourne.

Laracy, H. (1976). *Marists and Melanesians: A History of Catholic Missions in the Solomon Islands*, Australian National University Press, Canberra.

Lewellen Ted C. (1995). *Dependency and Development: An introduction to the Third World*, Bergin and Garvey, London.

Lineth, S. (2002). *Solomon Islands Trade Directory* 2002, 27th Edition, BJS Agencies, Honiara.

Mabogunje, A. L. (1972). *Regional Mobility and Resource Development in West Africa*, McGill- Queens University Press, London.

Mabogunje, A. L. (1981). *The Development Process: A Spatial Perspective*, Hutchinson University Library, London.

Macquarie University (1994). Macquarie Concise Dictionary, Macquarie University, New South Wales, Australia.

Magellan Geographix (1997).Map of Solomon Islands, retrieved from: http://www.infoplease.com/images/msolomon.gif.

Martinussen, J. (1997). *Society, State, and Market: A Guide to Competing Theories of Development*, Zed Books, London.

Masika, R., De Haan, A and Baden, S. (1997) Urbanization and Urban Poverty: a Gender Analysis. Bridge, Report No54. Accessed on 13th August 2012 from: http://www.bridge.ids.ac.uk/reports/re54.pdf. Accessed

McNamara, P. and Perkins, R. (1980). 'Solomon Islands Inter-Island shipping study stage 1: The existing Transport task and facilities inventory', Bureau of Transport Economics, Canberra.

McDonnell, P. (1986). 'Shipping Needs for Island Economies', A Paper Presented at the Workshop for New marine Technology and Social Change in the Pacific 12-13 March', Department of Geography Research School of Pacific Studies, Australian National University, South Pacific Bureau for Economic Cooperation, Suva, Fiji.

Meyrick and Associates (2007a). Pacific Regional Transport Analysis, ADB TA-6166 (REG), accessed on 4th August, 2012 from: http://www.theprif.org/sites/theprif.org/files/Pacificper cent20Regionper cent20Transportper cent20Analysisper cent20r_eportper cent202007.pdf.

Meyrick and Associates (2007b). Pacific Regional Transport Analysis, Final Report, Volume 1, Main Report, Project number 36661, ADB TA 6166, March 2007, accessed, from http://www2.adb.org/documents/Reports/Consultants. Retrieved on 23rd August, 2012.

Meyrick and Associates (2008). SOL: Implementation of Inter-Island Transport Reforms, ADB Final Technical Assistance Consultation Report, *TA 4588,* Project Number 38150, Wollongong, Australia. Retrieved on 13th July, 2011 from: http://www2.adb.org/documents/Reports/Consultants.

Middleton, W. B. (1984). 'Development of a Regional Shipping Line in the South Pacific', in C. C. Kissling (ed.), *Transport and Communications for Pacific Microstate: Issues in Organisation and Management*, Institute of Pacific Studies, The University of the South Pacific, Suva, Fiji.

Mizusawa, D., Guild R., Adhar, R., and Ling, D. (2011). *Strengthening Maritime Transport Sector in Solomon Islands*, TRB 2012 Annual Meeting accessed on 21st June, 2012 from : http://docs.trb.org/prp/12-3585.pdf.

Morgan, G. and Burrell, G. (1979). *Sociological Paradigms and Organizational Analysis: Elements of the Sociology of Corporate Life*, Heinemann, London.

Narlikar, A. (2005). *The World Trade Organisation: A very Short Introduction*, Oxford, New York.

Newberry, D. M., Hughes, G. A., Paterson, W. D.O., and Bennathan, E. (1988). *Road transport Taxation in Developing Countries: The Design of user Charges and Taxes for Tunisia*, World Bank Discussion papers, World bank, Washington DC.

Peet, R. (2009). *Unholy Trinity: The IMF, World Bank, and WTO,* second edition, Zed Books, London

Pergrum, D. F. (1963). *Transportation: Economics and Public Policy*, Richard Irwin, Illinois.

Porojan, A. (2000). *Trade Flows and Spatial Effects: The Gravity Model Revisited*, Derby University, Derby, UK. Retrieved on 12th June, 2012 from: http://www.ssees.ucl.ac.uk/met- network/papers/aporojan.pdf.

Prasad, B.C. and Yenteshwar R. (2007). *Assessing Fiji's Global Trade potential using the Gravity model Approach*, Working Paper, Number 2007/05, USP.

Proctor, A. (1980). 'Transport and Agricultural Development' in G. Ward and A. Proctor

(eds). *South Pacific Agriculture Choices and Constraints: South Pacific Agriculture Survey 1979*, Asian Development Bank in association with Australian National University Press, Canberra.

Rodrigue, J.P. and Pouliot, M. (2003). *Transport and Economic Development,* Department of Geography, Hofstra University, Hemstead, New York.

Rodrigue, J.P., Comtois, C. and Slack, B. (2006).The Geography of Transport System, Routledge, London, accessed on 3rd Sept. 2012 from: http://geonas.at.ua/_ld/0/34_The_Geography_o.pdf.

Rohorua, F. I. (2007). The Concept of Development in Ulawa in Solomon Islands and its Implications for National Development Policy and Planning, unpublished Thesis, University of Waikato.

Ross Touche and Company, Management Consultant (1984). Regional Transport Survey of the South Pacific: Shipping Study Review of Trade and Shipping Trends, , Management Consultant Association, London.

Saggar, R.K. (1978). *Rationalisation of Inter-Island Shipping Services*, Central Planning Office, Ministry of Economic Planning, Suva, Fiji.

Sampson, R. J., Ferris, M. T., and Shrock, D. L. (1985). *Domestic Transportation Practice Theory, and Polic*y, Fifth Edition, Houghton Mifflin Company, Boston.

Sepulveda, T. W. (1987). *Basic Concepts of Maritime Transport and its Present Status in Latin America and the Caribbean*, United Nations Publication, Santiago.

Schaffer, W. A. (1999). Regional Impact Models, Chapter 2: Regional Models of Income Determination: Simple Economics-Base Theory online, accessed on 15th October, 2012 from: http://www.rri.wvu.edu/WebBook/Schaffer/chap02.html.

Schaffer, W.A. (2010). Regional Models of Income Determination: Simple Economic-Base Theory, Chapter 3, Draft 5/11/2010, Regional Research Institute, accessed on 23rd May, 2012 from: http://www.rri.wvu.edu/WebBook/Schaffer/Chapterper cent203per cent20S11per cent20forper cent20WVA2.pdf.

Shand, R.T. (ed.) (1980). *The Island States of the Pacific and Indian Oceans: Anatomy of Development*, Monograph no. 23, Development Studies Center, Australian National University, Canberra.

Simon, D. (1996). *Transport and Development in The Third World*, Routledge, New York.

Solomon Islands Government (2009). Statistical Bulletin, 06/2011, Report on 2009 Population and Housing Census, Solomon Islands and Housing Centre 2009, Solomon Islands Statistics Office, Ministry of Finance, Honiara, Solomon Islands.

Solomon Islands Government (2011). *Statistical Bulletin, 6/2012*, International Merchandise Trade Statistics (December Quarter, 2011), Solomon Islands Statistics Office, Ministry of Finance, Honiara, Solomon Islands.

Solomon Islands Marine Department (2012). Ships Register, Ministry of Infrastructure Development, Honiara, Solomon Islands.

Solomon Star Newspaper (2004a). 'Downfall of MSC', Editorial column, July 30th, Honiara, Solomon Islands.

Solomon Star Newspaper (2004b). 'Malaita shipping services in serious trouble', July 30th, Honiara, Solomon Islands.

Solomon Star (2010). Maritime Sector to Reform, Wednesday, June 30th, accessed on 20th October, 2012 from http://www.solomontimes.com/news.aspx?nwID=5316.

Southeast Solomon Islands Cultural History: A preliminary Survey (1976). Bulletin 11, The Royal Society of New Zealand, Wellington.

Stanley, D. (1999). Solomon Islands Travel to the South, Moon Handbook, South Pacific. Retrieved on 14th April, 2012 from: http/: www.southpacific.org/text/finding_solomons.html.

Starkey, P., Ellis, S., Hine, J., and Ternell, (2002). Improving Rural Mobility: Option for Developing motorized and Non-motorised Transport in Rural areas, The World Bank, Technical Paper 525, Washington D.C.

Taafe, J. E. and Gauthier, J. R. (1973). Geography of Transportation, Prentice Hall, New Jersey.

TecnEcon- Hyder Consulting Limited (1999). Solomon Islands Shipping and Marine Study Project Number 7, ACP.Sol.28, Final Report, February, European Commission, European Development Fund, London.

Tuomi, B. (2005). Solomon Islands: Diagnostic Assessment of Inter-Island Transport, ADB Technical Report (TA 4527), August 2005, accessed on 12 August, 2012 from: http://www2.adb.org/Documents/Reports/Consultant/38241-SOL/38241-SOLTACR.pdf.

UNCTAD (United Nations Conference on Trade and Development) (1989). Trade in Services: Sectoral Issues, United Nations, New York.

UNCTAD (United Nations Conference on Trade and Development) (1997). Review of Maritime Transport 1997: Chapter VII Review of Regional Development- Small Island developing Countries, United Nations, New York.

UNCTAD (United Nations Conference on Trade and Development) (2002). India Country Report: Regional Seminar on Liberalization of Maritime Transport Services under WTOGATS, 11-13 February, Bangkok.

UNCTAD (United Nations Conference on Trade and Development) (2003). Review of Maritime Transport, Report by the UNCTAD Secretariat, United Nations, New York and Geneva.

UNCTAD (United Nations Conference on Trade and Development) (2010). Trade and Development, Report: Employment, globalisation, and Development, Report by the Secretariat of the United Nations Conference on Trade and DevelopmentUnited Nations, New York, accessed on 23rd July, 2012 from: http://unctad.org/en/docs/tdr2010_en.pdf.

UNCTAD (United Nations Conference on Trade and Development) (2011a). Annual Report, United Nations, New York. Retrieved form http://unctad.org/en/Docs/tdr2011_en.pdf. Accessed on 5th July 2012.

UNCTAD (United Nations Conference on Trade and Development) (2011b). Review of Maritime Transport 2011, Accessed on 24th June, 2012 from http://unctad.org/en/Docs/rmt2011_en.pdf.

UNCTAD (United Nations Conference on Trade and Development) (2011c). Trade and Development 2011: Post-crisis policy challenges in the world economy, United Nations, New York. Retrieved on 5th July 2012 from: http://unctad.org/en/Docs/tdr2011_en.pdf.

UNCTAD (United Nations Conference on Trade and Development) (2012). World Development Report 2012, accessed on 29th August, 2012 from: http://unctad.org/en/PublicationsLibrary/gds2012d1_en.pdf. Retrieved

UNDP (United Nations Development Programme) (1966). *Fiji Survey of the Transport System: Part 1 Transport in Fiji's Economy*, United Nations, Suva, Fiji.

UNDP (United Nations Development Programme (1999). Pacific Human Development Report 1999). *Creating Opportunities*, United Nations Development Programme, Suva, Fiji.

UNDP (United Nations Development Programme) (2001). Human Development Report, Suva, Fiji.

UNDP (United Nations Development Programme) (2002). Human Development Report: Building a Nation, Volume 1, Main Report, Mark Otter, Victoria.

UNDP (United Nations Development Programme) (2011a). Human Development Index and its components, accessed on 27th July, 2012 from: http://hdr.undp.org/en/media/HDR_2011_EN_Table1.pdf. Retrieved

UNDP (United Nations Development Programme) (2011b). International Human Development Indicators, accessed on19th September, 2012 from: http://hdrstats.undp.org/en/countries/profiles/SLB_print.html.

UNDP (United Nations Development Programme)(2011c). The Least Developed Countries Report, 2011, accessed on 24th August, 2012 from: http://unctad.org/en/docs/ldc2011_en.pdf.

UNESCAP (Economic and Social Commission for Asia and the Pacific) (1997). *Proceedings of the Sub-regional Seminar on Formulation of a Regional Policy to Replace Aging Ships in the Pacific Islands Fleets*, United Nations, New York.

UNESCAP (United Nations Economic and Social, Commission for Asia and the Pacific) (2002). Report of the Regional Seminar on Liberalization of Maritime Transport Services under WTOGATS, retrieved on 27 June, 2012 from: http://www.unescap.org/ttdw/publications.

UNESCAP (United Nations Economic and Social, Commission for Asia and the Pacific) (2009). Inter-island Shipping: Issues and Strategies. A Pilot Study on the Alleviation of Poverty in Remote Island Communities in Indonesia, United Nations, New York accessed on 24th August, 2012 from: http://www.unescap.org/ttdw/Publications/TFS_pubs/pub_2017/pub_2017_fulltext.pdf.

UNESCAP (United Nations Economic and Social Commission for Asia and the Pacific) (2010). Statistical Yearbook 2009: For Asia and the Pacific, United Nations. Accessed on 20th August, 2012 from: http://www.aidsdatahub.org/dmdocuments/ESCAP_SYB2009.pdf.

UNESCAP (United Nations Economic and Social Commission for Asia and the Pacific) (2012). Statistical Year Book for Asia and the Pacific accessed on 15th October, 2012from: http://www.uis.unesco.org/Library/Documents/statisticalyearbook-asia-pacific education-2011-en.pdf.

United Nations (1996). Marine Transport in Small Island developing States, Commission on Sustainable development Fourth Session, 18th April-3rd May, Report of the Secretary General, accessed on 28th July, 2012 from: http://islands.unep.ch/d96-20a4.

Unimaps (2012). Southwestern Pacific Map, retrieved on 20th March, 2012 from: http://unimaps.com/western_pacific/index.html.

UN-OHLLS (2010). Small Island Developing States, retrieved on 4th August, 2012 from: http://www.unohrlls.org/en/sids/43/.

Vickerman, R. and Quinet, E. (2004). *Principles of Transport Economics*, Edgar Elgar, Cheltenham, UK.

Wagenaar, T. C. and Babbie, E. (2001). *Practical Social Research*, 9th Edition, Wadsworth, Singapore.

Wagener, K. R. V. (1991). *Writing a Thesis: Substance and Styles*, Prentice Hall, Upper Saddle River, NJ.

Ward, R. G. and Proctor, A. (eds). (1980). *South Pacific Agriculture:Choices and Constraints. South Pacific Agriculture Survey 1979*, Asian Development Bank in association with Australian National University Press, Canberra.

Walsh, A.C. (1982). 'Solomon Islands', in A.C. Walsh, *Migration, Urbanisation and Development in the South Pacific Countries*, Country Report. United Nations, New York.

Walsh, A.C. (1996). *Getting On Top of your Thesis: The Essential Research Skills*, Second Edition, Amokura Publications, Suva Fiji.

Werner, C. (1985). *Spatial Transportation Modeling*, Sage Publications, London.

Wisconsin Department of Transportation Economic Development Team (1999). Transportation Alternatives for Economic Development in Wisconsin, Madison. Accessed on 23rd April 2012 from: http://ntl.bts.gov/DOCS/ted.html

World Bank (2009). Annual Report 2009, accessed on 25th May, 2012 from: http://siteresources.worldbank.org/EXTAR2009/Resources/6223977125295083187 3/AR09_Complete.pdf

World Bank (2010). *Promoting Economic Cooperation in South Asia: Beyond SAFTA*, eds. Sadiq Ahmed, Saman Kelegawa, Eliz Ghani, Sage, London.

Worrel, D. and Fairbairn, Te'o, I. J. F. (1996). *South Pacific and Caribbean Economies: A Comparative Study*, The Foundation for Development Cooperation, South Pacific Forum Secretariat, Suva.

APPENDIX

APPENDIX -1

Questionnaire

Confidentiality:

All responses to these questions will be treated with very high level of confidentiality and will be used solely for the purpose of study.

I. Household and Socio-economic Background

Please tick appropriate box (es) where necessary.

1. Village…….. 2. Ward……..

3. Constituency……

4. Province: i. Isabel □ ii. Malaita □

5. Gender: (1) Male □ (2) Female □

6. Age: (1) 15 - 30 □ (2) 30 – 45 □ (3) >50 □

7. Occupation: (1) Salary earner □ (2) Wage earner □ (3) Unemployed □
(4) Self-employed □

8. If self-employed mention your activity

(1) Small business □ (2) farming □ (3) Others □
(Specify)……

9. If in business, how does shipping affect your business?

(1)……

(2)……

(3)……

10. How much do you earn in a month?

(1) <$50 □ (2) $50 -$150 □ (3) $150 - $250 □ (4) >$250 □ (5) don't know □

11. How often do you travel to other islands, especially to Honiara?

(1) Every fortnight □ (2) once a month □ (3) every two months □

(4) Once in a year □ (5) not at all □

12. What mode of transport do you use when travelling to other islands?

(1) By ship □ (2) by Plane □ (3) By canoe □ (4) Either plane or ship □

(5) Never travel □

Why?.....

13. The main reason for travelling to Honiara is

(1) Visit friends/ relatives □ (2) Sell goods □ (3) Purchase cargoes □

(4) Education □ (5) buying goods □ (6) others □

(7) Never travel □

14. Does any member of your family moved to other islands?

(1) Yes □ (2) No □

15. If yes, how many people have moved?

……

16. What are some of the reasons for moving?

(1) Education □ (2) employment □ (3) leisure □ (4) marriage □

(5) Others □

(specify)……

17. Can you identify some of the problems arising due to shipping?

(1)…….
(2)…….
(3)…….
(4)…….

II. Shipping Service Provision and Quality

18. How often does the ship call at your port?

(1) Weekly □ (2) fortnightly □ (3) monthly □ (4) quarterly □ (5) yearly □

(6) Never at all □

19. During the ethnic tension, does the ship call at your port regularly?

(1) Yes □ (2) No □

20. The condition while travelling by ship is

(1) Poor □ (2) good □ (3) very good □ (4) very high standard □

(5) Don't know □ (6) not applicable □

21. Do you get all your daily consumer goods from the markets regularly?

(1) Yes □ (2) No □

22. Do you get your food supplies regularly?

(1) Yes □ (2) No □

23. If your answer is NO, do you think it is because of irregular shipping services?

……

24. How do you find the quality of the goods supplied through shipping?

(1) Good □ (2) bad □ (3) very bad □ (4) don't know □

25. Do you have access to a

(1) Clinic □ (2) School □ (3) Road □ (4) Radio □

(5) Trade store □ (6) Bank □

26. Is your port of call well connected by road?

(1) Yes □ (2) No □

27. What are the major products that are produced in your area for sale?

(1)……

(2)……

(3)……

(4)……

28. Where do you usually sell your produce?

(1) Malaita □ (2) Isabel □ (3) Honiara □ (4) Malaita/ Honiara □

(5) Isabel /Honiara □ (6) None □

29. If your answer is Honiara, why is that so?

(1)……

(2)……

(3)……

(4)……

30. What is the profit margin like when selling in Honiara as compared with selling at home?

(1) low □ (2) high □ (3) very high □ (4) don't know □

III. Shipping Services: Problems and Challenges

31. How do you find the behaviour of the ship's crews?

(1) Unfriendly □ (2) friendly □ (3) very friendly and helpful □

(4) Don't know □

32. What are some of the problems you experience when travelling on the company's ships?

(1) High charges □ (2) Congestion □ (3) poor servicing □ (4) time consuming □

33. How much is the fare being charged by shipping companies to Honiara?

$……

34. From your personal experience, is there any improvement in the shipping services being provided to your area after the privatisation of the Government shipping fleet?

(1) No improvement □ (2) very little improvement □ (3) Some improvement □
(4) very big improvement □ (5) can't tell □

35. If there is no shipping services being provided to your area, would that have any impact on your well-being?

(1) little impact □ (2) big impact □ (3) can't say □

Tangio tumas, fo taem blo iu- WANTOK

Thank you for your Responses