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Performance of Landowner Companies in the Timber Projects of Papua New Guinea's Forest Industry

A thesis
submitted in partial fulfilment
of the requirements for the Degree of
Doctor of Philosophy

at

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by

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Abstract of a thesis submitted in partial fulfilment of the
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Performance of Forestry-based Landowner Companies in Papua New Guinea

By

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The general situation of Landowner Companies (LOCs) that were associated with timber projects under the old *1979 Forest Policy* regime in Papua New Guinea (PG) was quite disturbing. Cases of bribery, corruption, mismanagement and too-cosy relationships with the logging companies on the part of the appointed local representatives, were rife among the LOCs in the PNG logging industry. The situation is generally similar with LOCs in timber projects whose operations began under the *1979 Forest Policy* and then continued under the current *1991 Forest Policy* regime. Problems identified with LOCs include mismanagement of landowners' funds, failure to be accountable to the landowners, poor landowner-LOC executive working relationships, and too-cosy relationships between LOC executives and the logging companies. The PNGFA, while aware of the problems facing LOCs, has continued to use the LOCs to facilitate new timber projects under the current *1991 Forest Policy* regime. The motivation of this study is to develop a better understanding of the factors that determine the performance of LOCs. The study was based three (3) case study areas and was conducted in two phases. Phase 1 of the study led to the development of major research themes using case study research strategy, with grounded theory as a research method, and supported by an in-depth interview and probing techniques. The research themes highlighted issues relating to various aspects of LOC businesses. The various issues reflected by the research themes were incorporated into the survey for Phase 2, which covered a larger sample size in the same case study areas. The findings from Phase 2 of the study indicate that the LOCs continue to be faced with issues, specifically relating to: poor organisation; lack of capacity, particularly the business knowledge, skills, experience and finance; the big, complex and diverse nature of the landowner groups that have created problems with their management, and the absence of laws or constitutions for the group or LOC businesses in general; and the failure on the part of LOC management to perform their responsibilities. Problems were also noted in the nature of the timber project development agreements involving payment of inadequate project levies that did not reflect serious commitment on the part of the logging company as well as the State to grand

to the landowners much need infrastructure projects in appreciation of their willingness to open up the forest resources they own under the traditional land tenure system.

The findings from this study that is similar to already existing knowledge on LOC issues cases of miss-management of LOC funds, the too-cosy working relationship between the landowners and the business leaders and the failure to uphold mandatory business responsibilities such as frequent business meetings where landowners get to be informed of how their funds are being used and how the project is going, as well as giving them a chance to offer their business suggestions. The findings from this study that are new include absence of company structure elements, landowners' high expectation for social services as reflected by their perception of LOC objectives, poorly done business plan, poor representation of landowners in the management structure, appointment of business executive been improperly done, lack of seriousness in the development of business contract, lack of capacity (financial, human and machinery, and absence of law or constitution.

Keywords: land tenure system, forest policy, Landowner Company, forest concession agreement, grounded theory, project development levy

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Abbreviations and Acronyms

ADB	Asian Development Bank
CIA	Central Intelligence Agency, USA
CPI	Consumer Price Index
CS	Case Study
FMA	Forest Management Agreement
GDP	Gross Domestic Product
GEM	Global Economic Monitor (Institute of International Finance)
GERA	Global Entrepreneurship Research Association
GoPNG	Government of Papua New Guinea
GT	Grounded Theory
HEC	Human Ethics Committee
IFRT	The 2003/2004 Independent Forest Review Team
IIED	International Institute of Environment and Development
ILG	Incorporated Landowner Group
ILGA	Incorporated Landowner Group Act 1974
ILO	International Labour Organisation
IMF	International Monetary Fund
IPA	Investment Promotion Authority
LFA	Local Forest Area
LO	Landowner
LOC	Landowner Company
LOCs	Landowner Companies
ODI	Overseas Development Institute
PNG	Papua New Guinea
PNGFA	Papua New Guinea Forest Authority
PGK	Papua New Guinea Kina (currency - kina & toea)
SIL	Summer Institute of Linguistics
TA	Timber Authority
TRP	Timber Rights Purchase
WB	World Bank
WIPO	World Intellectual Property Organisation

Chapter 1

Introduction

1.1 Introduction

Papua New Guinea (PNG) is blessed with many natural resources (gold, copper, silver, oil, liquefied natural gas, marine and forests) which have the potential to generate substantial revenue for its economy (GoPNG, 2013). Since PNG's political independence in 1975, policies and laws for the commercial development¹ of these natural resources have been enacted to pave the way for their exploitation. However, the biggest challenge for the new government has been to access these natural resources as all are owned by customary landowners under the traditional land tenure system. The land tenure system or land law cannot provide for any formal landowner-State agreement as it is informal, unwritten and lacks the legal structure to recognise landowners as an entity (Holzknecht, 1994). As a consequence, a company structure becomes the ideal option for their management; hence, the forest policy recommendation of the adoption of the Landowner Company (LOC) concept (GoPNG, 1991). This study is about the collectively owned LOCs in the timber business of PNG's forest industry.

The introduction of the LOC concept was primarily to facilitate the forest resource concession agreements (FRCA) that pave the way for the State, through the Papua New Guinea Forest Industry (PNGFA), to contract logging companies to develop forest resources through large scale logging² operations (GoPNG, 1991). Besides the LOCs' role in the facilitation of FRCA, they were expected to manage the interests or expectations of the landowners during the term of the timber project.

Landowners have high expectations from their LOCs as well as from the timber projects. These high expectations relate mainly to basic infrastructure projects such as roads, bridges and permanent buildings for schools, community halls, medical aid-posts, and water supply. These things are absent in many timber project areas in PNG, as these areas are remote and isolated, with limited access to government or mission services. The timber project is often seen as a proxy for government in terms of the provision of basic services.

Since the introduction of the LOC concept in 1979, it has gained popularity in PNG's forest industry. All timber projects have had associated with them LOCs that are collectively owned

¹ Extracting or harvesting of the resources

² Involves selective harvesting of commercially valuable trees of 50 centimetres diameter at breast height and above.

by the customary landowners from the timber project area. Landowners have high expectations from their LOCs, but unfortunately the ability of LOCs to deliver on their expectations has never been very satisfactory. Studies identified LOCs to have been faced with many problems (Barnett, 1989a; IFRR, 2004; Kamaeta & Topni, 1998; Mullins & Flaherty, 1995), and this study explores this further through the use of the case studies of the LOCs within the forest industry of PNG.

The remainder of this chapter outlines the physical, social, and economic characteristics as well as forestry laws, forest concession agreements, and incorporated landowner group. These topics are intended to provide some background information to the research issues in study. The chapter ends with study approach, research objective and research questions for Phase 1 of the study.

1.2 Physical Characteristics

PNG is an island country occupying the eastern half of the island of New Guinea and it lies between the Coral Sea and South Pacific Ocean. The total land area of the country is some 64 million hectares (GoPNG, 1991). Its physical landforms vary from flat and low lying coastal areas to rolling hills, right through to the very rugged mountains that run along the spine of the country from one end to the other. The highest mountain is Mt. Wilhelm, at 4,500 metres above sea level (Bourke & Harwood, 2009).

PNG's climate is very tropical with average temperatures ranging from 24 to 45 degrees Celsius. In the coastal areas it is quite humid but in the highland areas it is less humid and cooler, with temperatures ranging from 12-30 degrees Celsius (Bourke & Harwood, 2009). Some of the highland areas, including Mt. Wilhelm³ are very cold, with temperatures often below freezing. The country's annual rainfall has been estimated to be between 2000 and 4000 millimetres (Bourke & Harwood, 2009), however with great variations in the amount from one part of the country to the other.

³ It is 4,500 metres above sea level.

1.3 Social Characteristics

The estimated population of PNG in 2011 is 7.2 million people⁴ (GoPNG, 2011). There are about 800 different tribal groups who speak more than 800 different languages (SIL, 2007). English is the official language in business and government circles, and it is spoken by five to ten percent of the country's population. The other common languages are Melanesian Pidgin (*tok pisin*), a creole language that is widely used and understood by most of the country's population. *Hiri Motu* is common in the Papuan region of PNG although this is spoken by less than five percent of the country's total population (SIL, 2007).

Many of PNG's social indicators are poor or low as per the Central Intelligence Agency's (CIA) estimates (CIA, 2011). For example, the rate of literacy in PNG is still low, and it is much lower for women than for men. The average life expectancy is low, at just 60-70 years (though this is a significant improvement from previous years). The human development index has risen from 0.4 to 0.5, but progress has slowed in recent years, according to the World Health Organisation (2010). HIV/AIDS has become a major threat to the development of the nation. Many health facilities and services in the country have deteriorated in recent years, the main reasons being inadequate funding by the various governments to the health sector that supports rural communities, and a shortage of trained medical personnel. This situation is exacerbated by the fact that the population of PNG is dispersed across a vast area that includes numerous islands, making it even more difficult to provide cost-effective health services to the isolated areas and outer islands.

1.4 Economic Characteristics

PNG has a relatively small, dual economy that is made up of the formal and the informal sectors (GoPNG, 2013; Government of Australia, 2010). The formal sector is dominated by major industries like mining, crude petroleum oil refining, copra crushing, palm oil, plywood and wood chip production, construction, fisheries and tourism. The informal sector is dominated by agriculture and semi-agricultural industry. The major exports include liquefied natural gas (LNG), oil, gold, copper, ore, logs, palm oil, coffee, cocoa, copra and seafood and the major export markets are Australia, Japan and China. PNG's imports comprise mainly machinery and

⁴ About 80-85 percent of the total population live in rural areas while 12-20 percent live in urban areas of the country.

transport equipment, manufactured goods, foods, fuel, chemicals and most imports come from Australia, Singapore and China.

According to IMF (2014), PNG's GDP in 2010 was US\$9.72 billion, it grew to US\$12.87 billion in 2011. In 2012, there was moderate growth to a GDP of US\$15.13 billion. The same was the case in 2013 with small growth to a GDP at US\$15.97 billion and with a forecast growth in GDP by six percent in 2014. It is also been forecasted that the start of the US\$20 billion LNG project is expected to boost PNG's GDP growth to 20 percent in 2015.

While the last four years have seen steady growth in the economy as reflected by the GDP (above), PNG still carries high foreign debts. According to IMF (2014), in 2010, the country's foreign debt (from foreign borrowing) stood at USD\$2 billion, with a gradual increase to US\$3 billion in 2011, then a jump to a high of US\$7.7 billion in 2012. However, by 2013, the government had reduced its foreign debt down to 4.5 billion. It is expected to reduce the current debt further in 2014, with a forecast to bring the government's accounts to a nine percent surplus in 2015 when PNG begins the export of LNG.

The trend in consumer price index (CPI) has shown some improvement after its high at 8.4 percent in 2011 (it was 6 percent in 2010). In 2012, the CPI dropped to 2.2 percent but it increased slightly to 3.8 percent in 2013. The CPI is expected to increase to 6.5 percent in 2014 (IMF, 2014).

Despite the steady economic growth over the last four years that has seen improvements in macroeconomic performance, this has not translated into improved service delivery. Key social and economic indicators are in decline. For instance, poverty remains high, much of the public infrastructure is in poor condition and human development indicators are low. The government also faces the challenge of ensuring transparency and accountability for revenue flowing from the mining and natural gas and oil extraction projects. Other significant development constraints include challenging geography, extreme ethnic diversity, and a rapidly growing and widely dispersed population (ADB, 1998; IMF, 2014).

1.5 Forestry Laws

Forestry laws relate to forest policy, and, together with other supporting laws, they provide for the management and commercial development of the country's forest resources. Commercial development in this study refers to the large scale commercial logging operations that involve

the harvesting of commercially valuable tree species of acceptable diameter sizes⁵ for sawn timber production and exports in the round log form.

As a summary on forest laws and policy development, reference is made to Table 1.1 that indicates evidence of early commercial development of the forests in 1922 under the Timber Ordinances (*Timber Ordinance 1909* in Papua and *Timber Ordinance 1922* in New Guinea) which continued until their repeal in 1936 with the *Forest Ordinance 1936*. Formal forest policy development began in 1946 and continued until 1958. The colonial *1958 Forest Policy* remained valid after PNG’s political independence in 1975, until its repeal 1979 with the new *1979 Forest Policy*. Another important law was the Forestry Private Dealings Act 1971 that carried through until its repeal in 1991. That same year saw the repeal of the old *1979 Forest Policy* by the current *1991 Forest Policy*. Another important piece of law is the *Land Groups Incorporation Act 1974*, which remains current with extensive use for the incorporation of landowners into every new timber project in PNG.

Table 1.1: Development of forest policy and laws

Phase 1: Origins of colonial forest policy	
1922	No forest policy in existence. Control on the cutting and removal of timber exercised through the Timber Ordinance 1909 in Papua and the Timber Ordinance 1922 in New Guinea. C.E Lane–Poole commenced assessment of the forest resources of Papua and then New Guinea.
1936	Timber Ordinance of New Guinea superseded by Forestry Ordinance 1936.
1938	The Forest Service was established in New Guinea, with the appointment of two Australian foresters.
Phase 2: Post–war reconstruction and drive for development	
1946	First announcement of a formal forest policy. Army forestry records transferred to the administration. Former army personnel recruited to form the nucleus of the Forestry Department.
1953	Forestry Ordinance 1936 -37 of New Guinea applied to Papua and a uniform policy adopted for both territories (Papua and New Guinea).
1958	Adoption of New Forest Policy
Phase 3: Transition to Independence	
1971	Enactment of the Forestry Private Dealings Act
1974	Carson Report on Forestry and Forest Policy in Papua New Guinea, incorporation of forestry plans into the Government’s eight point Improvement Plans. Publication of the White Paper “National Forestry Policy”. Passage of the Land Groups Incorporation Act and the Land Acquisition Act, which later become the instrument for use in the Forest Management Agreement (FMA).
1975	Political Independence for PNG
1979	Adoption of the New Forest Policy, relaxing previous restrictions on log exports.

⁵Diameter at breast height of 50 centimetres and above.

Phase 4: Present stage	
1987	Commission of Inquiry into aspects of the Forest Industry
1988	PNG requests Tropical Action Plan (TFAP)
1989	Report of Commission of Inquiry into aspects of the Forest Industry (The Barnett Report)
1990	Draft and approval of the current National Forest Policy by National Executive Council
1991	Enactment of Forestry Policy and Act
1992	Forestry Regulation
1993	Amendment and Application of Forestry Act (as amended), 1993

Source: Overseas Development Institute (2007, pp. 27-28)

1.6 Forest Concession Agreements for Timber Projects

The forest concession agreement paves the way for access to customary forest resources for large scale commercial timber projects. Forest concession agreements were classified as Timber Rights Purchases (TRPs) or Local Forest Areas (LFAs), under the repealed *1979 Forest Policy*, and Forest Management Agreements (FMAs) under the current *1991 Forest Policy*. Timber projects that came into operation under the old forest policy regime and continued under the current forest policy regime, continued with their old classification, but became subject to the dictates of the current forest policy and related laws.

The LFA was a special case where the forest concession agreement was facilitated by the landowners and not the State. This was made possible by the *Forestry Private Dealings Act 1974*. This act gave recognition and authority to the customary landowners to develop their timber resources themselves; but the practical reality was that they did not have the capacity and the practice was for them to deal directly with a foreign logging company to develop their forest resources. A timber permit was normally issued to the LOC and the foreign logging company was then sub-contracted to develop the forest resources. The State had minimal input into facilitating Logging and Marketing Agreements (LMA) between the LOC and the foreign logging company, but the logging operation was subject to all the forest laws and policy.

The old *1979 Forest Policy* and its mechanisms (TRP and LFA) for the acquisition of the forest resources focused only on the trees and not the land, whereas the mechanism under the current *1991 Forest Policy* (FMA) focuses on both the trees and the land. This has made it easier for the adoption of principles and frameworks for sustainable forest management.

1.7 Incorporated Landowner Groups

An ‘Incorporated Landowners Group’ (ILG) is a formally registered social group that comprises many landowner clans, formed through the process defined by the *Land Groups Incorporation Act 1974*. Discussions relating to ILGs, their application, and related issues have been well documented (Fingleton, 1993, 1998; GoPNG, 2008; Holzkecht, 1994, 2007; Power, n.d.). Their significance in the forest industry continues, particularly with the formal registration of landowner clans to facilitate the formation of their business entities that will enter into forest concession agreements for the timber projects.

Forest concession agreements pave the way for access to the forest resources that are owned by the customary landowners of a particular timber project area. For such agreements, the parties involved include the LOC, that represents the landowners, and the PNGFA, that represents the State or government of PNG. However, recently ILGs have participated in the forest concession agreements (FMAs) directly through their executives (Holzknecht, 1994; Power, n.d.). While this ILG process offers significant improvement for the process of bringing the different landowner clans on board (unlike under the old forest policy regime, where eligible landowner clans were simply accepted off a mere listing of them, with no legal guidelines for verification), and in their participation in forest concession agreements, the composition of the boards is dominated by non-landowners, particularly government officers. Consequently, landowners, who were not happy with such arrangements, have instead gone back to using LOCs. Nevertheless, ILGs provided for accurate identification of the different landowner clans for the different timber projects and they have continued as the formal tool for landowner clan registration (Fingleton, 1993).

Particularly for an ILG, and according to Fingleton (1993), the process of incorporating customary landowner groups often begins with the preparation of the group’s constitution, which must set out:

- *the company name;*
- *the qualifications for (and any disqualification from) membership of the group;*
- *the title, composition and manner of appointments of the committee or other controlling bodies of the group;*
- *the way in which the groups act and the way actions are recorded, and the name of the custom under which the group acts;*

- *the details of the group's dispute settlement authority, and any limitations or conditions on the powers given to the group under the Act;*
- *any rules applicable to how the group's affairs are conducted.*

However, the use of ILGs has been criticised for their irrelevance to forestry operations because they are based on social relationships rather than trust, and because they are usually 'wealth-distributing' rather than 'wealth-creating' bodies (Lea, 2005). In other words, the group comprising the landowners is not the same as other conventional social groups and for that reason Lea suggested that ILGs be abandoned and instead companies that are created on a voluntary basis adopted. In the mining industry, the use of ILGs as a mechanism for distributing mining royalties has always been problematic, as indicated by (Koyama, 2004), who discussed the problems under the following headings: leadership struggles, unlawful and unfair sharing of benefits, complaints about leaders misusing ILG funds, lack of representation and responsibility of ILG leaders, lack of accountability and transparency, inability of ILGs to solve their problems internally, political alliance as a means of rent-seeking, bribery and corruption within ILGs, and failed landowner business enterprises. He added that most 'principal-agent' related problems arose from the poor design and the lack of oversight of the ILG Act.

The case of poor design may not be true, but the lack of oversight of the ILG Act is true. According to Fingleton (1993), the ILG-landowner related problems result from a failure to adopt the full dictates of the ILG Act. In particular he emphasised that the process for incorporating customary groups must begin with the preparation of the group's constitution (details are outlined above). Many of the problems highlighted by Koyama would have been avoided had a constitution been in place.

With this brief background information to this study, the next section contains discussions relating to the issues or problems facing the LOCs, and then it sets out how the study will continue from there.

1.8 Problem Setting

PNG's forest industry has had a 'problem past' but recently there has been improvement through drastic changes in the forest laws, policy, priorities and focus. The forest industry in the early years prior to and after PNG's Political independence in 1975 was dominated by Japanese and Australian logging companies; this changed during the 1980s to Southeast Asian logging companies. These Southeast Asian companies brought their own style of conducting

business and that got the industry into serious trouble, as the dealings between the logging companies, landowner agents, government officers and politicians become plagued with high levels of corruption, high instances of transfer pricing involving the export of round logs, exported log volumes per year soaring higher than the sustainable limit volume per year, and the unscrupulous logging practices that created much damage to the environment of the timber project sites. This, together with the general situation of the forest industry during the troubled times before and after the change in forest laws and policies are well documented by Barnett (1989b), Filer (1997), Filer & Sekhran (1998), Hunt (2006, 2002), IFRR (2001, 2004), and ODI (2007).

For the purpose of charting the course of this study on LOCs in the timber project of the PNG forest industry, reference is made to some of these studies and other literature. PNG's forest industry industry has suffered from endemic corruption. The 1988-1989 judicial enquiry (The Barnett Inquiry) into aspects of the logging industry revealed widespread and pervasive corruption involving logging companies, government officers, LOC executives, and local and provincial politicians, together with cases of transfer pricing and reckless logging practices (Barnett, 1989a). Particularly for the LOC executives, the enquiry revealed their acceptance of bribes that paid for easy access for the foreign logging companies to operate in their forest areas. Even the then Minister of Department of Forests was cited for corruption in the discharge of his responsibility; the law at that time gave him sole authority to declare the setting up of an LFA when all conditions were met, but in many cases declarations were made when certain conditions were never met (Barnett, 1989a).

The LOCs were also faced with serious management problems. The Barnett Inquiry revealed cases of misuse of landowners' funds, cases of dishonesty with the payment of timber royalties, and total neglect of all mandatory responsibilities towards the landowners (Barnett, 1989a). Similar findings were also made by Mullins and Flaherty (1995) in their study on the Kumil timber project in Madang province, where they found the LOC⁶ executives to have mismanaged landowners' funds intended for much needed infrastructure projects such as access roads, schools and aid-posts, as well as to provide cash assistance to farmers for cash crop farming. Interestingly, the executives of the LOC were not even customary landowners of the timber project area. This was how corrupt the forest industry was at that time, and the landowners subsequently took it upon themselves to sort the problem out by shutting down the timber project.

⁶ Ulingan Development Corporation

Another case of mismanagement by LOC executives emerged from the study by Kameata and Topni (1998) on the Vanimo TRP, which found landowners accusing their LOC executives of buying properties without the endorsement of the landowners, irregularities in the payment of royalties and other payments, and finally of mismanaging their funds by squandering them on court battles brought against them by disgruntled landowners. In their defence, the LOC executive claimed to have performed exceptionally well, and to have made investment in properties both in the country and overseas. However, they claimed, their biggest problem was having to put up with continuous and unnecessary demands for money by the factional landowners' groups; their inability to satisfy these demands led to a number of court cases being brought against them. To meet the legal costs and other outstanding payments, the LOC had to sell all their properties.

In the findings from a report on the review⁷ of 14 major timber projects (The 2003/2004 Review) to ascertain their compliance with the sustainable timber production⁸ logging practices, observations relating to LOCs include: poor representation of landowner groups in the LOC executive, instances of the LOC executive having access to landowners' funds while the company was insolvent, dishonesty in the distribution of landowner funds (dividends or compensation), putting landowners' funds to their own use, working in isolation from the landowners, the LOC executive having a too-cosy relationship with the logging companies, and evidence of clan-agent dealings that were not acting in the best interests of the landowners at large (IFRR, 2004).

The Barnett Inquiry, these independent studies and the 2003/2004 Review highlighted a host of problems facing LOCs within the forest industry. In fact, the opening statements in this section, 'PNG's forest industry industry suffers from endemic corruption', truly reflected the situation of the forest industry under the repealed *1979 Forest Policy*, the existence of the *Forestry Private Dealings Act 1974* (revoked) and the then Department of Forests. The Barnett Inquiry made reference to these pieces of legislation for having contributed in one way or another to the problems that engulfed the forest industry during the 1980s. In addition, many of the reports and studies cited in this section were conducted on timber projects that were in operation during the term of the old 1979 Forest Policy, and the Forestry Private Dealings Act under the Department of Forests.

Despite the government being well informed of the many problems facing LOCs, LOCs continue to be associated with every timber project under the current *1991 Forest Policy*

⁷ Began in 2003 and furnished the report in 2004.

⁸ One of the recommendations of the 1989 Barnett Inquiry.

regime. The problems faced by these LOCs may be the same or different but certainly the forest policy is different, as also are the conditions for the development of the forest resources and the support to landowners and their LOCs. This calls for the need to develop a better understanding of those factors that determine the performance of LOCs in timber projects in PNG's forest industry. Hence the motivation for this study.

The underlying assumption of this study is that the general situation of LOCs should have improved given the good organisational resources of PNGFA, the well trained forestry personnel, the easy access to information now compared to 20 or 30 years ago, the availability of individuals who are capable of managing their LOCs, the availability of many non-government organisations from which assistance can be received, and the availability of many existing timber projects where landowners can learn from their experiences. Given these assumptions, the need to develop independent research themes is necessary, and hence, this study was conducted in two phases, as will be explained.

1.9 Research Objective, Research Question, and Study Approach for Phase 1 of the Study

The objective of the study is to develop a better understanding of those factors that determine the performance of LOCs in the timber projects of PNG's forest industry. Guiding the study towards achieving this objective is the key research question, which is: Are the landowners actually benefiting from their LOC? And if not, what are the key problems?

LOCs of interest are those that are associated with the timber projects that came into operation under the current *1991 forest policy* regime. However, given the problem of limited availability of information specific to this group of LOCs, the study had to be conducted in two phases. Phase 1 of the study is intended to develop major research themes needed for the detailed study in Phase 2 of the study. This need will require a qualitative study approach with an exploratory focus that uses a case study (CS) research strategy, and grounded theory (GT) as a research methodology, supported by in-depth interview and probing techniques.

Literature relating to CS, GT, and in-depth interviewing and probing techniques are incorporated in the discussion of the research methodology for Phase 1 of the study (Chapter 3) and not in the literature review chapter (Chapter 2), as they are in fact the research methods to be adopted in Phase 1 of the study.

The research question (above) guiding Phase 1 of the study will be modified into a number of specific research questions following the findings from Phase 1 of the study. That is done towards the end of Chapter 4.

1.10 Organisation of the Thesis

This thesis has eight chapters. Following this introduction chapter, Chapter 2 contains background literature relevant to the study, and Chapter 3 contains the research methodology for Phase 1 of the study. Chapter 4 contains the results of Phase 1 of the study, Chapter 5 contains discussion on the research methodology for Phase 2 of the study, Chapter 6 presents the results for Phase 2 of the study, and Chapter 7 contains a discussion of the results of Phase 2 of the study. Chapter 8 is the final chapter and contains the various conclusions and final matters. The references and appendices follow after Chapter 8.

Chapter 2

Literature Review

2.1 Introduction

This study is on Landowner Companies (LOCs) in the timber projects of PNG's forest industry with the focus being to develop a better understanding of those factors that determine their performance. LOCs are business organisations like any other conventional businesses, but they are owned by the indigenous Papua New Guineans from the different timber project areas throughout PNG.

Literature of relevance to the study context includes that dealing with entrepreneurship, indigenous entrepreneurship, institutions, organisations and groups. It is intended that the review of literature relating to entrepreneurship and indigenous entrepreneurship will lead to the identification of theories, model, concepts, and frameworks that are applicable to the needs this study.

The various sections in this chapter after this introduction section are the different sections that contain the summary of the review of literature on the different subjects that are relevant to the needs of this study. Specifically, Section 2.2 is on entrepreneurship, Section 2.3 offers a background on indigenous people, and Section 2.4 on indigenous entrepreneurship. Section 2.5 contains a summary of the various literature relevant to this study. Also contained in this section are summaries of the theories, models, concepts, and framework that will be adopted in this study. This section also contains additional literature on institutions, organisations, and groups. Section 2.6 contains the summary for this chapter.

2.2 Entrepreneurship

The Landowner Companies (LOCs) in the timber business of PNG's forest industry, like other companies in PNG, are commercial entities and are subject to the relevant company laws (Company Act 1997 and Company Regulations 1989) of the country. LOCs are unique in that they are collectively owned by the customary landowners whose timber resources are being subjected to these large-scale logging operations. The LOC concept was a forest policy initiative intended to promote landowners' participation in some form of business using the returns from their timber resources. As such, the review of literature relating to entrepreneurship

will offer some background understanding of what it takes of any conventional businesses that is driven by profit orientated objectives.

The literature relating to economic development makes distinctions in their perspectives, and the two most common perspectives are modernisation and dependency (development) (Paredo, Anderson, Galbraith, Honig, & Dana, 2004) According to Paredo et al., (2004), the modernisation perspective explains much of entrepreneurial behaviour of developed economies, while the dependency perspective explains much of the entrepreneurial behaviour of developing economies. Whilst there are these two distinct perspectives that are popular in the contemporary dialogue, each with its own ancestry, they are actually close to each other in that they each refer to a state of society, they are based on a set of goals, and they refer to a process. In the case of the states of societies, theorists of modernisation distinguish between traditional, transitional and modernised societies, while development theorists speak of underdeveloped and developed societies. In the case of goals, both the modernisation and development perspectives articulate a set of goals in which the ideal of modernisation or development provides an agenda for action. Finally, in the case of the process, the modernisation process sees movement from tradition to modernity, while the development process sees movement from underdevelopment to development.

Emanating from these perspectives, let us look first at the neoclassical approach to economic development. This is based on the assumption of rational human conduct, decision making and profit maximisation, which Schumpeter (1961), among many economists, claimed to be far from reality. In addition, Nelson & Winter (1982, p. 5), added that the neoclassical approach to economic development “fails to address uncertainty, bounded rationality, the presence of large corporations, institutional complexity or the dynamics of actual adjustment processes”. The neoclassical framework is static and cannot allow for input such as knowledge from recently available new growth theories, a view being put forward by Kirzner (1979). He suggested that the role of entrepreneurship needs to be re-examined in economic development following strong criticism of mainstream neoclassical economists for their aggregation approach and neglect of entrepreneurial discovery. From there on, enterprise and entrepreneurship came to be seen as drivers of the economic growth of individuals, communities, and the nation as a whole.

Among the many definitions of entrepreneurship, we note that of Saifan (2012), who defines it as an exceptional set of activities carried out by individuals with an exceptional mind-set in order to maximise profit. He used “exceptional mind-set” as a broader term to encapsulate the characteristics that shape the entrepreneurial activities of entrepreneurs. Furthermore, he emphasised that entrepreneurs and business people are different in that entrepreneurs “create

needs” while business people “satisfy needs”. Some core characteristics of an entrepreneur⁹ include innovator, high achiever, risk taker, dedicated, arbitrageur, organiser, initiative taker, strategic thinker, value creator, opportunity-aware, leader, holistic, persistent and committed (Drucker, 1985; Gartner, 1988; Stevenson & Gumpert, 1985; Timmons, 1997; Venkataraman, 1997). Landstrom (2005) goes step further and groups these core characteristics of entrepreneurship into three fundamental approaches: *entrepreneurship as a function of the market*, *the entrepreneur as an individual*, and *entrepreneurship as a process*.

Entrepreneurship as a function of market, relates to the entrepreneur’s behaviour in the market as demonstrated by five functions: they act as risk-takers/risk managers, opportunity creators/innovators, coordinators of limited resources, alert seekers of opportunities, and as capitalists (Landstrom, 2005).

Entrepreneurs as individuals, refer to Table 2.1, which better describes the entrepreneur’s behaviour in relation to the entrepreneurial approach.

Table 2.1: Entrepreneur characteristics as per the entrepreneurial approach

Entrepreneurial approach	Entrepreneur characteristics
“Great person” school	The entrepreneur has an intuitive ability, a sixth sense and inborn traits and instincts.
Psychological characteristics school	Entrepreneurs are driven by unique values, attitudes, and needs.
Classical school	The central characteristic of entrepreneurial behaviour is innovation, and the entrepreneur is therefore creative and discovers new opportunities.
Management school	Entrepreneurs are organisers of an economic venture; entrepreneurs are people who organise, own, manage and assume risk.
Leadership school	Entrepreneurs are leaders of people; entrepreneurs have the ability to adopt their style to the needs of the people.
Intrapreneurship	Entrepreneurship skills can be useful in complex organisations; intrapreneurs ¹⁰ develop independent units to create markets and expand services.

Source: Cunningham & Lischeron (1991, p. 47).

Entrepreneurship as a process, involves all the functions, activities, and actions associated with the perceiving of opportunities and the creation of an organisation to pursue them (Bygrave & Hofer, 1991; Gartner, 1988). Cunningham & Lischeron (1991) describe the process as being

⁹ Compiled from definitions of entrepreneurship by researchers of entrepreneurship

¹⁰ An intrapreneur is a person who while remaining within a larger organisation, uses entrepreneurial skills to develop a new product or line of business as a subsidiary of the organisation.

iterative, emphasising personal evaluation, planning, acting and reassessing (Figure 2.1). It assumes people have the responsibility for the venture, or that they assume some of its risk and rewards.

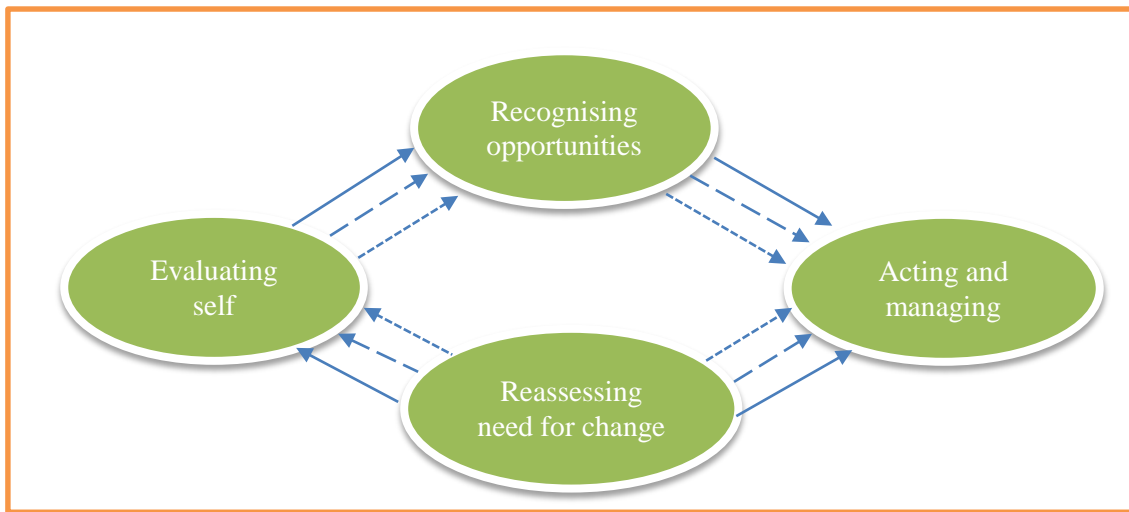


Figure 2.1: The entrepreneurial process

Source: Cunningham & Lischeron (1991, p. 57)

The entrepreneurial process involves entrepreneurs; so in order to understand them and their ventures, criteria from each facet of the overall process is required: the entrepreneur's personal perspective, their ways of identifying opportunities, their methods of acting and managing, and their mechanisms for adapting and reassessing (Cunningham & Lischeron, 1991).

Timmons (1997) mentioned a number of factors that influence the entrepreneurial process; and they are the environment or context within which the process takes place, the business opportunity, and the entrepreneur founding the venture. Given the relevance of these factors to this study, each of these factors will now be elaborated, as follows:

- *The environment or context within which the process takes place*, includes the local business climate, the degree to which local residents support or disparage risk-taking in establishing a successful business, and the availability of the physical infrastructure needed to support the new venture.
- *The business opportunity*, may range from small, home-based businesses to large ventures having several partners and multiple investors.
- *The characteristics of the entrepreneur founding the venture*, relates to the ability to recognize opportunities based upon nascent entrepreneurs' training, education, experiences, and creativity; the willingness to face risk and uncertainty; and the motivations for starting and operating the business. Entrepreneurial ventures may be

classified according to their differing growth potentials based on the entrepreneur's characteristics: *developing entrepreneurs*, *no-growth/slow growth entrepreneurs*, and *high-growth entrepreneurs*. The developing entrepreneur is a nascent entrepreneur who has the potential to become an active entrepreneur given the right circumstances and support. The no-growth/slow-growth entrepreneurs may lack the motivation, capacity, or opportunity for greater growth; include here are survival and lifestyle entrepreneurs. High-growth entrepreneurs, on the other hand, operate profitable ventures and operate successful businesses. High-growth ventures, often referred to as "gazelles," create new wealth by developing new products and processes and by developing new markets (Timmons, 1997).

Entrepreneurship can also be depicted by models, one example of a standard model being that by Pfeifer et al. (2003), as indicated in Figure 2.2. It should be noted however regarding this and other standard models of entrepreneurship, that the entrepreneurial factors of the model are based on research in western (developed) countries, and assume a primarily economic motivation. They are often based on individualism and almost all state that the individual's competence and resources are the key factors in starting an entrepreneurial business, and with a primary focus in their own interests (Bolton & Thomson, 2004; Carland & Carland, 1990; Cuervo, Ribeiro, & Roig, 2007).

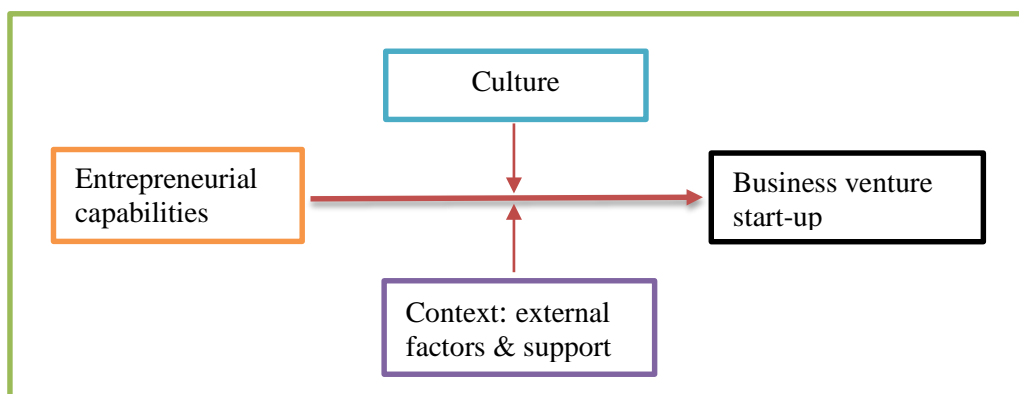


Figure 2.2: A standard framework of entrepreneurial ventures start-up

Source: Pfeifer et al (2003, p. 6).

Figure 2.2 demonstrates a relatively standard framework that conceptualises a business venture start-up that comprises individual entrepreneurs, the culture and the context (external factors and support such as the legal system, training programmes and advisory and support programmes). Again, such standard models are motivated by private considerations and driven by profit (wealth) goals (Casson, 1982).

Having now a better understanding of what entrepreneurship is, this review will continue on indigenous entrepreneurship in order to provide new knowledge and understanding of what it is and how it differs from entrepreneurship in general. For a start, ‘indigenous’ and so we must begin with defining what it is before reviewing the literature relating to indigenous entrepreneurship.

2.3 Indigenous People

There are about 300 to 370 million indigenous people around the world and these groups of people are complex, have different identities, cultures, and customs (ILO, 2009; WB, 2014a). The ILO’s defines indigenous people as:

“Peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonisation or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions” (ILO, 2009).

By contrast, The World Bank (2014b) define indigenous people by making reference to their possession, to some degree or other, of the following attributes:

- self-identification as members of a distinct indigenous cultural group;
- close attachment to ancestral territories and the natural resources in them;
- the existence of customary, social, or political institutions;
- the existence of an indigenous language different from the predominant language;
- strong attachment to ancestral territories and the natural resources on which they depend;
- exposure to risks and losses following the commercial development of their resources, including loss of identify, culture and customary livelihood;
- most marginalised (socially and politically), and
- the existence of a subsistence production system.

The definition by the Asian Development Bank (ADB) and those of other researchers of indigenous entrepreneurship (Paredo et al., 2004) are very similar to that by WB and ILO, and all one way or another tend to agree that indigenous people live in their traditional and subsistence ways and are commonly among the poorest and most vulnerable segments of society and are behind in the economic, education, and health sectors. In other words, the majority of the indigenous population are uneducated or less educated, unemployed, heavily

dependent on social welfare (more so in the case of developed countries than developing countries), and they struggle to reach many services provided by the government.

The conditions of indigenous communities have been of concern to economists as well as some international organisations/institutions, most notably the WB and IMF, who have responded to try to rectify the problems. One example of their response was the Structural Adjustment Programs, which were adopted by developing countries (PNG being one) during the early 1980s (IMF, 2014; WB, 2014b). Unfortunately that policy attempt did not stimulate rapid economic growth and in some cases there was no measurable progress in the general conditions of the indigenous communities. Despite the tremendous efforts of the financial institutions, the results were the same. Over time and in response to the failed attempts by the financial institutions, particularly the WB, many new approaches towards community engagement in business emerged, and indigenous entrepreneurship was one of them. The next section focuses on indigenous entrepreneurship.

2.4 Indigenous Entrepreneurship

Characteristic of the developing economies is the participation by the indigenous population or societies in business and economic activities whose nature is very distinct, hence the label 'indigenous entrepreneurship'. In contrast to entrepreneurship in general, indigenous entrepreneurship takes place within a particular cultural context (Maphosa, 1998) or within the context of the economic activities of indigenous people and in their own setting (Paredo et al., 2004). Throughout the world, wherever studies found business and economic activities to be embedded in cultural and social aspects, creating unique styles of entrepreneurship are created, which are often characterised by community-orientation, and which produce diverse livelihood outcomes (Cahn, 2006). So what really is indigenous entrepreneurship?

Among the many definitions, this study adopts that by Hindle & Lansdowne (2007), who defined indigenous entrepreneurship as:

“...the creation, management and development of new ventures by indigenous people for the benefit of indigenous people. The organisation thus created can pertain to either the private, public or non-profit sectors. The desired and achieved benefits of venturing can range from the narrow view of economic profit for a single individual to the broad view of multiple social and economic advantages for entire communities. Outcomes and

entitlements derived from indigenous entrepreneurship may extend to enterprise partners and stakeholders who may be non-indigenous”.

Indigenous entrepreneurship can also be seen as a form of self-employment driven by indigenous knowledge that leads to the achievement of self-determination and improvement of the indigenous social economic basis (Dana, 2007; Hindle & Lansdowne, 2007).

The experience of indigenous enterprise and entrepreneurship in developing countries varies but generally it has been admitted that it tends not to fare well. One study by Cahn (2006) into the rural communities of Samoa demonstrated that where the Samoan way of life and culture blended successfully with the micro-entrepreneurial activity, an ‘indigenous form of enterprise’ had developed. On the other hand, her research showed that tensions between the Samoan way of life and culture and the introduced business systems of the micro-enterprise could jeopardize the success and sustainability of the micro-enterprise. In the case of Maori enterprises, there has been great success, but still general inadequacy or lack of skills has been a problem (Frederick, 2004). The situation among other indigenous societies including those of PNG may probably be the same.

To gain some in-depth understanding of how culture influences entrepreneurship and in particular the different dimensions, reference is made to Table 2.2 that highlights common indigenous cultural values against common entrepreneurial values, using cultural value dimensions developed by Hofstede (1980).

Table 2.2: Comparison of common indigenous cultural values and common entrepreneurial culture values against Hofstede’s cultural value dimensions

Hofstede’s cultural value dimensions	Common indigenous cultural values	Common entrepreneurial values
Individualism/collectivism	High collectivism/low individualism	Low collectivism/high individualism
Power distance	Low power distance	High power distance
Uncertainty avoidance	Low uncertainty avoidance	Low uncertainty avoidance
Masculinity/femininity	High femininity/low masculinity	Low femininity/high masculinity
Confucian dynamism	Difficult to apply – distinctions between the two ends of the scope are unclear and can be contradictory	Did not include in their analysis

Source: Adopted from Lindsay (2005)

Table 2.2 highlights the differences between the profile of indigenous communities (Redpath & Nielsen, 1997) and the profile of non-indigenous entrepreneurs (McGrath, MacMillan, & Scheinberg, 1992). Uncertainty Avoidance is the only cultural dimension that has a common directional weighting in both group. Other dimensional weighting in the two groups are at opposite ends of the spectrum. Each of the cultural value dimensions can be elaborated on as follows:

- *Individualism*: this pertains to societies in which social ties and commitments are loose. Everyone is expected to look after himself or herself and the immediate family members. Collectivism, at the opposite pole to individualism, pertains to societies in which people from birth onwards are integrated into a strong cohesive group which throughout their lifetime continues to protect them, in exchange for unquestioning loyalty (Hofstede, 1991, p. 51). Collectivism is a key trait of indigenous communities. There is consensus in the literature that much of indigenous culture is about sharing resources, communalism, reciprocity, fulfilling social commitments and achieving social gains in the community (Curry, 2007; Dana, 2007; Lindsay, 2005).
- *Uncertainty avoidance*: “the extent to which the members of a culture feel threatened by an uncertain or unknown situation” (Hofstede, 1991, p. 113). In other words, the need to avoid uncertainty about the future. In a low uncertainty-avoidance culture, members are expected to cope with uncertainty as best they can. In high uncertainty avoidance cultures, structures are established which minimise the level of uncertainty faced by individual members.
- *Power distance*: the distance between individuals at different levels of the hierarchy (Pfeifer, 2003);
- *Masculinity versus femininity*: the division of roles and values in society regarding males and females (Pfeifer, 2003).

The indigenous culture and in particular the cultural dimensions make indigenous entrepreneurship very distinct, and as Dana (2007) puts it, the features of the culture of an indigenous community always contradict the basic assumptions of the standard theories of entrepreneurship. Standard models of entrepreneurship and entrepreneurial factors are based on research in western (developed) countries, and assume a primarily economic motivation. Consequently, such models of entrepreneurship may be unsuitable for investigating indigenous entrepreneurship, where the primary motivations may be both economic and non-economic (Dana, 2007; Lindsay, 2005). These standard models are based on individualism, and almost

all state that the individual's competence and resources are the key factors to starting up an entrepreneurial business, and further, that the entrepreneur is primarily focused on their own self-interest. By contrast, indigenous entrepreneurship is more communal in nature, with the focus more on the communal benefit.

Following the arguments that culture and social values contribute to shaping the attitude of the entrepreneurs towards a new business start-up, Lindsay (2005) developed a cultural based model of indigenous entrepreneurship, as depicted in Figure 2.3.

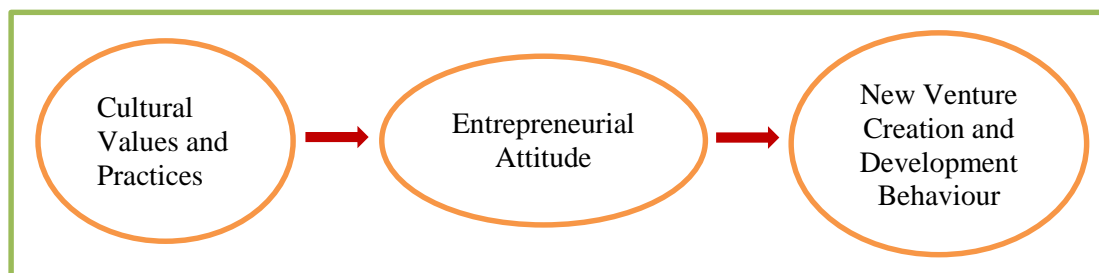


Figure 2.3: Cultural model of indigenous entrepreneurial attitude

Source: Lindsay (2005, p.4)

The indigenous model (Figure 2.3) recognises the influence of culture and social values, with the assumption that cultural values among indigenous people are quite different to those in developed countries. These cultural values shape the attitude of the entrepreneurs, which then affects the start-up of a new business. Indigenous entrepreneurial activities will often be based on communal rather than individual resources and focus on returns to individuals but also to the community (Cahn, 2006; Hindle & Lansdowne, 2007; Paredo et al., 2004). Standard models of entrepreneurship focus on the commercialisation of innovations, while a key motive of indigenous communities is preservation of heritage (Hindle & Lansdowne, 2007). They go even as far as to maintain that where culture and preservation of heritage do not feature as an important part of the development of an indigenous venture, then it may not be defined as indigenous entrepreneurship, even if the venture is owned by indigenous people and/or there is involvement of indigenous people. In their view, such a venture should be considered as simply a variation of the more standard models of entrepreneurship.

Besides the cultural model of indigenous entrepreneurial behaviour (Figure 2.3), we have that of Hindle & Moroz (2010), who showed that indigenous entrepreneurship is sufficiently distinct from both mainstream entrepreneurship and other social and management sciences. This led to the new framework shown in Figure 2.4.

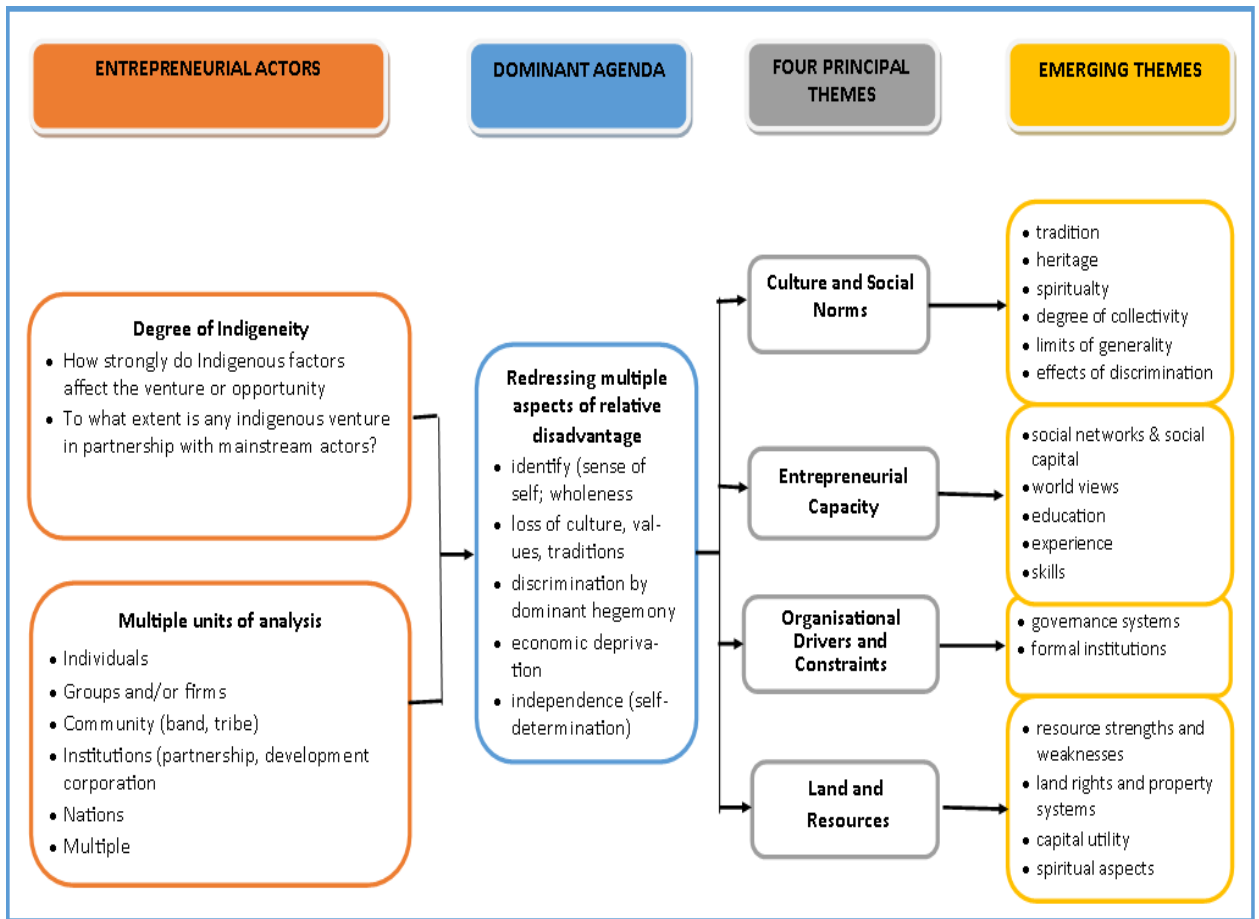


Figure 2.4: Indigenous entrepreneurship research framework

Source: Hindle & Moroz (2010, p.370).

The emerging themes shown in Figure 2.4 were also common in the many indigenous entrepreneurship cases investigated in a literature analysis by Hindle & Moroz (2010), further strengthening the case for its distinction from both mainstream entrepreneurship and other social and management sciences.

Literatures, relating to entrepreneurship and indigenous entrepreneurship is invaluable as from it we will form the lenses through which this study is conducted. The next section draws from the literatures the various factors involved in business venture start-up and success which can be related to this study.

2.5 Factors of Significance to this Study

The standard entrepreneurship model for new business venture start-up comprises three factors: culture, entrepreneurial capabilities and context (external factors and support). The indigenous entrepreneurship research framework developed by Hindle & Moroz (2010) comprises four factors: culture and social norms, entrepreneurial capacity, organisational drivers and

constraints, and land and resources. In addition to the indigenous entrepreneurship framework there is the culture based indigenous entrepreneurial attitude model developed by Lindsay (2005), which comprises two factors: cultural values and practices, and entrepreneurial attitude. While all three models/frameworks are similar, the indigenous cultural context makes the indigenous entrepreneurship model; but for the purpose of this study, a combination of all factors will be adopted, making reference to how it fits with this study. These different factors are *culture and social norms*; *entrepreneurial capacity*, *entrepreneur attributes*, and *entrepreneurship environment*. Each of these factors is discussed below, beginning with culture and social norms.

2.5.1 Cultural and social norms

The extent to which social and cultural norms encourage individual actions that may lead to new business methods or economic activities can potentially increase personal wealth and income. Particularly in regard to culture, literature has stressed its influence on entrepreneurial outcomes. For instance, Cahn (2006) in her study into the rural communities of Samoa demonstrated that where the Samoan way of life and culture blended successfully with the micro-entrepreneurial activities, an ‘indigenous form of enterprise’ had developed.

Culture can be better understood from these definitions - “the configuration of stereotyped patterns of learned behaviour which are handed down from one generation to the next through the means of language and imitation” (Barnouw, 1979, p. 5); “patterns of values, ideas, and other symbolic-meaningful systems as factors in the shaping of human behaviour” (Kroeber & Parsons, 1958, p. 583), and “the collective programming of mind which distinguishes the members of one human group from another and includes systems of values” (Hofstede, 1980, p. 25).

Values and norms are powerful forces for controlling and directing human behaviour. In fact culture shapes cognitive schema which ascribe meaning and values to motivational variables and guide choices, commitments, and standards of behaviour (Erez & Earley, 1993). Further, since values are typically determined early in life (Barnouw, 1979; Hofstede, 1980), they tend to be ‘programmed’ into individuals, resulting in behaviour patterns which are consistent with the cultural context and endure over time (Hofstede, 1980).

Thus culture, as the underlying system of values peculiar to a specific group or society, shapes the development of certain personality traits and motivates individuals in a society to engage in behaviours that may not be as prevalent in other societies. Entrepreneurial activity (i.e. new

venture creation) may be one of these behaviours which vary across countries due to differences in cultural values and beliefs (Mueller & Thomas, 2000).

2.5.2 Entrepreneurial capacity

Entrepreneurial capacity is necessary for new venture creation. In the context of this study, entrepreneurial capacity includes capital or finance; and the right kind of entrepreneurial attitudes, social capital and social networks, entrepreneurial attributes, and entrepreneurship environment. Each of these is explained as follows:

2.5.2.1 Finance

Any entrepreneurial start-up requires capital or finance. Finance can come from the entrepreneur's private savings or from outside, either through bank loans, grants or subsidies. Access to funding from outside is also dependent on government policies and programs (external environmental factors) at all levels. The entrepreneur's age and level of education can play a part in access to finance, as explained in the next section.

2.5.2.2 Personal attributes

An entrepreneur's personal attributes are defined by age, education and work experiences. Each of these are discussed as follows:

Age: Age and business venture start-up have an interesting relationship. Bolton and Thomson (2004) identified two age groups of entrepreneurs, the first to be between 20 to 22 years and 30 years old. At this age, individuals may have had some experience and also they tend to have less financial commitments than older people do. The second age group is 45 and over. These individuals are generally more capable, however they may have less support, including financial. Similarly, Burns and Dewhurst (1996), found individuals in age group 30 and above to appear more capable as they have developed a strong base of business experience, higher personal confidence, and more aware of way to access finance. Reynolds et al., (2000) referred to this group of individuals as being entrepreneurially active.

However, access to finance depends on many factors, one being the availability of sources and government and/or institution support, through their policies and programmes. This would be particularly true with the developing countries.

Education: Entrepreneurs with higher levels of education are in a better position to understand what is required in every aspect of entrepreneurship. This statement is supported by Riyanti (2004) who found entrepreneurs with higher levels of education to be more successful because

of having access to some business knowledge that can be useful for business venture start-up, management and success.

However education, particularly higher level of education, for some does not matter as necessary or essential for entrepreneurial success. As the GEM report highlighted, almost 62 percent of active entrepreneurs have not completed more than a secondary education, while those with at least some university experience represent only 35 percent of the total; and only three percent include men and women with graduate experience (Reynolds et al., 2000). But this is not to undermine the significance of some form of education. Despite these figures, business in general requires individuals with some specialised business knowledge and skills, and particularly experience. The following paragraphs focuses on some of the responsibilities of a manager of a business.

Looking at the case of a manager, he/she is responsible for the management of businesses and his/her task involves designing and maintaining an environment in which individuals work together in groups to efficiently accomplish selected aims (Gilbert, Glyndwr, Vitalis, Walker, & Gilbertson, 1995; Koontz & Weihrich, 1990). A manager is no ordinary individual; he/she is trained and skilled to carry out the various management tasks such as planning, organising, staffing, leading and controlling (Gilbert et al., 1995; Koontz & Weihrich, 1990). He/she also has the responsibility of making sure that the health, welfare and safety of workers are well taken care of, together with the safe-keeping and protection of the machinery and resources of the organisations. As such, having the appropriate business knowledge, skills and experience is necessary for the success of any business venture. The following paragraphs focus in turn on each of the tasks of a manager.

- *Planning* often begins with the identification of organisational objectives or goals from which necessary actions or processes to achieve these objectives or goals are put in place. Planning prepares the organisation for the future and often requires decision-making, which is choosing future courses of action from available alternatives (Koontz & Weihrich, 1990). The details of all planning are often contained in a big plan which defines the overall purpose, the objectives and most details of actions to be taken. Plans may take the form of hierarchical plans, policies, rules, procedures, programs or projects (Dunham & Pierce, 1989; Koontz & Weihrich, 1990).
- *Organising* is the creation of an organisational structure; and this involves the creating of structures involving roles for people to fill in an organisation, and establishing relationships and allocating resources to accomplish organisational goals (Dunham &

Pierce, 1989; Koontz & Weihrich, 1990). The creation of an organisational structure can be very challenging, but if it is done correctly, set organisational objectives and goals will be achievable.

- *Staffing* involves placing the right individuals into the various positions created under the organisational structure (Dunham & Pierce, 1989; Koontz & Weihrich, 1990). This includes identifying the workforce requirements, inventorying the people, and recruiting and selecting the right individual. As emphasised by (Koontz & Weihrich, 1990), staffing should be viewed as a continuous activity that has attached to it additional responsibilities such as promoting, appraising, planning the careers of, and compensating and training or otherwise developing both candidates and current job holders to accomplish their tasks effectively and efficiently.
- *Leading* involves the input of a manager who influences workers through various means such as motivation, leadership styles and approaches, and communication, so that their collective input in the production process will lead to the achievement of the organisational objectives or goals. (Koontz & Weihrich, 1990). Leading is indeed a very difficult task especially in light of the workers' desires and attitudes and their behaviour as individuals and in groups. Managers with the appropriate skills and training are able to overcome these difficulties and lead effectively.
- *Controlling* – this involves overseeing and verifying to make sure that everything is being done in accordance to the adopted plans, instructions and principles (Koontz & Weihrich, 1990). Controlling provides for the efficient utilisation of organisational resources, and it eventually leads to the achievement of organisational objectives and goals. Controlling measures performance against goals and plans, and should there be any negative deviations, corrective measures are put in place to correct them, which will lead to the achievement of the set plan and hence set organisational objectives or goals (Koontz & Weihrich, 1990).
- *Work Experience* - adds value to the specialised business or entrepreneurial knowledge gained through formal education as it is like the lense through which one knows and understands what is involved, what to expect and the options available in the real world of business. This is supported by Zimmerer & Scarborough (2008), who stated that work experience offers sufficient conceptual ability to proceed with an entrepreneurial venture.

2.5.2.3 Entrepreneurial attitude

Entrepreneurial attitude relates to the attitudes representing the climate for entrepreneurship in a society. Entrepreneurs need to be willing to take risks and have positive beliefs about the availability of opportunities around them, their ability to start businesses and the value of doing so. At the same time, they need customers who are willing to buy from them, vendors willing to supply them and families and investors ready to support their efforts. Even simple positive societal perceptions about entrepreneurship may indirectly stimulate this activity (GERA, 2014).

Positive attitudes about entrepreneurship in an economy can indicate the propensity for people to engage in this activity. Positive attitudes towards entrepreneurship include perseverance and determination, initiative and taking responsibility, orientation to clear goals, creativity, honesty and integrity, and independence (Bolton & Thomson, 2004). Attitudes can signify the extent to which a society may provide cultural and financial support and generate potential stakeholders that could enhance and assist the efforts of entrepreneurs (GERA, 2014).

2.5.2.4 Social capital and social networks

Social capital and social networks are important entrepreneurial capacities that are viewed as key components in ensuring desirable business outcomes. Beginning with social capital, McCallum (2003) defines it as those attributes found in social relationships which include trust, reciprocity, norms, rules and sanctions, and networks of civic engagement which provide social cohesion and assist in mobilising people to act collectively for mutual benefit. These attributes of social capital facilitate co-operation among individuals and between groups of individuals. Further to defining social capital, Paldam (2002) asserts that to better understand what social capital is and how it may contribute to societal performance, it is useful to divide it into three distinct, but related areas: trust and trustworthiness, civic engagement and co-operation, and social networks.

Trust helps determine the effectiveness or quality of social relations. If trust is lacking, a myriad of welfare-improving exchanges may not arise because potential participants in exchange may choose not to interact for fear of being exploited.

Co-operation contributes to an enhanced ability to help resolve conflicts when they arise, increased pooling and sharing of information, and devolution of responsibilities to between individuals or villagers.

Unlike trust and co-operation, that represent outcomes of social capital, social networks represent causal factors in its determination. Social networks can be divided into three categories: bonding, bridging and linking social capital (Paldam, 2002). Bonding social capital involves linkages or “strong ties” within groups of like-minded individuals (e.g. families) that often correspond to denser and more localised networks. Strong ties are particularly useful because they are associated with trust and co-operation that, in turn, encourage individuals to observe rules and sustainable practices.

2.5.3 Entrepreneurship environment

The entrepreneurship environment comprises attributes such as laws, systems, programs, services and physical infrastructures that are essential from venture for start-up and success. Environment can be sub-divided into internal and external environment; internal environments comprise attributes from within the business setting itself while external environments comprise attributes at higher levels such as government and other institutions/organisations.

The *external environment* includes government systems and support, generally including government laws and policies, government programs, entrepreneurial education and training, and the physical infrastructure and services. In the context of government policies, the focus is on the extent to which taxes or regulations would promote or encourage indigenous entrepreneurship; together with the government assistance through programs for new and growing firms at all levels of government. Particularly necessary is entrepreneurial education and training in creating and managing enterprises (at different levels of education if necessary). Entrepreneurial development and success hinges on the physical infrastructure and services. For instance, ease of access to physical resources such as communication, utilities, and transportation (land or air), at a price that does not discriminate against entrepreneurial development.

The *internal environment*, at the entrepreneurial level, relate to specific laws, systems, processes and arrangements are necessary for membership, decision-making, benefit distribution, conflict resolution, transparency, accountability, and fairness. The internal environment varies from one entrepreneurial setting to another and so the specifics of the attributes also varies. This means, laws, systems, processes and arrangements, must be specific to the entrepreneurial context or setting.

With the entrepreneurship environment characterised by laws, policies, and systems; the LOC business as a business organisation; and the landowners seen as a group, literature relating to

institutions, organisation, and groups is considered necessary for this study, hence their review next.

2.5.3.1 Institution

Institutions are social structures¹¹ that have attained a high degree of resilience and are composed of cultural-cognitive, normative, and regulative elements that, together with associated activities and resources, provide stability, social order, corporation and meaning to social life within a community (Scott, 1995). In a similar manner, Seumas (2011) stressed that institutions have associated with them a social purpose and permanence that transcend individual human lives and intentions, together with the making and enforcing of rules governing cooperative human behaviour. In other words, institutions can be viewed as governance structures embodying rules of social conduct. The existence of an institution is heavily dependent on such rules, as adhering strictly to them underpins its legitimacy. Institutions remain for an indefinite period unless facing constraints that will eventually lead to their rearrangement.

Seumas (2011) stated that institutions are characterised by four important features, namely structure, function, culture and sanctions. This makes institutions more complex than other social forms such as conventions, rules, social norms, roles and rituals, but less complex than societies and cultures. Of course societies and cultures are more complex than other and more complete social entities (Seumas, 2011). Some examples of institutions include education, laws and legal systems, the civil society, family, marriage, public service and transport (Natarajan & Natarajan, 2011; Scott, 1995; Seumas, 2011).

Institutional arrangements are essentially the 'rules' influencing human behaviour, and include both formal and informal rules. Formal institutional arrangements are codified in constitutions, statutes, regulation, plans and policies. Informal institutional arrangements are codified in traditional societies. In PNG villages, these informal institutions include traditional laws and customs, the land tenure system, social expectations such as rules governing relationships within a family and community, and societal norms and expectations. Land use, property rights, decision making and natural resource management in the context of traditional landownership are all guided by informal institutional arrangements.

¹¹ Refers to patterned social arrangement which form the society as a whole, and which determine, to some varying degree, the actions of the individuals socialised into that structure.

2.5.3.2 Organisations

Organisations are essentially separate and distinct groups of people that have been brought together, with their interaction in a consciously coordinated manner leading to the accomplishment of a common objective (Hunsicker, 2001). In a similar manner, organisations can also be defined as consciously co-ordinated social units composed of two or more people, that function on a relatively continuous basis to achieve a common goal or set of goals (Robbins, Millett, Cacioppe, & Water-Marsh, 1998).

Organisations are dynamic, with a wide range of activities taking place. Some activities or characteristics of organisations include division of labour; decision-making structures; rules and policies; and use of financial, human and material resources (Hunsicker, 2001; Robbins et al., 1998). Division of labour is the allocation to each person of specific role to play and is often done on the basis of knowledge and skills for performing that role. Decision-making structures are the established arrangements with defined points where a decision originates from and goes through the established channels before reaching its intended end. This decision-making structure can be used to make decisions or resolve conflicts. Rules and policies are a means of ensuring order, conformity, effectiveness, efficiency, and safety within an organisation. Money, and human and material resources are important in an organisation as their combination will lead to generating intended outcomes.

Business organisations are one example of organisations. Such organisations are formed with the objective(s) of providing goods and services to consumers in such a way that they can maximise on their financial returns or profits. Business organisations operate in a number of ways, for example as a sole trader, a partnership, a franchise or a company.

LOCs (the subject of this study) are formed in accordance with a Company Act of 1997. Companies are similar to sole traders or partnerships except that they exist as separate legal entities from their owners (shareholders). Being a separate legal entity means it is separate from its owners or shareholders; it can hold properties under its name, it can sue or be sued, and it can exist for an indefinite period of time unless its existence is dissolved according to the Act (Millar, 1999). Companies have limited liability, which means the directors and individual shareholders are not personally responsible for debts incurred by the company (Millar, 1999). Some basic elements for every company include a company name, at least one share, one shareholder and one director, a permanent business address which also serves as a registered office where company records are kept, and an address for communication purposes and from

where correspondences and legal documents can be served. These basic elements apply to PNG companies as specified under the Company Act of 1997 (WIPO).

2.5.3.3 Group

Group, in an organisational context, a group is defined as a collection of two or more people, each aware of his/her membership in the group, who through their positive interaction work with one another to achieve one or more common goals (Gilbert et al., 1995; Johnson & Johnson, 1987; Mills, 1967; Robbins, 2001). A group can be either formal or informal. Formal groups are groups defined by an organisation's structure and are designated to serve a specific task, whereas informal groups are groups that are neither formally structured nor organisationally determined.

A group's potential level of performance depends, to a large extent, on the resources that its members individually bring to the group. These resources are knowledge, skills and ability, and personality characteristics (Forsyth, 2006; Robbins et al., 1998). While individuals in a group may possess the best knowledge, skills and abilities to perform a particular task, their level of performance is determined by how effectively they will perform in a group. In terms of personal characteristics, positive attributes such as sociability, initiative, openness and flexibility tend to be positively related to group productivity, morale and cohesiveness (Forsyth, 2006; Mills, 1967; Robbins et al., 1998).

Groups have structures that shape the behaviour of members and make it possible to explain and predict a large portion of individual behaviour within the group as well as the performance of the group (Forsyth, 2006; Mills, 1967; Robbins et al., 1998). Some of these structure variables include formal leadership, roles, norms, group status, group size and the composition of a group. Formal leadership means those leadership positions determined by the group; a role is a set of expected behaviour patterns assigned to someone occupying a given position in a social unit; norms are the standards of behaviour that group members are expected to display; group status is a socially defined position or rank given to groups; group size is the number of its members; the composition of a group is the overall mix of members with different background attributes such as skills and knowledge, personalities, gender, sex, age, education, skills, interests; and the degree of cohesiveness is the extent to which group members are attracted to each other and are motivated to stay in the group (Forsyth, 2006; Mills, 1967). In addition to the group structure variables are the group behaviour variables, which include group interaction, group interdependence and group cohesion.

Group variables determine is the way in which individuals or members of a group engage with and influence each other. This can be done in the form of a task that includes all group behaviour that is focused principally on the group's work, project, plans and goals (Forsyth, 2006; Mills, 1967) or relationship which are centred around the social and interpersonal aspects of the group's life (Smith, 2008). Group interaction may vary (weak or strong), thus impacting on the ability of the group members to perform their task efficiently or maintain a healthy relationship (Forsyth, 2006; Mills, 1967). In group interaction, one group member's feelings, experiences and actions can be influenced in whole or part by others. It is very important to note that group interaction can only exist when group members share a common goal with each member's outcome affected by the actions of others, in particular where the outcome for the second person is affected by the actions of the first person where (Forsyth, 2006; Mills, 1967). Group interdependence is slightly different from group interaction and has more to do with the teamwork effort, implying that whatever the group outcome is, it is basically a result of the joint efforts or actions of all the group members (Forsyth, 2006; Mills, 1967). Group cohesiveness is defined as the property of a group that effectively binds people as group members to one another and to the group as a whole, giving the group a sense of solidarity and oneness (Forsyth, 2006; Mills, 1967; Vaughan & Hogg, 2005). Group cohesion can only be promoted when individuals are bonded or united together as unified social entities; however its strength varies, depending on the level of cohesiveness as determined by group type, group size, and structure.

2.6 Chapter Summary

This review of literature on entrepreneurship and indigenous entrepreneurship has led to the understanding of entrepreneurship as a functions of the market, as an individual (entrepreneur) and as a process. The standard model or framework of entrepreneurial venture start-up comprises various components that include entrepreneurial capabilities, culture and context. The content includes the external factors and support.

Besides shedding light on the attributes of standard entrepreneurship, the review of literature on indigenous entrepreneurship led to an understanding of how this differs from standard entrepreneurship. The one determining attribute behind this distinction is culture, particularly cultural values and practices. Adding this to the other components of the model: entrepreneurial capacity, organisational drivers and constraints, and land and resources, gives a typical indigenous entrepreneurship model.

Both the standard entrepreneurship and the indigenous entrepreneurship models or frameworks are applicable to the context of this study on the performance of LOCs in the timber business of PNG's forest industry. Drawing from both models, specific components adopted for this study include: culture and social norms, entrepreneurship capacity, and entrepreneurial environment. Each of the components of the model have been elaborated on for the purpose of this study. Supporting and relevant literature on institutions, organisations and groups has also been reviewed.

Chapter 3

Phase 1 - Research Methodology

3.1 Introduction

This chapter explains the research method and the research strategy and protocol adopted in this study. In this thesis, research methodology refers to the philosophical framework in which data related to a real phenomenon are captured and conceptualised; research strategy refers to the way in which that methodology is carried out; and research protocol specifies the methods employed in the empirical inquiry.

This research is largely qualitative in nature, and has its method aligned to the constructivist-interpretive paradigm and grounded theory principles. The case study protocols cover a number of steps including the selection of the case study LOCs, entering the site, units of analysis, sampling techniques, data analysis, data interpretation, and ensuring credibility, reliability and validity.

Section 3.2 contains discussion on the research method. Section 3.3 contains discussions on case study research strategy, Section 3.4 contains discussion on grounded theory, Section 3.5 contains discussions on case study research protocol, and Section 3.6 contains discussion on sampling techniques. Section 3.7 contains discussion on data generation, and Section 3.8 contains discussion on data analysis. Section 3.9 contain discussion on issues relating to credibility, reliability and validity, and Section 3.10 contains the summary for this chapter.

3.2 Research Method

Qualitative research varies in its methodological approaches and Phase 1 of this study adopts qualitative research with a constructive-interpretive genre, the details of which are explained below.

3.2.1 Qualitative research and constructivist-interpretive paradigm

Qualitative research approaches generally allow for an in-depth inquiry into a social or human problem in its natural setting with the intention of developing a rounded understanding on the basis of rich, contextual and detailed data (Creswell, 1998). It is also common with qualitative research to have a number of methods in the inquiry process that are aimed at interpreting a

problem, situation or behaviour, whilst in its natural setting, based on methods of analysis and explanation building which involve an understanding of complexity, detail and context (Mason, 1996). Most importantly, the methods adopted for data generation are flexible and sensitive to the social context in which the data are produced. Strauss and Corbin (1990) stated that qualitative research can be used to explore phenomena that are not known about. It can also be used to gain new perspectives on phenomena about which much is already known. In this thesis, the conceptual setting is LOC business in the timber projects of PNG's forest industry and the in-depth inquiry leading to the development of better understanding of those factor that determine their performances will involve a number of different methods.

Any qualitative research is shaped by the researcher's paradigm (Denzin & Lincoln, 1994). A paradigm is a worldview, a general perspective or a way of breaking down the complexity of the real world (Patton, 1990). A paradigm consists of three fundamental and related constituent components (questions) that together form the basis for assessing the beliefs of the paradigm adopted. They are ontological, epistemological and methodological assumptions that together frame the nature of the research and the role of the researchers in undertaking the scientific enquiry. Ontological assumptions in the conduct of an inquiry within a paradigm are intended to seek answers to questions such as what is the form and nature of reality and therefore, what is there that can be known about (Guba & Lincoln, 1989; Khazanchi & Munkvold, 2003). Epistemology is the theory of knowledge which is linked to ontology (Woodford, 1997) . The epistemological assumptions answer the question: What is the nature of the relationship between the knower or would-be knower and what can be known? (Guba & Lincoln, 1989). Paradigms dictate the way the world should be known, what the researcher's version of reality and truth is, and how to research and make sense of that reality (Schwandt, 2000). Denzin and Lincoln (1994) noted two main paradigms at the general level and four main paradigms at the specific levels within the two main paradigms. The two main paradigms at the general level are the qualitative and quantitative, and the four paradigms at the specific levels within these two main paradigm levels include positivist and post positivist, constructivist (interpretivist or naturalistic) and critical theorist. The positivist and post positivist are associated with the quantitative paradigms, while the constructivists and critical theorists paradigms are associated with the qualitative paradigm.

This research adopts a constructivist-interpretive paradigm. The constructivist paradigm is based on the assumption that knowledge is created in the interactions between the investigator and the respondents while the interpretive paradigm considers that the world is constructed and interpreted by human actions and beliefs (Easterby-Smith, Thorpe, & Lowe, 1991). As such,

the paradigm views people as actors in the social system and values the interaction between the researcher and informant that helps explain reality from the point of view of the people who live it in (Schwandt, 2000).

This study views the landowners as the social actors who live in the rural communities that comprise many tribal communities, villages, and households and individuals who have distinctive social systems as defined by their different customs or laws, beliefs, decision-making processes, social relations and languages. Despite these differences, all the different landowners or landowner clans from within the boundary of a timber project are united as a single group to participate in the forest concession agreements through their LOC and also pursue their development interests through their LOC business. My (researcher) interaction with the landowners and other stakeholders was to elicit information directly from them based on their experiences, accounts, perceptions, opinions, feelings, interactions, social relations and knowledge in relation to the phenomenon studied, which in this case centred on the three case study LOCs in the timber projects of PNG's forest industry. It is through this interaction that the general situation of the LOCs and other key factors affecting them can be socially constructed and interpreted from the perspective of the social actors and in their own context. In this sense, Guba and Lincoln (1994) mentioned that the notions of meaning and reality are to be understood from the perspectives of the social actors, where relationships are defined and enacted, and from the way respondents subjectively as well as objectively view themselves within their own context. In such cases, researchers have to be mindful and open to alternative interpretations. As individuals, we make these interpretations within the framework of mental constructs that reflect the subjective nature of our life experiences and training. In qualitative research, this leads to the acceptability of the constructivist-interpretative paradigm.

The choice of a research method is often driven by the research questions which are framed in terms of 'what', 'why' and 'how' questions. The 'what' questions attempt to explore the boundaries of knowledge rather than confirm a hypothesis, and are indicative of descriptive and exploratory research (Patton, 2002; Yin, 2003). The 'why' and 'how' questions are indicative of explanatory research. While case studies are more aligned with quantitative analysis (Yin, 2003), in this study, the approach is from an emic¹² perspective, such that the explanations, and the constructions of realities derived from them are from the lived experience of the landowners. Phase 1 of the study adopts the case study as a research strategy and grounded theory as a research method. Each of these methods is covered below.

¹² An outsider's view

3.3 Case Study as a Research Strategy

A case study (CS) can be defined as an in-depth examination of a single instance of some social phenomena or an empirical inquiry that investigates a contemporary phenomenon within its real-life context when the boundaries between the phenomenon and context are not clearly evident, and in which multiple sources of evidences are used (Babbie, 2004; Yin, 1989). Clearly from its definition, a CS can be viewed as a research strategy and not a methodology as it is one of the many ways of conducting research (Bell, 2005; Hamel, Dufour, & Fortin, 1993; Punch, 2005). Other research strategies include experiments, survey, archival analysis, document analysis and models.

CS are exploratory, explanatory and descriptive in nature, and they provide insights and in-depth understanding of the complexities of the phenomena under study (Yin, 1989). They are a preferred strategy when the focus is on contemporary phenomena within some real-life context, when the researcher has no control over events and when the research seeks answers to ‘how’ and ‘why’ questions. This study has its research questions framed in ‘why’ and ‘how’ questions that are intended to find answers to a social phenomenon, which is the general situation of LOCs and the key issues facing them. This requires an in-depth examination of the various aspects of the LOC businesses ranging from how they have been organised, how managed, and the organisation of landowners. CSs can be either a single-case or be multiple-cases and can include both qualitative and quantitative evidences, but cannot be solely qualitative. The use of the CS research strategy is highly suitable as it clearly defines the cases of the study

There is the issue of rigor and the scientific basis for generalising to populations with case study research strategy involving single or multiple cases, but much of this is addressed in the research design, while the concern over generalisation is not an issue because in case studies, the generalisation is to the theory and not to the population (Campbell, 1975; Eisenhardt, 1989). These authors added that by addressing the issues of rigor and scientific basis for generalisation to the population the case study is made credible.

Grounded theory is the method adopted in Phase 1 of this study and this is discussed in the next section.

3.4 Grounded Theory

Grounded theory (GT) was first written about by Glaser and Strauss in 1967 (Glaser & Strauss, 1967) and is another qualitative method important in this constructivist-interpretive qualitative research that is focused on theory development or theory building (Strauss & Corbin, 1994). GT can be interpreted as both the results of research and the research process itself. It is inductive and is built upon constant comparative methods and simultaneous data collection and analysis that is aimed at developing an account of a phenomenon that identifies the major constructs or categories and their relationships, including context and process (Babchuk, 2009b; Becker, 1993).

The basic tenet of grounded theory is that the theory must emerge from the data or at least that the theory must be grounded in data (Glaser & Strauss, 1967). This more closely reflects reality than a traditional quantitative study. This generation of substantive theory from data collected in the field, and the GT's potential to study many areas of social life that cannot be studied using a quantitative method, makes GT very different from other qualitative methods.

However, some forty years after the first development of grounded theory, a division appeared between Glaser and Strauss as they developed and extended their own conflicting interpretations of the original method (Babchuk, 2009a). Strauss teamed up with Corbin and subsequently developed and extended the original theory, but his idea later faced criticism from Glaser (1994). The divergence between the two original authors led to what is now commonly termed the Glaserian approach and the Straussian approach to grounded theory (Hekkala, 2007). A summary of the divergence is presented in Table 1. This divergence demonstrates that GT is not a unified framework but a family of methods (Bryant & Charmaz, 2007; Denzin, 2007).

Whilst the continuation of the division between the Glaserian and Straussian approaches remains, Charmaz presented a new divide within grounded theory, which is objectivist versus constructivist (Babchuk, 2008). According to Babchuk (2008, p. 11), objectivists hold that (1) all reality is objective and external to the mind and that knowledge is reliably based on observed objects and events; (2) there needs to be an emphasis on objects rather than feelings or thoughts in literature or art; and (3) the validity of objective phenomena over subjective experience must be recognised (through any of various theories asserting this).

Table 3.1: Grounded theory variant

Glaserian approach	Straussian approach
Beginning with general wonderment (an empty mind)	Having a general idea of where to begin
Emerging theory, with neutral questions	Forcing the theory, with structured questions
Development of a conceptual theory (abstraction of time, people and place)	Conceptual description (description of situations)
The theory is grounded in the data	The theory is interpreted by an observer
Inductive method	Inductive-deductive method
The research is passive, exhibiting disciplined restraint	The researcher is active
Data reveals the theory	Data is structured to reveal the theory
Coding is less rigorous, there is a constant comparison of incidents to incidents, with neutral questions and categories and properties evolving. Taking care not to ‘over-conceptualise’, identify key points	Coding is more rigorous and defined by technique. The nature of making comparisons varies with the coding technique. Labels are carefully crafted at the time. Codes are derived from ‘micro-analysis which consist of analysis of data word-by word’
Two coding phases or types, simple (fracture the data, then conceptually group it) and substantive (open or selective, to produce categories and properties)	Three types of coding, open (identifying, naming, categorising and describing phenomena), axial (the process of relating codes to each other) and selective (choosing a core category and relating other categories to that).
Regarded by some as the only ‘true’ Grounded Theory Methodology	Regarded by some as a form of qualitative data analysis

Adopted from Halaweh, Fidler & McRobb (2008, p. 3).

Alternatively, constructivism holds (1) an approach to the study of society that stresses the socially constructed character of social relations; (2) the claim that significant aspects of social life are historically and socially contingent (not inevitable consequences of human nature or other essential characteristics of society); (3) a psychological epistemology (theory of knowledge) which argues that humans generate knowledge and meanings from their experiences.

Overall, the three different approaches, the ‘classical and emerging’ approach of Glaser (1994, 1998), the traditional ‘systemic’ approach of Strauss and Corbin (1990), and the ‘objectivist’ and ‘constructivist’ approaches of Charmaz (1990, 2000), differ in terms of ontology and epistemology, but not so much on method.

GT research requires a constant interplay between the researcher and the data. Coding is the heart of GT. Its “recurring facts, themes, comments, and the like are selected from field notes and organised into categories expected to help explain a situation of interest” (Krathwohl, 1997, p. 307). According to Dick (2005), coding is the result of raising questions and giving provisional answers about categories and their relations and this forms the basis for later aggregation into concepts or core codes. Creating distinctions between codes produces dimensions and sub-dimensions. The exact nature of coding also differs between the Glaserian and Straussian approaches. Under the Straussian approach of GT, there are three types of coding: open (identifying, naming, categorising and describing phenomena), axial coding (the process of linking codes to each other) and selective coding (choosing core categories and relating other categories to that).

Since the first development of GT by Glaser and Strauss (1967), it has gained considerable popularity in education and the social sciences in one form or another across a wide range of problem areas and practical settings (Bryant & Charmaz, 2007; Denzin & Lincoln, 1994). According to Babchuk (1997, p. 4), researchers have used either: only one of the GT postulates (constant comparison or simultaneous data collection and analysis); used GT in conjunction with other methods; used selected aspects of this methodology which researchers found convenient or appealing given the nature of their research; utilised most but not all of the recommended techniques or carefully followed the full complement of rules and dictates of GT. However, Miles et al. (2006, p. 6) contended that engaging in any form of grounded theory study requires the researcher to address a set of common characteristics. They are theoretical sensitivity, theoretical sampling, treatment of the literature, constant comparative methods, coding, the meaning of verification, identifying the code categories, memoing and diagramming, and the measurement of rigour. Each of these characteristics are methods in themselves ranging from data generation and analysis to the emergence of result(s) (theory or theories). Each of the characteristics are actually the various approaches and methods of GT and each of them is summarised as follows:

- Theoretical sensitivity refers to the attribute of having insight, the ability to give meaning to data, the capacity to understand and the capacity to separate the pertinent from the non-pertinent (Glaser, 1978; Strauss & Corbin, 1990) This reflects more on the part of the researcher.
- Theoretical sampling relates to the sampling that determines the selection of a sample from which data generation and analysis are performed for the development of a concept or theory. Data collection and analysis leading to the development of GT is guided by theoretical

sampling or sampling on the basis of theoretically relevant constructs. In other words, the selection of data sources is done in such a way that the generation of information and the analysis of the information will contribute towards data saturation and, hence, the emergence of a concept or theory.

- Treatment of the literature relates to differences in the viewpoints of the traditional and evolved grounded theorists. The traditional GT (Glaserian approach) maintains that there is no need to review any of the literature in the substantive area under study and the justification is that this may contaminate, constrain, inhibit, stifle or impede the researchers analysis of codes emerging from the data (Glaser, 1992, p. 31). However the opposite approach is taken by evolved GT theorists (the Straussian and Charmaz approaches), who suggest that non-technical literature such as reports and internal correspondence can be seen as a potential source of data, providing information, in particular about the context within which the participants operate, that can be reviewed (Strauss & Corbin, 1998).
- Coding is the identification of each word, sentences and phrases through use of code, and is the primary form of data analysis in GT.
- The constant comparison method is a method for data analysis in GT. There are several steps in this method, beginning with the identification of a phenomenon, objectives, events or settings of interest; and this is done by open coding (Glaser & Strauss, 1967). Next is the identification of concepts, principles, and structural or process features of the experience or phenomenon of interest. This is followed by making decisions regarding the initial collection of data based on the researcher's initial understanding of the phenomena. Theoretical sampling follows and then a rigorous comparison is made between the different groups or data sources. This would eventually get to the stage of development of emergent categories.
- Memoing is the writing of ideas and substantive codes, and it is a process that continues in parallel with data collection, note-taking and coding. This writing of ideas and substantive codes enable the researcher to conceptualise based on the raw data, to a higher level of abstraction that explains the research phenomena in the context in which it is examined.
- Diagramming in GT involves the use of diagrams in presenting the concepts or ideas and their relationships.
- Identifying the core category is the primary focus of GT as it generally integrates all of the theory's various aspects. The core category is often arrived at following selective coding, and its (core category) identification requires the input of the researcher through their exploration of the centrality of the story, and their narrative rendering of the analysis, to the eventual development of the core or central category (Strauss & Corbin, 1998).

- The measure of rigour is an issue that is critical in all research as it dictates the quality of the research, particularly how the results of the research can be adopted or generalised to the population. This is not so much of an issue with GT as the generalisation is to the theory and not to the population.

This study adopts the '*Glaserian approach*', in particular the general approach for data generation where the researcher sets out with an open mind and with the intention of developing research themes that emerges from the data with the use of neutral or open-ended questions for data generation; however in part it also adopts the '*Straussian approach*', particularly in using coding for data analysis as a method viewed to be more rigorous than coding under the Glaserian approach.

3.5 Case Study Research Protocols

3.5.1 Case study sites

Shown in Figure 3.1, are the locations of the three case study timber projects. The Amanab blocks 1-4 (total of four forest blocks) timber project is located in the Sandaun province of PNG. It covers an area of about 181,033 hectares and logging operations began in 2002. It is one of the timber projects under the current *1991 Forest Policy*. The Hawain LFA timber project is located in the East Sepik Province of PNG. It covers an area of about 53,230 hectares and logging operation began in 1992, but stopped in 1994 due to the withdrawal of the logging company because of very high government taxes. Operations resumed in 2004, but stopped again in 2007 following in-fighting among the different landowner groups. In 2008, the operation resumed again. The Raicoast TRP is located in the Madang province of PNG. It covers an area of about 103,200 hectares, and logging operations began operations in 1989 but stopped in 1993 following the suspension of the timber permit. In 2004, the operation resumed and continued during the time of the fieldwork for this study. Both the Hawain LFA and Raicoast TRP timber projects began under the old *1979 Forest Policy* and continued under the current *1991 Forest Policy* regime.

Associated with each of these timber projects are LOCs. The Amanab Block 1-4 timber project has associated with it the *Amgreen Limited LOC*, the Hawain timber project has associated with it the *Wianduo Limited LOC*, and the Raicoast timber project has associated with it the *Raicoast Holdings Limited LOC*. There are number of other timber projects that could have possibly been selected in the three case study provinces. However, issues of logistics, time, funding and security led to the selection of these three timber projects.

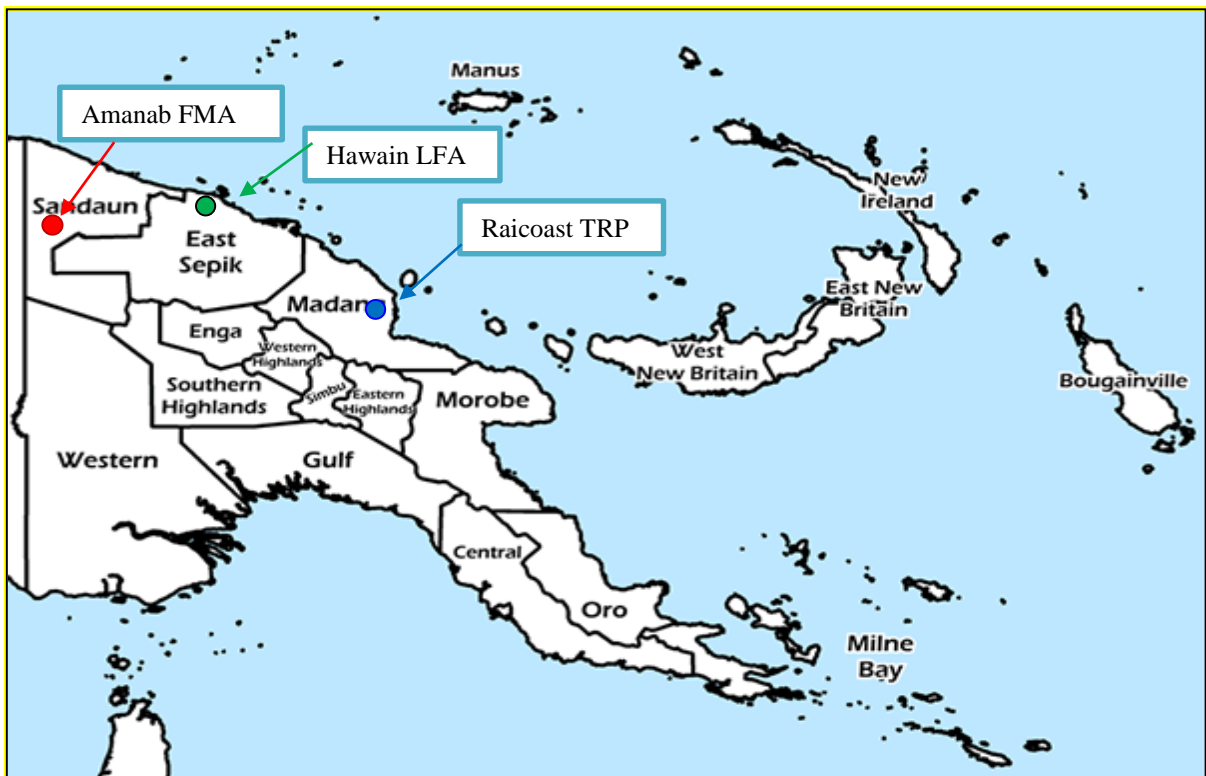


Figure 3.1: Location of the three case study timber projects in Papua New Guinea

3.5.2 Entering the site

The study sites are the three timber project sites as described in Section 3.6.1. Participants of interest in these sites are the landowners who collectively own the three case study LOCs. This ownership relates to the traditional land tenure system defined along clan and tribal lines and on that basis, this study saw it appropriate to deal with the leaders of the clans rather than any individuals members; hence clan leaders are the cases in this study.

Prior to any interviews, several protocols needed to be adequately addressed. The first protocol was in the survey. This included the application of the principles of anonymity, confidentiality of the sources of information, the security of data (during and after the interview), my personal conduct and the use of human subjects. These issues were addressed with the input of Lincoln University’s Human Ethics Committee (HEC), and formal approval by HEC was granted on the 10th October, 2008. As part of the process, a consent form was prepared, containing a brief explanation of the purpose of the study and the reason for selecting the participants (clan leaders). This consent form ensured that research participants understood their rights and consented to the interview. It also included their right to withdraw from giving information and participating in the research. A careful effort was made to ensure that participants were comfortable and relaxed and that the questions were clear and culturally acceptable.

The second protocol was permission to undertake the research in the various village communities of the three timber projects. This involved consultation with the village councillors and community leaders. PNGFA's officer in charge of the project and the Provincial Forest Manager (PFM) were invaluable with this exercise. These individuals were the first points of contact, and an important source of information. They provided much needed logistic support, were invaluable in the identification of different landowner clans and assisted with interviewing the clan leaders. Interviews were conducted at the PNGFA provincial office for those clan leaders who were able to travel to the office. For landowners who were not able to make it to town, the interviews were conducted in the village. Participants eligible for the interview were the landowners, more specifically clan leaders of different clans and business leaders. Invitations were made by word of mouth as well as by letter. The message template contained a personal introduction, the research topic and objective, and a request for an interview.

3.5.3 Data management

Information collected from the interviews were field notes and recorded interviews. While this information was invaluable to this study, the researcher has the ethical obligation to protect the confidentiality of information given by the research participants. That was catered for by having them stored away safely in a locked bag, and the computer laptop was password protected. This protection of the valuable information is important because the primary data from the interviews are precious, as they cannot be recaptured in precisely the same way, even if the opportunity were available again. Moreover, the researcher has to protect the confidentiality of information given by the research participants.

3.6 Sampling Techniques

Sampling can be categorised into two types: probability-based and non-probability based. This study adopted a range of non-probability-based sampling techniques, including purposive, snowball, stratified and theoretical techniques. Although stratified sampling is a probability-based sampling, its application is within the domain of purposive sampling. Purposive sampling ensures that diversity is captured in the samples (Barnet, 1999). This study used purposive sampling to select the participants or clan leaders and executives of the three case study LOCs. Together with purposive sampling, snowball sampling was used to select from among the many clan leaders to be interviewed. Successful application of this technique owed a lot to the PNGFA officers, namely, the managers and project officers in charge of the three different

timber projects, who each time assisted with the identification of a particular clan leader who they felt would make a good starting point for my interviews. After the interview, this clan leader helped with the recruitment of another clan leader from the same block who he thought would offer invaluable information. After interviewing him, he recruited another new clan leader, and this process continued on until no new information was generated or repetition of information (data saturation) began, so the researcher made the decision to end the interview cycle with that last participant. All the four forest blocks were covered in the same manner.

The decision to start snowball sampling with the PNGFA officers was because of their knowledge and understanding of the landowners who had some issues with their respective LOCs. In order to capture the very rich information from the wide array of landowners, stratified sampling was used concurrently with snowball sampling to select landowners from different forest blocks, different village locations, and different traditional language boundaries. Theoretical sampling was used concurrently with purposive and snowball sampling to guide the selection from one participant to another that enabled adequate data analysis collection and hence concept or theory development. Thus, purposive, snowball, stratified and theoretical sampling techniques used in tandem enabled the identification of key participants for the in-depth interviews.

The use of the different sampling techniques such as purposeful sampling and snowball sampling took into account the critical issues or errors with use of these techniques. This was adequately addressed during sampling. According to Patton (1990, 2002), the first error relates to distortions caused by an insufficient breadth in sampling; and that compensated for through the appropriate application of theoretical sampling when using elements of GT. The second error relates to distortions introduced by changes over time; and that was addressed by selecting participants on the basis of the state forest blocks - already harvested, currently harvesting and yet to be harvested. The third error relates to distortion caused by lack of depth in data collection at each site; and that accounted for by ensuring that theoretical saturation of data occurs. Theoretical saturation is the point at which iterations among data collection, analysis and theory development yield minimal or no new information to further challenge or elaborate the concept (Pandit, 1996).

3.7 Data Generation

The cases for the data generation were the clan leaders. This study prefers to use the term *data generation* to reflect that the data resulted from a process rather than simple numerical

measurement. Data generation involved the use of an in-depth interview technique and probing techniques. The interviews and probing were guided by the leading questions, discussed below.

3.7.1 Unstructured in-depth interview

Interviews are the most utilized data collection method in qualitative research. Interview can be classified into three types - *structured interviews*, *unstructured interviews*, and *semi-structured interviews* (Oka & Shaw, 2000). This study adopted an unstructured or open-ended interview technique for data generation. The researcher and interviewee talk freely, but guided by the leading questions, that are open-ended and supported by probing for generating information on various aspects of the study (Table 3.2).

Every participants who participated in the interview was considered special. A good interview is like a good conversation. A good conversation is always a two-way affair. One person talks while the other listens, responds, and encourages. An in-depth interview is more than just an interview in that you are talking to another person in such a way that you understand a particular part of their life. This was the situation with the interviews in this study. It is during the interviews that the research data in the form of biographical narratives relating to the various aspects of LOC is generated.

3.7.2 Leading questions

Leading questions were used for interviewing participants to generate data for Phase 1 of the study. This was done in accordance with the dictates of GT, specifically the '*Glaserian approach*'. The leading questions sets in motion the process of data generation. The researcher asks the leading question, the participant responds, the researcher asks another question, the participants responds, and this goes on until the researcher is satisfied that all important information of interest or relevance to the study has been collected. This repetition of questioning-response, questioning-response and so forth is referred to as probing, a technique was used throughout all the interviews. The role of the researcher in the generation of data in this study was passive and that was consistent with the dictates of the '*Glaserian approach*'.

Contained in Table 3.2 is the framework containing the leading questions and a list of topics or aspects of relevance for probing following the leading question. The use of a probing technique provided for the collection of invaluable data for Phase 1 of the study. While the researcher played a passive role in the generation of data, he also had the responsibility of ensuring that all the aspects of relevance to this study were thoroughly covered.

Table 3.2: Framework of leading questions and aspects of probing for data generation

Broad subjects and leading questions	Aspects for probing
Landowner group	
What do you think about the group made up of landowners who collectively own the LOC?	Size; relationship, level of education Understanding about LOC business Other (topics from interview)
Organisation of LOC business	
What do you think about the organisation of the LOC?	Membership, appointment of LOC executives Office space/permanent address Business plan, business contract Landowner representation in the management Others (topics from the interview)
Management of LOC business	
What do you think about the management of your LOC?	Meetings, reports and consultations Landowner expectations, issues/problems Other (topics from the interview)
Support to LOC business	
What do you think about the support of PNGFA to the LOC business?	Degree of support to landowners' issues, concerns or problems Others (topics from the interview)
How do you see the relationship of the logging company with your LOC business?	Working relationship with LOC executive Commitments to their responsibilities Others (topics from the interview)

This framework ensured that all information of relevance to this study was collected during the interviews. This included experiences, perceptions, opinions, feelings, and knowledge, as expressed by the participants.

During the interviews, reflections were made on the information provided by the participants to ensure that the researcher understood the main responses and interpretations that had been described. At the end of the interview, the participants were asked if there was anything else they thought was important in understanding the issue under discussion that had not been covered. Throughout the interviews, probing techniques were used to elicit more valuable information.

There were also a few cases where interviews were recorded using a digital voice recorder. Before each interview began, permission was asked of each participant to record the interview. The entire conversation was recorded (despite some stage when the conversation was not relevant to the study). Recording allowed greater attention to be given to what the research participants were saying. However, the major drawback was the longer time (one to two hours) required for transcribing.

Throughout the study, and on a daily basis after a few interviews, the contents of the interview were summarised in order to document any difficulties encountered which, in turn, helped me to improve the content and style of later interviews. These summaries also helped me to review and categorise themes and concepts that emerged during interviews while they were still ‘fresh’ in my mind. These field notes (written text) and the transcripts of the recorded verbal interviews served as the primary data for this study.

3.7.3 Data preparation

Data generated during the interviews were in the form of interview memos and digital recordings. As part of the process of data preparation, every interview memo were typed/transcribed into a written script that gave a narrative account of the interviews. All these written scripts will be used in the analysis; this is discussed in the next section.

3.8 Data Analysis

Data analysis in GT is mainly coding and under the GT “*Straussian approach*”, there are three phases of coding – *open coding*, *axial coding* and *selective coding*. “*Open coding*” involves identifying, naming, categorising and describing phenomena from the written text, “*Axial coding*” involves the identifying and grouping of related codes related to each other, and “*Selective coding*” involves the choosing of a core category and the grouping of all related codes developed during the two earlier coding processes. In this study, as with much other qualitative research, codes used in coding generally originate from the researcher and from the research participant. The codes reflect a theme, a concept or a process.

While coding can be done manually, this study used NVivo for coding. The next section describes NVivo and its use in data analysis in this study.

3.8.1 NVivo for data analysis

The NVivo software is designed for comprehensive qualitative data analysis. It can be used to organise and analyse interviews, field notes, textual sources, and other types of qualitative data including images, audio and video files. Characteristic of NVivo is its creation of nodes, which represent codes, themes or ideas. The codes can be free, meaning they stand alone, not supported by other codes; or they may be in the form of a tree with a main node and branches connecting to other supporting nodes like a tree with branches emerging from the main trunk or bole.

Coding is an analysis that is performed using NVivo where typed written texts of interviews and digital transcripts (word documents) are uploaded onto the NVivo program for analysis. The process involves a thorough reading, marking and annotating of the important parts of the text which relate to the research questions. NVivo is able to retrieve quickly and efficiently those coded texts that were stored together in the form of free nodes. It must be noted that NVivo does not do the analysis, such as deciding what constitutes a theme, what to name it, and what meanings to extract from case studies. To complete the analysis, further thinking and building connections with other primary and secondary data is required (Patton, 2002). Whether coding is done manually or with a computer program, the process includes making decisions about what counts as 'data', systematically applying the codes to the transcripts, and storing the coded texts to make retrieval for further analysis easier, faster and more thorough.

3.9 Ensuring Credibility, Reliability and Validity

Issues of credibility, reliability and validity must be adequately addressed in qualitative research because of the nature of the data, which is fluid and emergent with no linear and fixed lines between data collection and data analysis. Examples of qualitative data or data sources include written texts, transcripts, images, audio and video files. The process of data collection and analysis can occur concurrently as was the case in this study involving the use of GT method. As such, issues of credibility, reliability, conformability and transferability need to be adequately addressed in the research process.

In the case of this study, the use of purposive sampling, snowball sampling, stratified sampling, and triangulation (of sources of data) provided multiple sources of evidence that ensured credibility, as suggested by Yin (1989) and Creswell (1998). The use of three case study sites and the selection of interview participants (clan leaders) from all four forest blocks of the three timber projects complement each other, providing triangulation of data, and can be viewed as promoting validity.

The safekeeping of interview memos, digital recording, and their corresponding written scripts for all participants from the three case studies, together with the adequate descriptions of the research method, ensures dependability. The ability of the researcher, in particular his skills, competence and rigour in the designing and conducting field studies without any problems, contributes to the credibility of the study. The findings from this study will help in better understanding issues affecting forestry-based LOCs and how best they can be addressed. That encapsulates the importance and usefulness of this study. The issues of transferability in

qualitative studies is not so much of an issues as the findings can only be generalised to the theory and cannot be extended to another situation, setting or population.

This chapter ends with the chapter summary.

3.10 Chapter Summary

The primary purpose of this chapter is to describe the study approach for Phase 1 of the study. That has been done in great detail (above) and a summary is contained in this section. The research method for Phase 1 of the study was largely qualitative in nature and it was guided by the constructivist-interpretive paradigm. According to Easter-Smith (1991) and Schwandt (1994) (1994), the constructivist-interpretive paradigm is based on the assumption that knowledge is created in the interaction between the researcher and the respondents, and the interaction helps explain reality from the point of view of the people who live in it.

The methodological approach aligns well with the ontological and epistemological assumptions. The ontology of the study is the complex systems involving landowner related businesses that is linked with the development of the forest resources in PNG, while the epistemology is concerned with how the landowners and their businesses are to be studied to gain some in-depth knowledge and understanding about their performance through the interactions between the researcher and the study objects (landowners). Indeed, the role of the researcher is very important in this methodical approach.

The methodological approach comprises a case study (CS) research strategy and the grounded theory (GT) method. This study adopted CS research strategy protocols to define its cases and the protocols to access the cases to generate data of interest. Case studies can be single or multiple case studies, and the cases can be in the form of a person, situation, event or place. In this study, the cases, at the general or broad level, are the three case study LOCs associated with each of their respective timber projects. At the specific level, the cases of interest are the clan leaders and business executives for each of the three LOCs. Clan leaders were the preferred cases over ordinary landowners because of their leadership status, and they were the first point of contact when dealing with landowners and are representative of the different clans. Clan leaders and LOC executives were the basis for the generation of data of interest for Phase 1 of this study.

The application of the GT method is in data generation and data analysis. An overview of GT is contained in Section 3.5; this study adopted a combination of the two approaches of GT. For

the general approach or conduct of the research and data generation during the interviews, the Glaserian approach of GT is adopted, while for data analysis, the Straussian approach is adopted. Coding is the primary tool for data analysis and theory development.

Stratified, purposive, snowballing and theoretical sampling techniques provide for the selection of cases for interviews, as discussed in Section 3.7. Stratified sampling provided for the stratification of cases according to their different forest blocks and their locality within each of the forest blocks in reference to physical distances to existing infrastructure or from coast to inland. Purposive and snowballing sampling techniques are used in recruiting the cases for interview and are guided by theoretical sampling with the idea that the selection of each new cases should be guided by the search for new and invaluable information that will contribute towards theory development. Interviews for the purpose of data generations were supported by the in-depth interview techniques and probing techniques. To ensure that every aspect of information relevant to the study was collected, a framework containing leading questions and some specific subjects areas for probing was developed as shown in Table 3.2.

The data analysis method was thoroughly described in Section 3.9. Coding was the primary tool for data analysis. Coding often involves three phases – open coding, axial coding and selective coding. Coding requires the input of the researchers in sorting, organising and categorising relevant information, giving it meaning and hence promoting theme or theory development. In this study, the codes reflected issues relating to LOC businesses. The whole approach of data analysis conformed to the ‘Straussian approach’ of GT.

While coding can be done manually, this study found it convenient to use NVivo to do the coding. Contained in Section 3.9.1 is an explanation of what it is and what it does. In this study, NVivo was used to create free nodes; and these nodes represent a code, a theme or an idea. Free nodes are nodes that stand on their own, while tree nodes are nodes that are connected to each other to form the shape of a tree with its trunk/stem, the main branches and the smaller ones, leading to the leaves. It is from these free or tree nodes that comparisons are made, relationships determined and themes developed. While NVivo can be used to develop nodes, it does not do the analysis such as deciding what constitutes a theme. To complete that requires the input of the researcher in grouping nodes of similarity, from which relationships and themes are developed.

In summary, the research method for Phase 1 of the study is comprehensive, addresses the issues of credibility, reliability and validity, and aligns itself with the Phase 1 of the study’s research objective.

Chapter 4

Phase 1 Results - Research Themes

4.1 Introduction

This chapter contains the results for Phase 1 of the study. The results are in the form of themes and are presented according to the four theme categories, namely: '*Organisation of LOC business*', '*Management of LOC business*', '*LOC business group*' and '*Support by the PNGFA*'. These themes highlight issues that relate to each of the theme categories for this study on the LOC businesses.

The various sections in this chapter after the introduction include Section 4.2, that contains the description of the interview participants, Section 4.3, that recaps on the process of data generation and analysis, and Section 4.4, which contains the various results. Section 4.5 contains the summary of themes from the different theme categories, while Section 4.6 contains the conclusions from Phase 1 of the study. Also contained in this section are the research questions for Phase 2 of the study. Section 4.7 contains the summary for this chapter.

4.2 Description of Interview Participants

Interview participants in this study were clan leaders representing the various landowner clans, who collectively owned the three LOCs: Raicoast Holdings Limited, Wianduo Limited and Amgreen Limited. For easy reference to these LOCs and their respective timber projects, the following company names will be adopted throughout this chapter, 'Raicoast LOC' for the Raicoast timber project and its LOC, Raicoast Holdings Limited; 'Hawain LOC' for Hawain timber project and its LOC, Wianduo Limited; and 'Amanab LOC' for Amanab Block 1-4 timber project and its LOC, Amgreen Limited.

The total number of clan leaders interviewed was not determined prior to the actual interviews (fieldwork) but resulted from the process of data generation and analysis, and that was consistent with the dictates of the GT method for sample size determination. An important aspect of this method is data saturation which is the stage at which, after having progressed well with the interviews and the generation of data (information), the continued recruiting of additional participants will start to offer little or no new information to that already collected. Instead, the information from these additional participants is a repetition of the same information already captured from the earlier interviews. Information repetition indicates

saturation and a decision is made to end the interview at that last or n^{th} participant. This last participant and all the earlier participants make up the total number of clan leaders being interviewed. This process was adopted when conducting interviews in all four forest blocks of the three case study LOCs; the total number of clan leaders at the level of data saturation for the three case study timber projects or LOCs were 57 for Raicoast LOC, 54 for Hawain LOC and 54 for Amanab LOC.

Table 4.1: Summary of numbers of villages, traditional languages, landowner clans, and clan leaders interviewed per forest block for the three case study timber projects

Timber Projects	Forest blocks	No. of villages	No. of spoken languages	Landowner clans	Clan leaders
Raicoast TRP	1 ^{AL}	13	8	242	10
	2 ^{AL}	7	2	184	15
	3 ^{CL}	8	4	230	20
	4 ^{YL}	10	5	215	12
Hawain LFA	1 ^{AL}	5	1*	48	8
	2 ^{AL}	8	1*	53	22
	3 ^{CL}	7	1*	24	12
	4 ^{YL}	5	1*	56	12
Amanab FMA	1 ^{YL}	10	4	273	9
	2 ^{YL}	9	2	145	9
	3 ^{YL}	8	3	125	12
	4 ^{CL}	11	5	240	24

*Same traditional language being spoken by landowners in all four forest blocks;
 AL=forest block already logged, CL=forest block logged at time of data collection,
 YL=forest block yet to be logged

Contained in Table 4.1 is background information relating to the three case study timber projects; this includes the numbers of villages, traditional languages spoken in the timber project areas, the numbers of landowner clans and the numbers of clan leaders interviewed, all presented under each of the four forest blocks. The total number of clan leaders per forest block resulted from the data generation process, as explained above, while the total number of landowner clans in the many villages of each of the forest blocks for all the three case study timber projects was estimated using a timber royalty database, ILG documents and personal

communications with the village leaders. This information will be invaluable during Phase 2 of this study when covering large sample sizes.

4.3 Process of Data Generation and Analysis

Data generation involved the use of leading questions, in-depth interviews and the general approach as per the GT ‘Glaserian approach’, while data analysis involved the use of the GT ‘Straussian approach’. The recruitment of interview participants was carefully done using snowball and theoretical sampling techniques (details explained in Section 3.7). These sampling techniques enabled the selection of key clan leaders (participants) and their interviews provided the rich information needed for Phase 1 of the study.

The interviews were unstructured, open-ended and supported by the use of probing techniques. After every interview, written memos and transcripts from the recordings were prepared for detailed analysis later in the office. However, preliminary analysis was made during the early stages of the interviews in the three case study timber projects; this was to get familiar with the kind of information that was emerging from the interviews and to ensure that all areas of interest were thoroughly explored. This preliminary analysis was based on data from the first five participants and this approach is consistent with the dictates of case studies and the GT method.

The interviews of participants from forest blocks where logging was taking place and where it was yet to take place followed the same style adopted in the first forest block (logging taking place). Interviews (data generation) in these forest blocks focused on the possibility of capturing any new information, and confirming and validating earlier information. Once the repetition of information became too common, a decision was made to end the interview and, hence, the final number of clan leaders representing each forest blocks for the three case study LOCs were determined.

Coding (using the GT method) was the primary analytical technique for data analysis and, consistent with the Straussian approach, three types or phases of coding were adopted: *open coding*, *axial coding* and *selective coding*. ‘*Open coding*’ is used to name, categorise or describe a phenomenon, object, process or action. This was done by thoroughly reading the entire content of the interview script and applying a code to the various texts of relevance to this study. At the end, a list of codes is created. Another thorough reading of the entire context of the interview script and coding will either apply codes from a list of already created codes or create a new one if it is not in the earlier list. This new code is added to the already existing list of codes. The process continues with the use of codes from the already created list of codes and,

where needed, new codes are created as coding continues with more and more thorough reading of the written scripts from the interviews. At some stage, no more new codes will be created, and all future coding will from there on utilise the already existing list of codes. For this study, coding was undertaken on a total of 165 written scripts. The significance of coding is that a frequency count is associated with each of the codes, corresponding to the number of times each codes is assigned when thoroughly reading the written scripts of the interviews, as was the case in this study. The higher the frequency, the more frequent each of the codes are referred to by the interview participants and the frequency totals can also be presented as percentages of the overall number.

In this study, the codes denotes a themes. After the initial assignation of codes, the next phase of coding requires the researcher's input to define appropriate broad themes under which similar or related initial codes or themes are grouped together; that is facilitated by the axial and selective coding processes. While coding was originally done manually, it can now be done with use of NVivo, which is qualitative data analysis software. For this phase of study, the entire data (165 written scripts) generated from the interviews were analysed using NVivo. The advantages of using NVivo is its ability to deal with large data sizes, the better organisation of data, convenience, the automatic preparation of statistics, such as numbers of sources or frequencies, numbers of references and much more.

The four broad themes that resulted from the coding process are presented under the four different theme categories; they include '*LOC business organisation*', '*LOC business management*', '*LOC business group*' and '*PNGFA*'. These four categories reflect various aspects of LOC businesses.

4.4 Phase 1 Results

The results consist of the various themes, presented under four different themes categories: '*Organisation of LOC business*', '*Management of LOC business*', '*LOC business group*' and '*Support by PNGFA*'. These broad themes were developed from the data collection and analysis process outlined above (Section 4.3) and were based on data (written scripts) from a total of 165 interview participants (57 for Raicoast LOC, 54 for Amanab LOC and 54 for Hawain LOC). Contained under the four broad theme categories are 13 themes of which seven relate to '*Organisation of LOC business*', four relate to '*Management of LOC business*', one relates to '*LOC business group*' and one relates to '*Support by PNGFA*'. Table 4.2 displays the details.

Table 4.2: Summary of themes according to the theme categories

Theme categories	Broad theme	No. of Themes
Organisation of LOC business	▪ Company structure elements	4
	▪ LOC business objectives	5
	▪ LOC business plan	4
	▪ LOC structure & landowner representation	3
	▪ Appointment of LOC executives	5
	▪ LOC business contract	6
	▪ LOC capacity	4
Management of LOC business	▪ Mandatory company responsibilities	3
	▪ Funding of development projects	3
	▪ Enforcement of business contract	4
	▪ Working relationship	6
LOC business group	▪ Suitability of LOC business groups	7
Support by PNGFA	▪ Support by PNGFA	3

From Table 4.2, a high number of themes relate to the theme category ‘*Organisation of LOC business*’ and ‘*Management of LOC business*’, while there are fewer for the other two categories. The next section contains a presentation of the results for the theme category ‘*Organisation of LOC business*’.

4.4.1 Organisation of LOC business

‘*Organisation of LOC*’ is one of the four theme categories under which the results of Phase 1 of the study are presented. ‘*Organisation of LOC business*’ in the case of this study relates to important organisational elements that are fundamental to the performance of LOC businesses. Examples of organisational elements include company structural elements, processes, procedures, rules or laws, plans for the business, business agreements if several parties are involved, and the capacity to undertake specific tasks. Every business, including the three case study LOCs, has to exhibit these elements.

Contained under this category ‘*Organisation of LOC business*’ are seven broad themes and they include, *LOC business objectives*, *LOC business plan*, *LOC business structure and landowner representation*, *Appointment of LOC executive*, *LOC business contract* and *LOC capacity*. The next section begins with the presentation of themes under each of the seven categories of broad themes, beginning with the broad theme category of ‘*LOC structure elements*’.

4.4.1.1 Company structure elements

'Company structure elements' is the first of the seven themes under the category 'Organisation of LOC businesses'. Some of these elements as described under the Company Act 1997 (PNGID, 2011), including a formal company name, one or more shares, one or more shareholders, one or more directors, possibly a constitution¹³, a permanent address or office, an official address for service, and the safe keeping of the company and accounting records. Whether the three case study LOCs have in place all the important company structure elements is not known but the results below will provide some insights into that.

Following the data generation and analysis process as outlined in Section 4.3, several themes emerged; those that relate to the 'Company structure elements' were grouped together, and their details are displayed in Table 4.3. The totals under 'no. of clan leaders' column indicate the total number of clan leaders who contributed to each theme.

Table 4.3: Themes relating to the company structure elements and number of clan leaders per LOC making reference to them (N=57 Raicoast LOC, 54 Hawain LOC, 54 Amanab LOC)

Themes relating to company structure elements	LOCs	No. of clan leaders
i. Absence of a permanent office space or address	Raicoast	50 (88%)
	Hawain	52 (96%)
	Amanab	47 (87%)
ii. Inability of the LOC business to keep safe all business and accounting records.	Raicoast	44 (77%)
	Hawain	35 (65%)
	Amanab	30 (56%)
iii. Absence of an official address for service	Raicoast	8 (14%)
	Hawain	6 (11%)
	Amanab	5 (9%)
iv. Absence of company shares for purchases.	Raicoast	4 (7%)
	Hawain	5 (9%)
	Amanab	3 (6%)

From Table 4.3, for all three LOCs, the first and second themes were the most frequently commented on, as shown by the high percentages (56 to 96%) of participants from the three LOCs who made reference to them, while the third and fourth themes are the less frequently indicated, as shown by the low percentages (between 6 to 14%) of participants from the three

¹³ Under the Company Act 1997, a company may opt to have a constitution but is not required to have one.

LOCs who made reference to them. The four themes highlight issues that relate to the structural elements for the three LOCs.

The first theme – *‘Absence of a permanent office space or address’*, was commented on by between 87 to 96 percent of participants from the three LOCs. In line with this theme, the participants commented on the great inconvenience this issue highlighted. As one clan leader puts it, *“It is very difficult to find the company executive to express our concerns, issues or problems we have as they are nowhere around to be easily found. Going after them in their villiges is not right and is risky as we may be attacked by their tribe. Now we hear that they are accommodated by the logging company in one of their office spaces but the situation is still the same, as access to them is restricted by the company security”*. The researcher also sometimes had difficulty locating them in their offices, only to be told later that they did not have a permanent office space or address to operate from.

The second theme, *‘Inability of the LOC business to keep safe all business and accounting records’*, was commented on by between 56 to 77 percent of participants from the three LOCs. With the reality that the three LOCs have no permanent office spaces or addresses, the participants were of the view that the business and accounting records of the company cannot be safely kept.

The third theme, *‘Absence of an official address for service’* was commented on by between 9 to 14 percent of the participants from the three LOCs. While this theme was not frequently commented on by many participants, it is still an important element of a company structure. The same applies to the fourth theme, *‘Absence of company shares for purchase’*, as commented on by between 6 and 9 percent of the participant from the three LOCs. Particularly for the fourth theme, buying of shares and becoming a shareholder is common for a business that adopts a company type business structure, but that wasn’t the case with the three LOCs. Instead of a landowner becoming a shareholder of the LOC business through a purchase of company shares, the landowner became a member at no cost. This membership criterion was through recognition of belonging to a landowner clan that was a signatory to the timber concession agreement.

4.4.1.2 LOC business objectives

‘LOC business objectives’ is the second of the seven themes under the category *‘Organisation of LOC business’*. A company is formed with specific objectives; and the three LOCs are no exception to this. The objectives for the three case study LOCs is not known but the results below will provide some insights into that, as perceived by the landowners.

Following the data generation and analysis process as outline in Section 4.3, several themes emerged, and those that relate to ‘*LOC business objectives*’ were grouped together and their details displayed in Table 4.4. The totals under the column ‘no. of clan leaders’ indicate the total number of clan leaders who contributed to each theme.

Table 4.4: Themes relating to LOC objectives and number of clan leaders per LOC making reference to them (N=57 Raicoast LOC, 54 Hawain LOC, 54 Amanab LOC)

Themes relating to LOC business objectives	LOCs	No. of clan leaders
i. To fund or provide financial support for the construction of public facilities.	Raicoast	54 (95%)
	Hawain	51 (94%)
	Amanab	48 (89%)
ii. To ensure that development benefits as agreed to under the business contract are delivered.	Raicoast	47 (82%)
	Hawain	49 (91%)
	Amanab	45 (83%)
iii. To be attentive to landowners’ concerns, issues or problems.	Raicoast	38 (67%)
	Hawain	40 (74%)
	Amanab	34 (63%)
iv. To fund or provide financial support to group or community activities.	Raicoast	8 (14%)
	Hawain	11 (20%)
	Amanab	5 (9%)
v. To invest directly in businesses.	Raicoast	3 (5%)
	Hawain	2 (4%)
	Amanab	2 (4%)

From Table 4.4 for all three LOCs, the first, second and third objectives were the most frequently commented on, as shown by the high percentages of participants (between 63 to 95 percent) from the three LOCs who made reference to them, while the fourth and fifth objectives were less frequently commented on, as indicated by the low percentages of participants (between 4 to 20 percent) who made reference to them. In general, the first, second, third and fourth objectives are social or service oriented, while the fifth objective is business or profit oriented. The business or profit orientated objective was a less popular objective. The five themes highlight issues that relate to LOC business objectives for the three LOCs.

The first objective, ‘*To fund or provide financial support to the construction of public facilities*’, was indicated by between 89 to 95 percent of the participants from the three LOCs. The participants come from village communities where basic infrastructures such as good all-weather roads and bridges are non-existent, and buildings for schools, clinics and other service centres are made from bush material. To them, better roads and bridges, permanent buildings for schools, clinics and other service centres are the kinds of development they expected from

the LOCs and the timber projects in general. That was the primary reason for initially having agreed to the timber projects. The high percentages of participants commented on this objective indicates the high significance for them, something that their respective LOCs should have pursued.

The second objective, *'To ensure that development benefits as agreed to under the business contract are delivered'*, was commented on by between 82 to 91 percent of participants from the three LOCs. The business contracts between the LOCs and the logging companies contained many benefits (monetary and infrastructure) that landowners were to receive from the timber project. Many of the benefits were to be provided by the logging company and the participants were of the opinion that the LOC management must constantly remind the logging companies who often give it a low priority and are more focused on their business activities. The high percentages of participants commented on this objective indicates the high significance of this objective for them, something that their respective LOCs should have pursued.

The third objective, *'To be attentive to landowners' concerns, issues or problems'*, was commented on by between 63 to 74 percent of participants from the three LOCs. The participants indicated that the logging operation had benefited the logging company more than the landowners who, besides receiving one-time timber royalties, are also faced with many issues, concern or problem following the logging operation. The support of the LOC management was necessary in such situations given that LOCs were the only legitimate representative of the landowners when it came to dealing with the logging company or the State. The high percentages of participants commenting on this objective indicated the high significance of this objective for them, something their respective LOCs should have pursued.

The fourth objective, *'To fund or provide financial support to group or community activities'*, was commented on by between 9 to 20 percent of participants from the three LOCs. This objective was not frequently mentioned by the participants, and the same applied to the fifth objective, *'To invest directly in businesses'*, as commented on by between 4 to 5 percent of the participants from the three LOCs. Particularly for the fourth objective, these few participants expressed concern that the limited funds the LOC received from the logging company in the form of log export premiums and project levies should be put to good use to benefit all the landowners rather than to fund or provide financial support to group or community activities where only some will benefit. In the case of the fifth objective, few participants commented that business or profit orientated objectives matched the company structure and was the original intention of the Forest Policy that recommended the LOC business concept. For both objectives

(fourth and fifth), the low percentages indicate that these objectives are less significant and that their respective LOCs should not pursue them.

Further to the participants' perception of the LOC objectives, when asked if any of these had been achieved, the participants said no.

4.4.1.3 LOC business plan

'LOC business plan' is the third of the seven themes under the category 'Organisation of LOC business'. A business plan is important to any company or business in general, as it tells what is to be done, how it should be done, what resources are required, the timing of the different activities, the rules and laws to adhere to, the technical specifications to maintain, the costs and revenue, and the targets that it plans to achieve; and all these things contribute towards achieving its overall objectives. As such, a business plan is an important part of any business, and the three LOCs are no exception to that rule. Whether the three LOCs have a properly developed business plans is not known, but the results below will provide some insights into that.

Several initial themes emerged following the data generation and analysis process, as outlined in Section 4.3; those that relate to the 'LOC business plan' were grouped together and their details are displayed in Table 4.5. The totals under the column 'no. of clan leader' indicate the total number of clan leaders who commented on each theme.

Table 4.5: Themes relating to LOC business plan and number of clan leaders per LOC making reference to them (N=57 Raicoast LOC, 54 Hawain LOC, 54 Amanab LOC)

Themes relating to LOC business plan	LOCs	No. of clan leaders
i. The business plan probably lacked technical details and was not comprehensive.	Raicoast	46 (81%)
	Hawain	43 (80%)
	Amanab	38 (70%)
ii. The LOC executive lacked business knowledge, skills and experience.	Raicoast	51 (89%)
	Hawain	47 (87%)
	Amanab	44 (81%)
iii. The business plan was done in a great rush.	Raicoast	47 (82%)
	Hawain	44 (81%)
	Amanab	49 (91%)
iv. The landowners never contributed to or had access to LOC the business plan.	Raicoast	45 (79%)
	Hawain	47 (87%)
	Amanab	44 (81%)

From Table 4.5, for all three LOCs, these four themes were the most frequently commented on, as shown by the high percentages (between 70 to 92%) of participants from the three LOCs who made reference to them. These four themes highlight issues that relate to business plan for the three LOCs.

The first theme, *'The business plan probably lacked technical details and was not comprehensive'*, was commented on by between 70 to 81 percent of the participants from the three LOCs. The participants were of the opinion that the business plans were no more than just a list of development projects. Development projects, such as public infrastructure like roads, bridges and permanent buildings (made of iron roof and timber) for schools, clinics and community centres were common among the three LOCs, while the development of a township was one of the major plans by the Amanab LOC. However, the participants feared that what is missing from the business plans are their many technical details. This was how one of the forestry officers in charge of one of the timber projects put it: *"Many of the development projects mentioned in the business plans of the respective LOCs are built to no standard at all. Unfortunately we are not in a position to enforce on the standards as this is something between the LOCs and the logging company. The logging companies have taken advantage of such situations by building sub-standard projects and the best the LOC can do is to apply pressure on the logging company so they at least are serious in meeting their contractual responsibilities"*.

The second theme, *'The LOC executive lacked the business knowledge, skills and experience'*, was commented on by between 81 to 89 percent of participants from the three LOCs. The business executives from the three LOCs were identified as having no business knowledge, skills or experience. This theme relates to the first theme, where LOC executives were limited by their lack of appropriate business knowledge and skill, hence, their inability to put together a comprehensive and detailed business plan.

The third theme, *'The business plan was done in a great rush'*, was commented on by between 81 to 91 percent of the participants from the three LOCs. The participants commented within just days after the establishment of the LOC business, the executive participated in the signing of a business contract between them and the logging company. For the LOC executives to develop their business plan within that short span of time is practically impossible as they did not have the capacity to do so (second theme). That led to the participants' expression of the business plan as being unrealistic.

The fourth theme, ‘*The landowners never contributed to or had access to the business plan*’ was commented on by between 79 to 87 percent of the participants from the three LOCs. This was not essential, but the participants felt that at least they should be involved one way or other, and that would have been satisfying for them as they had very high expectations for many benefits from the timber projects.

4.4.1.4 Management structure and landowner representation

‘*Management structure and landowner representation*’ is the fourth of the seven themes under the category ‘*LOC business organisation*’. The management structure for the three LOCs includes a board that comprises landowner representatives (one or more for each of the four forest blocks¹⁴), a chairman or leader appointed by a meeting and not by the board, and secretary and a secretary. The size of the management structure varies from eight to ten. Whether the management structure is appropriate for the business and was accepted by the landowners is not known, though the results below will provide some insights into that.

Following the data generation and analysis process outlined in Section 4.3, several themes emerged. Those that relate to ‘*Management structure and landowner representation*’ were grouped together and their details are displayed in Table 4.6. The totals under ‘no. of clan leaders’ column indicate the total number of clan leaders who commented on each theme.

Table 4.6: Themes relating to the management structure and landowner representation and number of clan leaders per LOC making reference to them (N=57 Raicoast LOC, 54 Hawain LOC, 54 Amanab LOC)

Themes relating to management structure and landowner representative	LOCs	No. of clan leaders
i. The timber project has associated with too many landowner clans.	Raicoast	46 (81%)
	Hawain	43 (80%)
	Amanab	38 (70%)
ii. Composition of individuals in the management is not representative of the different forest blocks.	Raicoast	52 (91%)
	Hawain	50 (93%)
	Amanab	48 (89%)
iii. Landowner not being too comfortable in being represented by another landowner who is unrelated to them or who had never worked with them before.	Raicoast	53 (93%)
	Hawain	51 (94%)
	Amanab	50 (93%)

¹⁴ The three case study LOCs have their total timber concession area divided into 4 almost equal blocks by PNGFA for its management and monitoring purposes, which provided the stratification in the sampling of landowners.

From Table 4.6 for the three LOCs, all three themes are the most frequently indicated as shown by the high percentages (between 65 to 93%) of participants from the three LOCs who made reference to them. The three themes highlight some issues relating to the management structure for the three LOCs.

The first theme, *'The timber project has associated with it too many landowner clans'*, was commented on by between 70 to 81 percent of the participants from the three LOCs. This is hard to deny, considering that the estimated total numbers of landowner clans (Table 4.1) was 871 for the Raicoast timber project, 509 for the Hawain timber project and 783 for the Amanab timber project.

The second theme, *'Composition of individuals in the management team is not representative of the different forest blocks'*, was commented on by between 89 to 93 percent of the participants from the three LOCs. The participants said that the business leader and the administrative staff came from the same forest blocks, which was over represented, while the other forest blocks had only one representative.

The third theme, *'Landowners not been too comfortable in being represented by another landowner who is unrelated to them or who has never worked with them before'*, was commented on by between 93 to 94 percent of the participants from the three LOCs. All the participants were not related to each other, spoke different languages¹⁵ (this was particularly true for landowners from the Raicoast and Amanab timber projects), some were tribal enemies, many had never worked together as a group of this size before. Traditionally, the different landowner clans have always lived independently of each other. Being brought together by the LOC business has been a completely new experience for all the landowners.

4.4.1.5 Appointment of LOC executive

'Appointment of LOC executive' is the fifth of the seven themes under the category – *'Organisation of LOC business'*. A company would require the services of its executive who had to be appointed in a manner accepted as formal and transparent. For many appointments, the process begins with the dissemination of a meeting notice informing all members of the meeting date, time and place. At the meeting, nominations are called for each executive position and this is followed with the actual voting, either through a show of hands or a secret ballot, and the winners are declared. It is important that the meeting is conducted by a neutral body and only eligible participants are allow to cast their votes. Exactly how well the executives of

¹⁵ Landowners from the Hawain timber project speak only one language.

the three LOCs got appointed is not known, but the results below will provide some insights into that.

Several themes emerged following the data generation and analysis process, as outlined in Section 4.3. Those that relate to ‘*Appointment of LOC executive*’ were grouped together and their details displayed in Table 4.7. The totals under the column ‘no. of clan leaders’ indicate the total number of clan leaders who commented on each theme.

Table 4.7: Themes relating to appointment of LOC executive and number of clan leaders per LOCs making reference to them (N=57 Raicoast LOC, 54 Hawain LOC, 54 Amanab LOC)

Themes relating to appointment of LOC executive	LOCs	No. of clan leaders
i. Absence of a meeting notice for the appointment of LOC executive.	Raicoast	41 (72%)
	Hawain	49 (91%)
	Amanab	39 (72%)
ii. The choice of the meeting location was not central and convenient.	Raicoast	39 (68%)
	Hawain	34 (63%)
	Amanab	29 (54%)
iii. Absent from the meeting that appointed the LOC executive.	Raicoast	51 (89%)
	Hawain	52 (96%)
	Amanab	49 (91%)
iv. Only the business leader was appointed at the meeting.	Raicoast	45 (79%)
	Hawain	48 (89%)
	Amanab	37 (69%)
v. The meeting for the appointment of the LOC executive was dictated to by a few vocal and influential landowners.	Raicoast	49 (86%)
	Hawain	51 (94%)
	Amanab	46 (85%)

From Table 4.7, for all three LOCs, all five initial themes are the most frequently commented on, as shown by the high percentages (between 54 to 96 percent) of participants from the three LOCs who made reference to them. These five themes highlight issues that relate to the appointment of LOC executive for the three LOCs.

The first theme, ‘*Absence of a meeting notice for the appointment of LOC executive*’ was commented on by between 72 to 91 percent of the participants from the three LOCs. The participants commented that they were never informed of the meeting, and had the notices been conveyed by word of mouth, which would be the most common way of sending messages, the possibility of reaching every landowner was slim as they were scattered far and wide within the

boundary of the respective timber projects. Also contributing to this difficulty is the problem of communication, particularly for landowners of the Raicoast and Amanab timber projects, where many different traditional languages are spoken. An advance meeting notice would have been convenient for the landowners but there is the issues of meeting location, and the difficulty of finding a location to suit all the landowners, as expressed by the second theme, *'The choice of the meeting location was not central and convenient'*. This theme was commented on by between 54 to 68 percent of the participants from the three LOCs.

The third theme, *'Absent from the meeting that appointed the LOC executive'* was commented on by between 89 to 96 percent of the participants from the three LOCs. This theme follows on from the first and second themes and goes on to confirm the poor attendance of the landowners at the meeting, which is indicative of the poor organisation and arrangements made on the part of those few individuals who organised the meeting. The majority of the participants who commented on the above theme, also commented that their absence from the appointment meeting made them feel they were not a true part of their LOC business.

The fourth theme, *'Only the business leader was appointed at the meeting'* was commented on by between 69 to 89 percent of the participants from the three LOCs. The position of business leader was viewed by the participants as associated with power, authority and influence. Not surprisingly, this appointment (business leader) took priority at the meeting. The other appointments for the other executive positions were never formally undertaken. As one clan leader puts it: *"... we only voted for the business leader through a show of hands and after that, names of other executive members were mentioned and endorsed but no votes taken. No checks were done to ensure that voting was on the basis of one vote per landowner clan. Instead, there were more than one vote from the same landowner clans present at that time, giving a high total but it was poorly representative of the different landowner clans who are the rightful and collective owners of the LOC business"*. In addition, the participants mentioned that landowner clan representatives for each of the forest blocks were hand-picked by the few landowner clans from those forest blocks representatives present at the meeting. Landowner clans for other forest blocks that were not appointed at that meeting were asked to appoint their landowner clan representative later.

The fifth theme, *'The meetings for the appointment of the LOC executive was dictated to by a few vocal and influential landowners'* was commented on by between 85 to 94 percent of participants from the three LOCs. The participants commented that all arrangements and

processes leading to the appointment of the business leader were hijacked by a few landowners. Interestingly, these were the same landowners who were instrumental in negotiating with the logging company and the State for the timber projects. With vested interests in the management positions, they organised the LOC executive appointment meeting to their convenience and advantage, as reflected by their dominance in the composition of the executive team and the many complaints made against them by the participants.

4.4.1.6 LOC business contract

'LOC business contract' is the sixth of the seven themes under the category *'Organisation of LOC business'*. A business contract is a legally binding agreement between two or more persons, parties or entities. The three LOCs have business contracts that were entered into between them and their respective logging companies. These business contracts were viewed by the landowners as the medium through which much needed public infrastructures and services could be delivered by the responsible parties as per the business contract. Under the repealed *1979 Forest Policy*, the business contracts were such that the logging companies were the ones responsible for the development of public infrastructures (roads and bridges); this made sense, as had the capacity to do so. However, under the current *1991 Forest Policy*, many business contracts were such that the logging companies were less directly involved and paid in the form of levies for the development of specific projects agreed under the business contract. For example, the project development levies are often intended for funding specific projects like reforestation and public infrastructure such as roads, bridges and schools. These levies or funds are paid to the LOC (business entity) with the expectation that they were put to their intended purposes.

Hence the significance of a properly developed business contract has the potential of benefiting the landowners and for the three LOCs. Whether they made good business contracts is not known, but the results below will provide some insights into that.

Several themes emerged following the data generation and analysis process, as outlined in Section 4.3. Those that relate to *'LOC business contract'* were grouped together and their details displayed in Table 4.8. The totals under 'no. of clan leaders' column indicate the total number of clan leader who contributed to each theme.

Table 4.8: Themes relating to LOC Business Contract and clan leaders per LOC making reference to them (N=57 Raicoast LOC, 54 Hawain LOC, 54 Amanab LOC)

Themes relating to LOC business contract	LOCs	No. of clan leaders
i. The LOC executive signed the business contract but never contributed towards its drafting and never understood all its contents.	Raicoast	44 (77%)
	Hawain	47 (87%)
	Amanab	36 (67%)
ii. The LOC executives lacked the appropriate knowledge, skills and experience to negotiate the business contract to their advantage.	Raicoast	52 (91%)
	Hawain	53 (98%)
	Amanab	50 (93%)
iii. The development projects expected by the landowners were poorly defined in the business contract.	Raicoast	52 (91%)
	Hawain	53 (98%)
	Amanab	48 (89%)
iv. The business contract was done in a great rush.	Raicoast	50 (88%)
	Hawain	52 (96%)
	Amanab	47 (87%)
v. The landowners never contributed to or had access to their business contract.	Raicoast	36 (63%)
	Hawain	42 (78%)
	Amanab	36 (67%)
vi. The rates of log export premiums or the various levies paid to the LOC by the logging company are probably inadequate to generate sufficient funds for the construction of large-scale development projects.	Raicoast	44 (77%)
	Hawain	50 (93%)
	Amanab	48 (89%)

From Table 4.8, and for all three LOCs, all six initial themes are the most frequently commented on, as shown by the high percentages (between 63 to 98%) of participants from the three LOCs who made reference to them. These themes highlight issues relating to the business contract of the three LOCs.

The first theme, *‘The LOC executive signed the business contract but they never contributed towards its preparation and never understood all its contents’*, was commented on by between 67 to 87 percent of participants from the three LOCs. The participants doubted that the LOC executive had the capacity to develop or negotiate a business contract that would offer real benefit to them. The role of the LOC executive was mainly just to sign despite not understanding important details.

The second theme, *‘The LOC executive lacked the appropriate business knowledge, skills and experience to negotiate the business contract to their advantage’*, was commented on by

between 91 to 98 percent of participants from the three LOCs. This has impacted the outcome of the business contract as reflected by the third theme, *'The development projects expected by the landowners were poorly defined in the business contract'*, that was commented on by between 88 to 96 percent of participants from the three LOCs. The business contract would have had much to offer to the landowners had it been properly done and from the results here relating to the first, second and third themes, the LOC executives of all the LOCs performed badly in this area.

The fourth theme, *'The business contract was done in a great rush'*, was commented on by between 87 to 96 percent of participants from the three LOCs. This activity was performed immediately after the formation of the LOC and the participants doubted whether the LOC executive had had time to participate effectively in the development of the business contract or to obtain outside assistance.

The fifth theme, *'The landowners never contributed to or had access to the business contract'* was commented on by between 63 to 78 percent of participants from the three LOCs. The participants expressed that the LOC executive did not never attended to the every responsibilities of their LOCs following their appointment and never updated the landowners on developments relating to the business contract and, most importantly, how it will benefit them.

The sixth theme, *'The rates of log export premium or the various levies paid to the LOC by the logging company are probably inadequate to generate sufficient funds for the construction of large-scale development projects'* was commented on by between 77 to 93 percent of participants from the three LOCs. In general, the rate for the log export premium varies from PGK¹⁶10 to as high as PGK30.00 per cubic metre of exported logs while the rates for the various levies (education, infrastructure and reforestation) vary from PGK1.00 to as high as PGK10.00 per cubic metre, depending on the export log price. For example, for a log price of between PGK50-100 per cubic metre, the logging company is expected to pay PGK2 per cubic metre to the LOC. With the higher log prices, say from PGK111-150, a higher rate (but not more than PGK10.00) is paid by the logging company to the LOC, say at a rate of PGK5.00 per cubic metre. In other words, the rate of the various levies (PGKina per cubic metre) increases with the price of the export logs. As one staff of *Société Générale de Surveillance* (SGS) puts it, *"the above rates would have generated at least PGK20,000.00 to up to PGK100,000.00 per year for each of the LOCs, including the Amanab LOC"*. While these amounts may appear to be a lot of

¹⁶ Papua New Guinea currency in kina and toea.

money, but with no proper plans of how the money is going to be used and considering the fact that many of the public facilities expected by the landowners are capital intensive, such amounts of money are in fact inadequate.

4.4.1.7 *LOC capacity*

‘*LOC capacity*’ is the seventh of the seven themes under the category – ‘*Organisation of LOC*’. Capacity is viewed in terms of finance, technical skills and know-how, and the machinery. The availability and use of these things will lead to the provision of those much needed development benefits expected by the landowners. This is the case of the three LOCs who are faced with the task of delivering development projects to the landowners; however, the nature of such projects, public infrastructure, as an example, are capital intensive and require heavy machinery, skilled and trained personnel to perform the task, and most importantly the funds to meet all the costs associated with the development of the project. Whether the three LOCs have the capacity to perform to the expectations of the landowners is not known, but the results below will provide some insights into that.

Several themes emerged following the data generation and analysis process, as outlined in Section 4.3. Those that relate to ‘*LOC capacity*’ were grouped together and their details are displayed in Table 4.9. The totals under the column ‘no. of clan leaders’ indicate the total number of clan leaders who commented on each theme.

Table 4.9: Themes relating to LOC business contract and number of clan leaders making reference to them (N=57 Raicoast LOC, 54 Hawain LOC, 54 Amanab LOC)

Themes relating to business contract	LOCs	No. of clan leaders
i. The LOC does not have adequate funds to fund or support the construction of public facilities and other development projects.	Raicoast	51 (89%)
	Hawain	49 (91%)
	Amanab	50 (93%)
ii. The LOC does not have the necessary machinery to construct the public facilities or other development projects.	Raicoast	53 (93%)
	Hawain	51 (94%)
	Amanab	49 (91%)
iii. The LOC does not have the trained and skilled manpower to perform the various tasks relating to the construction of public facilities and other development projects.	Raicoast	50 (88%)
	Hawain	49 (91%)
	Amanab	51 (94%)
iv. The LOC is unable to secure funding from commercial banks to fund the construction of public facilities and other development projects.	Raicoast	12 (21%)
	Hawain	17 (31%)
	Amanab	15 (28%)

From Table 4.9, for the three LOCs, all four initial themes were the most frequently commented on, as shown by the high percentages (between 89 to 94%) of participants from the three LOCs who made reference to them. These themes highlight issues relating to LOC capacity for the three LOCs.

The first statement, *'The LOC does not have adequate funds to fund or support the construction of public facilities and other development projects'*, was commented on by between 89 to 93 percent of the participants from the three LOCs. The participants have very high expectations towards their LOCs delivering development projects and public infrastructure, like roads and bridges; but the reality is that these projects cost substantial amounts of money. With the logging company being their only source of funding and this funding being inconsistent (in amounts and intervals), the ability of the LOC to deliver effectively will be hampered.

The second theme, *'The LOC does not have the necessary machinery to construct the public facilities or other development projects'*, was commented on by between 91 to 94 percent of the participants from the three LOCs. The participants have recognised this to be lacking with the LOC as they do not even have the funding to hire the machinery for the construction of public facilities and other development projects.

The third theme, *'The LOC does not have the trained and skilled manpower to perform the various tasks relating to the construction of public facilities and other development projects'*, was commented on by between 88 to 94 percent of the participants from the three LOCs. From the identification of the participants in terms of their level of education, only 5 percent of the participants from the three LOCs had some technical or higher level of education; however they did not have the appropriate business knowledge, skills and experience. The same is the case with the LOC executives.

The fourth theme, *'The LOC is unable to secure funding from the commercial banks to fund the construction of public facilities and other development projects'* was commented on by between 21 to 31 percent of the participants from the three LOCs. A few of the participants have mentioned about the possibility of the LOC taking a bank loan to help fund the construction of public infrastructure and other development benefits; but they came to realise that the LOC does not have the security or collateral as a guarantee for a loan. Also, the great uncertainty about their sources of funding from the export of round logs and the inconsistency of their funds may create difficulties in the timely repayment of a bank loan. This has not eventuated for the three cases studies and most probably won't.

4.4.2 Management of LOC businesses

'Management of LOC businesses' is the second of the four theme categories under which the results of Phase 1 of this study are presented. *'Management LOC businesses'*, in the case of this study, focuses on the business executives and particularly on how they manage the businesses. As indicated in the earlier part of the results (Section 4.4.1.2), landowners have high expectations from their LOCs, and the achievement of these expectations is dependent on how the businesses are being managed. Little is known of exactly how the three LOCs manage their businesses but the results below will provide some insight into that.

Contained under this category are four themes which include: *'Mandatory company responsibilities'*, *'Funding of development projects'*, *'Enforcement of business contract'*, and *'Working relationship'*. Below is the presentation of the various themes under each of the theme categories of *'Management of LOC businesses'*.

4.4.2.1 Mandatory company responsibilities

'Mandatory company responsibilities' is the first of the four themes under the category *'Management of LOC business'*. Mandatory company responsibilities include the conduct of annual general meetings, the preparation of audited financial statements and annual reports, and the filing of annual returns, all prescribed by the Company Act 1997 (PNGID, 2011). How well the LOC management has upheld the many mandatory responsibilities is not known, but the results below will provide some insights into that.

Several themes emerged following data collection and analysis, as outlined in Section 4.3, and those that relate to the *'Mandatory company responsibilities'* were grouped together and their details displayed in Table 4.10. The totals under the column 'no. of clan leaders' indicate the total number of clan leaders who commented on each theme.

Table 4.10: Themes relating to mandatory company responsibilities and number of clan leaders making reference to them (N=57 Raicoast LOC, 54 Hawain LOC, 54 Amanab LOC)

Themes relating to mandatory company responsibilities	LOCs	No. of clan leaders
i. Absence of annual general meetings	Raicoast	52 (91%)
	Hawain	51 (94%)
	Amanab	50 (93%)
ii. Absence of annual financial and business reports.	Raicoast	52 (91%)
	Hawain	51 (94%)
	Amanab	48 (89%)
iii. Could have failed to file annual returns.	Raicoast	8 (14%)
	Hawain	5 (9%)
	Amanab	4 (7%)

From Table 4.10, for all three LOCs, the first and second themes were the most frequently commented on, as shown by the high percentages (between 89 to 94%) of participants who made reference to them, while the third theme is less frequently commented on, as shown by the low percentage (between 7 to 14%) of participants who made reference to it. The three themes highlight issues relating to the mandatory business responsibilities for the three LOCs.

The first theme, '*Absence of annual general meetings*', was commented on by between 91 to 94 percent of participants from the three LOCs. The participants have complained about the failure of the management in not calling a single annual general meeting since the start of the LOC business, despite numerous requests being made of them. This was totally wrong as far as the participants were concerned and, not surprisingly, anger and frustration towards the management was indicated by the landowners.

The second theme, '*Absence of annual financial and business reports*', was commented on by 89 to 94 percent of the participants from the three LOCs. The participants were very concerned about how their funds were being managed but have never had the opportunity to see for themselves how their funds were being managed as there had been no annual financial report since the start of the LOC business. Other business reports have also never been prepared.

The third theme, '*Could have failed to file annual returns*', was commented on by 7 to 14 percent of the participants from the three LOCs. This mandatory responsibility is important for

continued recognition as a legitimate company under the laws of the country. A few participants who were familiar with this mandatory responsibility expressed this concern.

4.4.2.2 Funding of development projects

'Funding of development projects' is the second of the four themes under the category *'Management of LOC business'*. Development projects in this study include public infrastructure such as good all-weather-use roads that link up to the existing main highways, permanent bridges¹⁷ over rivers that are often impassable during the rainy season due to flooding, permanent buildings¹⁸ for schools and health centres, and village water supplies. These projects are non-existent in the different timber project areas and their construction would have contributed positively to changing the lives of landowners in the many village communities within the boundaries of the timber projects. These were the kinds of benefits that convinced the landowners to go into agreement with the State to release the rights to their timber resources to the State for their commercial production that it was hoped would lead to providing the much needed public facilities. The landowners, the majority of them illiterate, were easily convinced and readily released their timber resources to the State, because of their high expectations of their LOC and the timber project, in general, as indicated by some early results (Section 4.4.2.2).

Several themes emerged following the data generation and analysis process, as outlined in Section 4.3, and those that relate to *'Funding of development projects'* were grouped together and their details displayed in Table 4.11. The totals under 'no. of clan leaders' column indicate the total number of clan leaders who commented on each theme.

¹⁷ Made from steel, concrete and culverts than using logs.

¹⁸ Buildings made of iron roofs and timber.

Table 4.11: Themes relating to funding of development projects and number of clan leaders per LOC making reference to them (N=57 Raicoast LOC, 54 Hawain LOC, 54 Amanab LOC)

Initial themes relating to funding of development projects	LOCs	No. of clan leaders
i. Absence of any public infrastructure funded by the LOC.	Raicoast	52 (91%)
	Hawain	50 (93%)
	Amanab	47 (87%)
ii. Absence of any public infrastructure funded by the logging company.	Raicoast	50 (88%)
	Hawain	51 (94%)
	Amanab	47 (87%)
iii. Logging company built roads and bridges for its own use.	Raicoast	51 (89%)
	Hawain	50 (93%)
	Amanab	40 (74%)
iv. Public infrastructure and other project levies paid by the logging companies are probably inadequate to achieve their intentions.	Raicoast	40 (70%)
	Hawain	48 (89%)
	Amanab	50 (93%)

From Table 4.11, for all three LOCs, all four themes are the most frequently commented on, as shown by the high percentages (between 70 to 94%) of participants from the three LOCs who made reference to them. The four themes highlight issues relating to funding of development projects by the three LOCs.

The first theme, ‘*Absence of any public infrastructure funded by the LOC*’, was commented by between 87 to 93 percent of the participants from the three LOCs. The participants were unhappy with their LOC, and in particular, the management for not funding a single project they were promised despite having received funds from the logging company. The same can be said of the logging company, as reflected by the second theme – ‘*Absence of any public infrastructure funded by the logging company*’. This was commented on by between 87 to 94 percent of participants from the three LOCs. The participants commented that while the logging company has been going for many years, there was nothing evident to show that the logging company has been genuine in its commitments. The many schools and medical centres in the project area are still made of traditional materials and access to the remote inland areas continues to be on foot.

As logging progresses into remote areas, the construction of the logging roads is evident but the participants commented that these roads have been built for logging purposes and not of equivalent standard to the national roads in the country. In addition, the roads were built toward stands of commercial forests and are far from connecting to the inland villages. Unfortunately, many of these roads are quickly destroyed by the rains and are covered with secondary forest growth, making them unusable once logging progresses on. As one clan leader puts it, “*before logging took place, we used bush tracks to walk to the nearest main road but when logging started, we were happy to see roads and some bridges being built. However as operation continued on, we realised that the roads were built towards the forests for the purpose of harvesting the trees and also were never properly gravelled. What you see now is so sad that the whole arrangement failed us and we resort once again to using the bush track, and this may continue on*”. This issues is reflected by the third theme, ‘*Logging company built roads and bridges for its own use*, which was mentioned by between 74 to 93 percent of the participants from the three LOCs.

The fourth theme, ‘*Public infrastructure or project development levies paid by the logging companies are probably inadequate to achieve their intentions*’, was commented on by between 70 to 93 percent of the participants from the three LOCs. The participants felt that the various development projects such as roads, bridges, permanent buildings for schools and health centres, water supplies, and reforestation costs substantial amounts of money (thousands of PNG kina). The participants also expressed that the levy rates are often not more than PGK10.00 and depend on the number of log exports made by the logging company in a year and the price of the logs at the time of export, so that the amount of money a LOC can expect to received can vary from PGK10,000.00 to PGK100,000.00. This is because of the unstable nature of the logging operations; disturbances like weather or human factors affect the operations and the exports. This affects the ability of the LOC to meet the expectations of the landowners.

4.4.2.3 Business contract enforcement

‘*Business contract enforcement*’ is the third of the four themes under the category ‘*Management of LOC business*’. The landowners also have the expectations that their respective LOCs should be responsible for the enforcement of the business contracts, particularly for the purpose of ensuring that the logging company does fulfil its commitment to deliver development projects and other benefits as agreed to under the business contract. It does not matter if the business contract was between the LOC and the logging company, as in the case of Raicoast and Hawain

timber projects, or between the State and the logging company, as in the case of the Amanab timber project; the respective LOCs are the eyes and mouths of the landowners and must contribute where necessary to the enforcement of the business contract. How the three LOCs have conducted themselves in this respect (business contract enforcement) is not known, although the results below will provide some insights into that.

Several themes emerged following the data collection and analysis process, as outlined in Section 4.3, and those that relate to ‘*Business contract enforcement*’, were grouped together and their details are displayed in Table 4.12. The totals under the column ‘no of clan leaders’ indicate the total number of clan leaders who commented on each theme.

Table 4.12: Themes relating to business contract enforcement and number of clan leaders making reference to them (N=57 Raicoast LOC, 54 Hawain LOC, 54 Amanab LOC)

Themes relating to business contract enforcement	LOCs	No. of clan leaders
i. LOC management did not know how to go about enforcing the business contract	Raicoast	53 (93%)
	Hawain	48 (89%)
	Amanab	79 (80%)
ii. Logging operations have progresses but the promised development projects or public infrastructures have not emerged.	Raicoast	51 (89%)
	Hawain	52 (96%)
	Amanab	48 (89%)
iii. Little was done about the breaching of logging laws by the logging company.	Raicoast	30 (53%)
	Hawain	35 (65%)
	Amanab	29 (54%)
iv. Landowners have gone out on their own to force the logging company to compensate them for the damage from unlawful logging activities.	Raicoast	43 (75%)
	Hawain	49 (91%)
	Amanab	31 (57%)
v. The business leader and the logging company have a good working relationship that made it practically difficult for the LOC leader to enforce the business contract.	Raicoast	44 (77%)
	Hawain	48 (89%)
	Amanab	39 (72%)

From Table 4.12, for all three LOCs, all five themes are the most frequently commented on, as shown by the high percentages (53 to 96%) of participants from the three LOCs who made reference to them. The five themes highlight issues relating to the enforcement of business contracts by the three LOCs.

The first theme, ‘*LOC management did not know how to go about enforcing the business contract*’, was commented on by between 80 to 93 percent of participants from the three LOCs.

The participants were of the view that the LOC executives were not very familiar with the terms and conditions of the business contract and were unable to enforce it.

The second theme, *'Logging operations have progressed but the promised development projects or public infrastructures have not emerged'*, was commented on by between 89 to 94 percent of participants from the three LOCs. This was one of the major concerns of the landowners after seeing that the logging activities by the logging company had progressed to other forest blocks but the promised development projects were nowhere to be seen.

The third theme, *'Little was done about the breaching of logging laws by the logging company'*, was commented on by between 53 to 65 percent of the participants from the three LOCs. The majority of the participants were from forest blocks where logging had taken place and currently taking place at the time of the fieldwork. These groups of participants were greatly concerned about the poor regard of the logging laws and monitoring by PNGFA was not adequate, leaving the logging company to easily escape without punishment. For example, the cutting of trees close to the waterways, cemeteries and historical sites is normally not allowed under the logging laws, but despite this they were harvested. There were also cases of unnecessary wastages of logs from trimming due to splits following poor felling or handling techniques and this wastage log volume from trimming were never included in the log volume calculations for royalty payments, leaving the owners of the trees being paid less money than expected. This often resulted in landowners taking the law into their own hands as reflected by the fourth theme, *'Landowners have gone out in their own way to force the logging company to compensate them for the damage from unlawful logging activities'*. This theme was commented on by between 57 to 91 percent of the participants from the three LOCs. From the participants' experience, forceful and physical blockades were very effective in getting the attention of the logging companies. In such a situations, the LOC leader was often aiding the logging company, who often used police to threaten the landowners and break the blockade. In some cases, the landowners were locked up in police cells and went before the court.

This unexpected conduct of the LOC leaders is reflected by the fifth theme, *'The business leader and the logging company have a good working relationship that made it practically difficult for the LOC leader to enforce the business contract'*. This theme was commented on by between 72 to 89 percent of the participants from the three LOCs. The participants commented that the very too-healthy working relationships between the LOC leader and the logging company had

impacted on the ability of the LOC leader to properly enforce the business contract and all the commitments expected from the logging company.

4.4.2.4 Working relationship

‘Working relationship’ is the last of the four themes under the category ‘*Management of LOC business*’. The ‘working relationship’ refers to that between members of the LOC executive team and between them and the landowners. A good and healthy working relationships is often promoted through teamwork; reaching out and addressing issues, concerns or problems; having regular meetings, meeting important requirements; respect and understanding each other; upholding set rules, procedures or laws; being honest and transparent; and so on. Whether this has been the case with the three LOCs is not known, and the results below will provide some insights into that.

Several themes emerged following the data generation and analysis process, as outlined in Section 4.3, and those that relate to ‘*Working relationship*’ are contained in Table 4.13. The totals under the column ‘no. of clan leaders’ indicate the total number of clan leaders who commented on each themes.

Table 4.13: Themes relating to working relationship and number of clan leaders making reference to them (N=57 Raicoast LOC, 54 Hawain LOC, 54 Amanab LOC)

Themes relating to working relationship	LOCs	Number of clan leaders
i. Absence of frequent business executive meetings.	Raicoast	52 (91%)
	Hawain	50 (93%)
	Amanab	47 (87%)
ii. Absence of frequent general meetings.	Raicoast	44 (77%)
	Hawain	50 (93%)
	Amanab	40 (74%)
iii. All financial and management decisions being made by the business leader.	Raicoast	51 (89%)
	Hawain	50 (93%)
	Amanab	50 (93%)
iv. Landowners’ concerns, issues or problems received no attention from the LOC executive.	Raicoast	46 (81%)
	Hawain	41 (76%)
	Amanab	38 (70%)
v. Access to LOC executives at a critical time was never possible.	Raicoast	38 (67%)
	Hawain	35 (65%)
	Amanab	33 (61%)

From Table 4.13, and for all three LOCs, all five themes were most frequently commented on, as shown by the high percentages (between 61 to 93%) of participants from the three LOCs who made reference to them. The five themes highlight issues relating to the working relationships among members of the LOC executive and between the LOC executive and the landowners of the three LOCs.

The first theme, '*Absence of frequent business executive meetings*', was commented on by between 87 to 93 percent of the participants of the three LOCs. The participants commented that since the start of the LOC business, there had never been a single meeting among the members of the LOC executive. That problem, according to the participants, was largely to be blamed on the business leader who for reasons known only to him made no attempt to have regular meetings with his executive members.

The second theme, '*Absence of frequent general meetings*', was commented on by between 74 to 93 percent of the participants from the three LOCs. The participants complained that there had been hardly any business meetings between the LOC executives and the landowners since the start of the LOC business. Some of the participants had even demanded action by the LOC leader about meetings but they never eventuated.

The third theme, '*All financial and management decisions being made by the business leader*', was commented on by between 89 to 93 percent of the participants from the three LOCs. The participants commented that all financial and management decisions did not result from the meetings but were made by the business leaders alone. This concentration of power in the hands of the business leader was very concerning to all participants, and many had formed factions with the intention of replacing the LOC leader, as was the case with Raicoast and Hawain LOCs, but this action had only created more new problems.

The fourth theme, '*Landowners' concerns, issues or problems received no attention from the LOC executive*', was commented on by between 70 to 81 percent of the participants from the three LOCs. Since the start of the logging operation, landowners have been faced with a range of concerns, issues or problems, and some required the attention of their business leader. The participants expressed disappointment that the executives of the three LOCs, particularly the business leaders, were never attentive to the landowners' concerns, issues or problems and that left them angry and frustrated. Some even took the law into their own hands and created more problems for themselves despite doing the right thing.

The fifth theme, '*Access to LOC executive at critical time was never possible*', was commented on by between 61 to 67 percent of the participants from the three LOCs. The participants indicated that there were some critical times when immediate access to their business leader was necessary, but it was never possible. This problem is also contributed to by the absence of a permanent office space, as was reflected earlier in one theme (Section 4.4.1.1).

4.4.3 LOC business group

'*LOC business group*' is third of the four categories under which the results of the first phase of this study are presented. The LOC business group in the case of this study is a group that comprises all the landowners from the many village communities within the boundaries of the respective timber projects. These landowners were signatories to each of the timber concession agreements that paved the way for the timber projects and they are also collective owners of the respective LOC businesses.

Contained under this category is the theme '*Suitability of LOC business group*'. Like any other business group, a crucial factor is the ability of the group members to work together (directly or indirectly) as a group in the development of the timber resources and also utilise the monetary benefits from the timber projects to invest in businesses or build the much needed public infrastructures in many village communities affected by the timber projects. The LOCs, representing landowners as a group, were viewed as the medium through which the landowners can benefit meaningfully from the development of their forest resources; that was one of the reasons for them consenting to the forest concession agreement in the first place. This was also the intention of the *Forest Policy* that recommended its adoption.

The suitability of a LOC business group can be determined by its size, compositions, available rules or laws, and the ability of the group members to work together as a group for a common purpose. How suitable the three case study LOC business groups are not known but the results below will provide some insights into that.

Several themes emerged following the data collection and analysis, as outlined in Section 4.3, and those that relate to the '*Suitability of LOC business group*' were grouped together and their details are displayed in Table 4.14. The totals under the column 'no. of clan leaders' indicate the total number of clan leaders who commented on each theme.

Table 4.14: Themes relating to the suitability of LOC business group and number of clan leaders per LOC making reference to them (N=57 Raicoast LOC, 54 Hawain LOC, 54 Amanab LOC)

Themes relating to the suitability of LOC business group	LOCs	No. of clan leaders
i. The high number of landowner clans.	Raicoast	52 (91%)
	Hawain	50 (93%)
	Amanab	47 (87%)
ii. The high number of traditional languages at the Amanab and Raicoast timber projects.	Raicoast	44 (77%)
	Hawain	N/A
	Amanab	40 (74%)
iii. Landowner clans are not related to each other.	Raicoast	51 (89%)
	Hawain	50 (93%)
	Amanab	50 (93%)
iv. The existence of tribal differences among some landowner clans.	Raicoast	52 (91%)
	Hawain	48 (89%)
	Amanab	44 (81%)
v. LOC business group as a new experience.	Raicoast	37 (65%)
	Hawain	35 (65%)
	Amanab	32 (59%)
vi. Group membership poorly defined	Raicoast	33 (58%)
	Hawain	37 (69%)
	Amanab	30 (56%)
vii. Absence of necessary rules and/or laws.	Raicoast	29 (51%)
	Hawain	46 (57%)
	Amanab	28 (52%)
viii. Existence of faction landowner groups.	Raicoast	41 (72%)
	Hawain	46 (96%)
	Amanab	N/A

From Table 4.14, for all three LOCs, all eight themes were the most frequently commented on, as shown by the high percentages (51 to 93%) of participants from the three LOCs, who made reference to them. However an exceptions is seen here in the case of the Hawain LOC with regards to the second theme, because only one traditional language is spoken in the area; and also for the Amanab LOC, for the eighth theme, because that issue did not existed during the time of the fieldwork. All eight initial themes highlighted issues relating to the LOC business group of the three LOCs.

The first theme, ‘*The high number of landowner clans*’, was commented on by between 87 to 93 percent of participants from the three LOCs. The estimated number of landowner clans per

timber project was 871 for Raicoast, 509 for Hawain and 783 for Amanab (Table 3.1). This high number of landowner clans was of major concern among the participants, some having commented that it makes the business group too big and unrealistic for pursuing their business interests.

The second theme, '*The high number of traditional languages for Raicoast and Amanab timber projects*', was commented on by between 74 to 77 percent of the participants from the two LOCs. While this does not apply to the Hawain timber project, since only one traditional language is being spoken, it applies to the Raicoast and Amanab timber projects where each was identified to have a total of 19 and 14 different traditional languages are found, respectively.

The third theme, '*Landowner clans are unrelated to each other*', was commented on by between 89 to 93 percent of the participants from the three LOCs. This theme relates to the first and second themes, despite only one traditional language being spoken, as in the case of landowners from the Hawain timber project, or where more than 10 different traditional languages are spoken, as is the case with landowner clans from the Raicoast and Amanab timber projects. The issues expressed by this theme can have a significant impact on the working relationships, particularly in communicating with the landowners.

The fourth theme, '*The existence of tribal differences among some landowner clans*' was commented on by between 81 to 91 percent of the participants from the three LOCs. The participants expressed concern that landowner clans come from different tribal backgrounds and many were once tribal enemies or have some differences or disputes between them that were never resolved amicably, but they had to come together as a group to pursue their business interests.

The fifth theme, '*LOC business group as a new experience*', was indicated by between 59 to 65 percent of participants from the three LOCs. The participants commented that this group was a totally new experience for them, particularly its size, and the many issues highlighted by the first, second, third and the fourth themes. Their experience of business groups was one that is made up of landowner clans who come from the same or neighbouring villages and are related to each other, in contrast to the case with the LOC business group.

The sixth theme, '*Group membership poorly defined*', was commented on by between 56 to 69 percent of the participants from the three LOCs. The participants were of the opinion that the free membership gained through recognition of being a landowner clan which was a signatory to the timber concession agreement did not offer a strong sense of membership of the LOC business group. Some of the participants preferred membership through financial forms like the

payment of some prescribed fees, but in the case of the timber project, it would have been a lot better if the size/volume and commercial value of the timber resources belonging to each landowner clan was the basis of defining membership so as to allow fairness in the voting rights, representation, power and other privileges. Unfortunately, these desirables (voting rights, representation, power and other privileges) are simply non-existent under the current membership arrangement.

The seventh theme, '*Absence of necessary rules and/or laws*', was commented on by between 51 to 57 percent of the participants from the three LOCs. This theme is related to the sixth theme, where the participants commented that it was just too difficult to manage the landowners as every member of a landowner clans was free to say anything they wanted; it would be better if only the clan leader who is their legitimate representative could speak for them. Sometimes this creates disagreements and division among group members. One landowner gave an examples: "...landowner clans where the logging is currently taking place are more concerned about themselves and are demanding too much from the logging company and unnecessarily disrupting the logging operation for reasons to do with their own differences without been considerate of other landowners where logging is yet to take place".

The eighth theme, '*Existence of faction landowner groups*', was indicated by between 72 to 96 percent of the participants from the Raicoast and Hawain LOCs. This theme was evident only with the Raicoast and Hawain timber projects. The emergence of a faction of landowner groups resulted from their dissatisfaction towards the LOC management for the failure to deliver those promised development projects, their lack of frequent meetings with regular financial reports and updates on what the business is doing, as well as having failed to address the many problems, issues or concerns of the landowners relating to the logging projects. The participants also expressed that the experiences of faction groups and the formation of new company executives often goes through lengthy court battles and even physical confrontations, but that was the only available option when PNGFA had neglected them completely. The new company executives maintain the same company name as with the case of Raicoas LOC, and make new name as with the case of Hawain LOC.

4.4.4 Support by PNGFA

'*Support by PNGFA*' is the last of the four categories under which the results of Phase 1 of this study are presented. The PNGFA is the only state institution responsible for the formulation of all plans, procedures, laws, rules and regulations relating to the development and management of all commercial timber projects in the country.

Support by PNGFA, in the context of this study, is viewed from the perspective of the landowners, who since the start of the timber projects have had many issues, concerns and problems relating to their respective LOCs, and to logging activities in general. The working relationship between the landowners and their respective LOC management has not been good and so the many issues, concerns or problems of the landowners have never been amicably resolved. Instead, landowners seek the support and assistance of PNGFA, particularly the project supervisors and where necessary the province forest managers. How helpful PNGFA has been to the landowners from the three LOCs is not known, but the results below will provide some insights into that.

Several themes emerged following the data collection and analysis, as outlined in Section 4.3, and those that relate to the ‘PNGFA support’ were grouped together and their details displayed in Table 4.15. The totals under the column ‘no. of clan leaders’ indicate the total number of clan leaders who commented on each theme.

Table 4.15: Themes relating to the support by PNGFA and number of clan leaders per LOC making reference to them (N=57 Raicoast LOC, 54 Hawain LOC, 54 Amanab LOC)

Themes relating to support by PNGFA	LOCs	No. of clan leaders
i. PNGFA was never supportive to the landowners’ problems, concerns or issues that resulted from the logging operation.	Raicoast	38 (70%)
	Hawain	43 (80%)
	Amanab	34 (63%)
ii. PNGFA was never supportive to the landowners for their many LOC related problems, concerns or issues	Raicoast	48 (84%)
	Hawain	47 (82%)
	Amanab	45 (79%)

From Table 4.15, for all three LOCs, both the two themes were the most frequently commented on, as indicated by the high percentages (63 to 82%) of participants from the three LOCs who made reference to them. The two themes highlight issues relating to the LOCs.

The first theme, ‘PNGFA was never supportive to the landowners’ problems, concerns or issues that resulted from the logging operation’, was commented on by between 63 to 80 percent of the participants from the three case study LOCs. The participants commented that for the many land disputes, PNGFA had engaged the services of land mediators from the lands departments to mediate, with them playing a secondary role. What frustrates the landowner in this case is that the process (mediation) often takes long, often some months before a decision is made.

While this is going on, the operation has moved to another forest area and the concern of the participants is that these two or more disputing landowner clans were left to sort it out themselves while PNGFA supports the continuation of the logging operation, making the landowners feel been cheated or not worthy of their involvement in the timber project. The same was the case with problems of damage to food gardens and prohibited sites, drinking water sites, and logging in prohibited site (river buffer zones); PNGFA never acted decisively to deal with the logging company and seek compensation on behalf of the landowners. As one landowner puts it: *“The process of justice and fair business practice as expressed by the landowners was very frustrating and do not work for us the poor and defenceless landowners”*.

The second theme, *‘PNGFA was never supportive of the landowners for the many LOC related issues, concerns or problems’*, was commented on by between 79 to 84 percent of participants from the three LOCs. The LOC executive, and in particular, the business leaders, have performed poorly, as indicated by the earlier results, such as failing mandatory company responsibilities, poor working relationships, and making decisions on the use of landowners’ funds that did not benefit them. Landowners have tried changing their leadership through votes of no-confidence but they were thwarted by the lack of commitment on the part of PNGFA to intervene and support the change by officially recognising the new leadership and the executive team.

4.5 Summary of Themes

The results in Section 4.4 were presented under the four categories *‘Organisation of LOC business’*, *‘Management of LOC business’*, *‘LOC business group’* and *‘Support by PNGFA’*. Each of these categories relates to the various aspects of LOC business. The results were presented in the the form of themes that highlighted specific issues relating to each of the four categories. Accordingly, the theme summary for the four categories is presented below, beginning with the category – *‘Organisation of LOC business’*.

4.5.1 Organisation of LOC business

The category *‘Organisation of LOC’*, consisted of seven sub-categories that include: *‘Company structure elements’*, *‘LOC objectives’*, *‘LOC business plan’*, *‘Management structure and landowner representation’*, *‘Appointment of LOC executive’*, *‘LOC business contract’* and *‘LOC capacity’*. The seven categories relate to the various aspects of organisation for the LOC business. Each of these seven categories also represent a broad theme category under which similar or related themes were grouped together during the process of data analysis; these

results presented in Section 4.4.1. Contained in Table 4.16 is the summary of the themes for the category ‘*Organisation of LOC business*’.

Table 4.16: Summary of themes for the category – ‘*Organisation of LOC business*’

Theme categories relating to the organisation of LOC	No. of themes	Theme summary
Company structure elements	4	Absence of company structure elements
LOC objectives	5	Social/service oriented objective strongly perceived by the landowners rather than business or profit.
LOC business plan	4	Poorly done, lacked technical details and not promising any tangible outcomes.
Management structure and landowner representation	3	The size of management offers only limited landowner representation.
Appointment of LOC executive	5	Poorly done and greatly influenced by individuals with vested interests resulting in poor landowner representation.
LOC business contract	6	Poorly done, lacked technical details, and not beneficial to the landowners.
LOC capacity	4	Lacked technical, financial and human capacity.

From Table 4.16, the various themes highlight issues relating to aspects of organisation of the three LOCs, and in particular, company structural elements, business plans, management structure and landowner representation, the appointment of LOC executives, business contracts and LOC capacity. A summary based on all these themes is that the three LOC businesses are faced with organisational related issues, indicating their poor state of organisation.

4.5.2 Management of LOC business

The category ‘*Management of LOC business*’ consisted of four sub-categories that include: ‘*Mandatory company responsibilities*’, ‘*Funding of development projects*’, ‘*Business contract enforcement*’ and ‘*Working relationship*’. The four categories relate to the various aspects of management of the LOC business. Each of these four categories also represent a broad theme category, under which, similar or related themes were grouped together during the process of data analysis; these results were presented in Section 4.4.2. Contained in Table 4.17 is the summary of themes for the category ‘*Management of LOC*’.

Table 4.17: Summary of themes for the category – ‘Management of LOC business’

Theme category relating to LOC management	No. of themes	Summary of themes
Mandatory company responsibilities	3	Failed in upholding the mandatory company responsibilities.
Funding of development projects	4	Lack of serious commitment to fund or support the construction of development projects (public infrastructures and other).
Business contract enforcement	5	Little was done on the part of the LOC management to ensure that the logging company adheres to the conditions of the business contract.
Working relationship	5	The business leader has decided not to work closely with his executive members and the landowners.

From Table 4.17, the various themes highlight issues relating to various aspects of management of the three LOCs, and in particular, mandatory company responsibilities, funding of development projects, enforcement of business contracts and working relationships. A summary based on these themes is that the three LOC executive have failed miserably in their many management responsibilities.

4.5.3 LOC business group

The category, ‘*LOC business group*’, has just one category that is ‘*The suitability of the LOC business group*’, under which, similar or related themes were grouped together during the process of data analysis; the results were presented in Table 4.14. Based on these themes, the suitability of the landowners of the three LOCs, as a business group, is summarised as being poor, since the group was too big, complex, and lacked structure.

4.5.4 Support by PNGFA

The category ‘*Support by PNGFA*’, has just one category that is ‘*Support by PNGFA*’, under which similar or related themes were grouped together during the data analysis; the results were presented in Table 4.15. Based on these results, the support coming from PNGFA to landowners and their LOCs can best be summarised as limited or hardly perceptible.

4.6 Conclusion

The objective of the study was to develop a better understanding of those factors that determine the performance of LOCs in the timber projects of the PNG forest industry, and guiding this study towards the achievement of this objective is the research question: Are the landowners actually benefiting from their LOCs in the timber projects of the PNG forest industry? Given the limited availability of information specific to those LOCs of interest, the study has had to be conducted in two phases. Phase 1 of the study was intended to develop major research themes, hence the adoption of a quality research study approach with an exploratory focus that used a case study (CS) research strategy and grounded theory (GT) as a research methodology, supported by in-depth interview and probing techniques.

This chapter contains the results for Phase 1 of the study. The results are in the form of themes and were presented according to the four theme categories, namely: '*Organisation of LOC business*', '*Management of LOC business*', '*LOC business group*' and '*Support by the PNGFA*'. Accordingly, summaries of each of the theme categories contained in Section 4.5 are as follows:

The theme category '*Organisation of LOC business*', comprises seven generalised (integrated) themes that resulted from the process of axial and selective coding of GT, namely: *company structure elements*, *LOC objectives*, *LOC business plan*, *management structure and landowner representation*, *appointment of LOC executive*, *LOC business contract*, and *LOC capacity*. Each of these integrated themes contained a number of initial themes that resulted from the process of initial coding of GT. Drawing from these initial themes, a summary of the generalised themes are as follows:

- *Company structure elements*: the three LOCs were noted to be without necessary company structure elements;
- *LOC objective*: the landowners from the three LOCs have high expectations for social or service related projects from their LOC (as per landowner perception of objectives for their LOC);
- *LOC business plan*: The three LOCs had business plans that were poorly done, lacked technical details and did not specify any tangible outcomes;
- *Management structure and landowner representation*: the three LOC structures offer only limited landowner representation;
- *Appointment of LOC executive*: appointment of landowners to the LOC executive positions of the three LOCs was poorly done and greatly influenced by individuals with

vested interests, resulting in poor landowner representation in the composition of the executive;

- *LOC business contract*: business contracts for the three LOCs were poorly done, lacked technical details, and were not beneficial to the landowners;
- *LOC capacity*: the three LOCs lacked technical, financial and human capacity.

The theme category '*Management of LOC*', comprised four generalised (integrated) themes that resulted from the process of axial and selective coding of GT, and they are: *mandatory company responsibilities*, *funding of development projects*, *business contract enforcement*, and *working relationships*. Each of these integrated themes contained a number of initial themes that resulting from the process of initial coding of GT. Drawing from these initial themes, a summary of the generalised themes are as follows:

- *Mandatory company responsibilities*: The three LOC executives failed to uphold the mandatory company responsibilities;
- *Funding of development projects*: The three LOC executives were never committed to funding or support of construction of development projects (public infrastructures and other);
- *Business contract enforcement*: the three LOC executives never ensured that the logging companies adhered strictly to the conditions of the business contract;
- *Working relationships*: the three LOC executives worked in isolation from the landowners; and the business leader was never seen to be working closely with his executive members.

The theme category '*LOC business group*', comprises a generalised (integrated) theme that resulted from the process of axial and selective coding of GT, and that is: *suitability of the LOC business group*. Drawing from these initial themes, a summary of the generalised theme is as follows:

- *Suitability of the LOC business groups*: The LOC business group for the three LOCs is big, diverse, complex, and lacked structure.

The theme category '*Support by PNGFA*', comprises a generalised (integrated) theme that resulted from the process of axial and selective coding of GT, and that is : *support by PNGFA*. Drawing from the initial themes, a summary of the generalised theme is as follows:

- *Support by PNGFA:* The support by PNGFA to the landowners from the three LOCs was limited or hardly perceptible.

With these findings, the research question was revisited. The question of whether landowners from the three case study LOCs have actually benefited from their LOCs, and the issues highlighted by the various themes, indicate problems relating to the organisation of LOCs, the management of the LOCs, LOC business groups, and support by PNGFA. These problems have contributed towards the LOCs' inability to perform as companies and to deliver on the many expectations of the landowners. Hence the answer as, No.

The findings of Phase 1 of the study highlighted a number of key problem areas or factors that have determined the performance of LOCs in the timber projects of PNG's forest industry, that need to be explored. This would require a more detailed study that explores at greater depths the various aspects of LOC businesses. A different study approach for Phase 2 of the study is clearly required, and guiding that are a number of specific research questions, which include:

1. *Is the organisation of the three case study LOC businesses adequate and appropriate?*
2. *Have the three LOC executives delivered their management responsibilities adequately and professionally?*
3. *How capable are the three LOC businesses of performing to the expectations of landowners?*
4. *How capable are the landowner groups of pursuing their interests through their LOC businesses?*
5. *Could PNGFA do any better in their support to the landowners in their many issues, as well as with their development needs?*
6. *What are the key institutional barriers to LOC business success?*

4.7 Chapter Summary

Phase 1 of the study led to the development of major research themes as presented in this chapter. These themes highlighted issues relating to the various aspects of LOC businesses. The conclusions from the various themes indicated issues relating to the organisation of LOCs, the

management of LOCs, LOC business groups, and support by PNGFA. These have been the reason for the LOCs' failure to deliver meaningful benefit to their respective landowners.

The research themes will be adopted in Phase 2 of the study. Guiding Phase 2 of the study are some specific research questions (Section 4.6), each focusing on specific problem areas as highlighted in the summary of themes (findings).

Phase 2 of the study will take a different approach that involves a survey. The various issues relating to the different aspects of LOC businesses will be incorporated into the survey, which will be administered over a large population. The details of the study approach for Phase 2 of the study are presented in the next chapter.

Chapter 5

Phase 2 - Research Methodology

5.1 Introduction

Phase 1 of the study led to the development of various themes. The themes highlighted issues relating to the various aspects of the LOC businesses. Accordingly, specific research questions were developed to guide Phase 2 of the study, that explores these issues in greater depth.

Phase 2 of the study research methodology involved the use of a survey. The various issues relating to the different aspects of the LOC businesses are incorporated into the survey that was to be tested over a large population size, with the findings to verify earlier findings from Phase 1 of the study. Case study research strategy, the protocols and cases will be the same as in Phase 1 of the study.

The various sections in this chapter after the introduction are Section 5.2, that presents the conceptual model, Section 5.3, which discusses the research method, and 5.4, which contains the summary for this chapter.

5.2 Conceptual Model

The findings from Phase 1 of the study led to the development of specific research questions and they are:

- 1. Is the organisation of the three case study LOC businesses adequate and appropriate?*
- 2. Have the three LOC executives delivered on their management responsibilities adequately and professionally?*
- 3. How capable are the three LOC businesses of performing to the expectations of landowners?*
- 4. How capable are the landowner groups of pursuing their interests through their LOC businesses?*
- 5. Could PNGFA do any better in their support to the landowners in their many issues, as well as with their development needs?*
- 6. What are the key institutional barriers to LOC business success?*

These questions are intended to guide the development of the research method for Phase 2 of the study. In particular, the development of the survey will be more detailed, and will focus on specific aspects of the LOC businesses that include: organisation of LOCs, management of LOCs, LOC business groups, and support by PNGFA, as well as the institutional aspects of it. The development of the survey will draw reference on the findings from Phase 1 of the study as well as the literature review. A conceptual model for Phase 2 of the study is displayed below (Figure 5.1.)

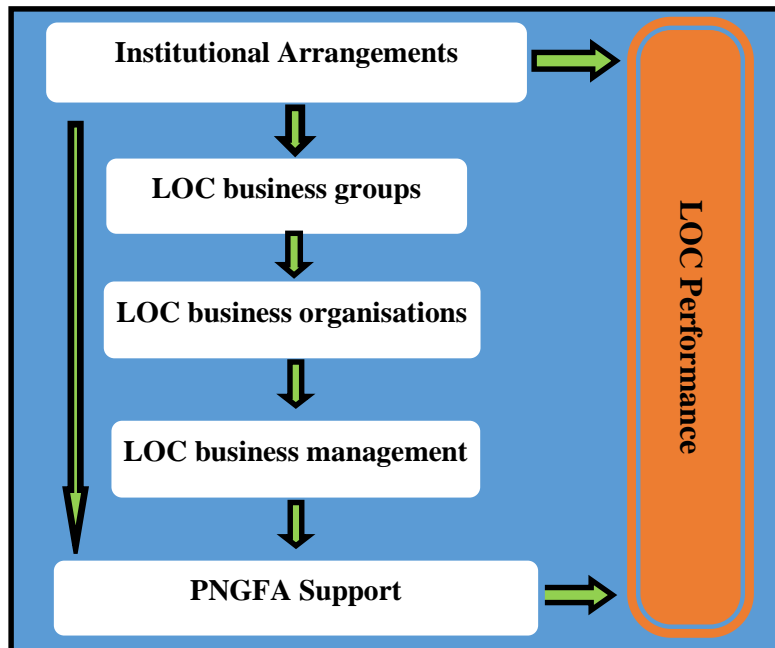


Figure 5.1: Conceptual model

5.3 Research Method

Phase 2 of this study is a continuation from Phase 1. It adopts the case study research strategy and purposive and stratified sampling techniques, however with a different data collection method, a survey. In the use of a survey for the collection of numerical data, the sampling techniques are non-probabilistic in nature and so the second phase, although basically quantitative, is also viewed as qualitative in nature.

With Phase 2 of the study covering a much larger sample size, and with more details being sought on the specific issues highlighted by the research themes in Phase 1 of the study, the adoption of this study approach and, in particular, the use of a survey is the most appropriate.

5.3.1 Development of survey for Phase 2 of study

A 5-point Likert scale survey was developed for data collection for this phase of the study. The 5-point Likert scale survey is made up of statements that the respondent is to grade on a 5-point scale. The five scale points are ‘*strongly disagree*’, ‘*disagree*’, ‘*neutral*’, ‘*agree*’, to ‘*strongly agree*’, with each assigned a numerical value, starting with 1 for ‘*strongly disagree*’, 2 for ‘*disagree*’, 3 for ‘*neutral*’, 4 for ‘*agree*’, and 5 for ‘*strongly agree*’. For example, the statement, ‘*I know all the landowners from all the different incorporated landowner groups*’, and if the respondent gives a rating of 1 which is ‘*strongly disagree*’, this is taken to mean that he does not know all the landowners from all the different ILG groups.

The details of the 5-point Likert scale survey are contained in Appendix C. The statements are grouped according to the four broad subject areas: *LOC business organisation*, *LOC business management*, *LOC business group* and *PNGFA Support*. Each of the statements reflects the issues highlighted by the major themes. For the theme relating to LOC business organisation, statements were made in reference to company structure, laws and processes, appointment, capacity, landowner representation, business objectives, membership, and business plan as well as business agreements. For the theme relating to LOC business managements, statements were made in reference carrying out mandatory responsibilities, commitments to members and landowners, and capacity. For the theme relating to LOC business group, statements were made in reference to group composition, suitability, potential/capacity, and behaviour. For the theme relating to PNGFA, a statement was made in reference to their level of commitment.

5.3.2 Case study as a research strategy

The second phase of this study continued with the use of case study as a research strategy. The application of case study during the first phase of study allowed for a more focused and in-depth examination of cases (interview participants) to offer better understanding of the general situation of the LOCs and the key issues. The case study helped define the boundary that allowed for easy application of its protocols for the generation of data and analysis. This will be the same with the second phase of study.

The same LOCs and timber projects remains the objective of the study– Raicoast Holdings Limited for the Raicoast timber project (Raicoast LOC), Wianduo Limited for the Hawain timber project (Hawain LOC) and Amgreen Limited for the Amanab Block 1-4 timber project (Amanab LOC). The landowners from these timber projects collectively own their respective LOCs, and this study (Phase 2) continues to view them as invaluable sources of information.

The selection of the respondents, the collection of data and analysis of the data are discussed below.

5.3.3 Case study research protocols

There are eight different research protocols, relating to entering the site, the units of analysis, sampling techniques, the data collection method, data analysis and interpretation, ensuring credibility, reliability and validity; study sites, and sample population. Details relating to each of these protocols are outlined below.

5.3.3.1 Ethical issues

As with Phase 1 of the study, the conduct of the survey took seriously ethical issues such as the application of the principle of anonymity, confidentiality of information provided, the security of data (during and after the survey), the surveyor's personal conduct, and all the general protocols relating to the use of human subjects. Much of these were addressed with the Lincoln University's Human Ethics Committee (HEC), and formal approval by HEC was granted on the 10th October, 2008.

For all surveys in the villages, permission had to be received from the village councillor and community leaders. Access to these individuals was with the assistance of PNGFA officers who were in charge of the respective timber projects. Only those who have consented were surveyed. The standard consent form that was used during Phase 1 of study was used again.

5.3.3.2 Unit of analysis

The cases in this study are the landowners who collectively own the LOCs that are associated with the three case study timber projects. Specifically, the landowners should meet the criteria of being clan leaders and also new in the sense that they should not be the same individuals who participated during phase 1 of the study. So these new clan leaders were the cases from which various data of interest were collected.

5.3.3.3 Sampling technique

Purposive sampling (non-probabilistic) was adopted in phase 2 of this study. This sampling technique will enable the selection of respondents (cases) from the different village communities in the four forest blocks (where logging had already taken place, where logging was taking place at the time of field studies, and where logging is yet to take place) of the timber projects. The selection of the respondents ensured that: they come from different communities where different traditional languages are being spoken (only for Raicoast and Amanab timber

projects), they come from different geographic locations, they come from areas where there are available basic government or mission services to none; and some who have associated with them some community or job responsibilities. This criteria for the selection of survey respondents will promote respondent diversity and fairness, hence the accuracy of information.

5.3.3.4 Data collection technique

A 5-point-Likert scale survey was used to collect the data. The survey was made up of statements with response options for respondents to mark, ranging from '*strongly disagree*', '*disagree*', '*neutral*', '*agree*', to '*strongly agree*'. Each of the four categories (conceptual model) of the survey, 'Institutional arrangement', 'LOC business organisation', 'LOC business group', 'LOC business management', and 'PNGFA support', has a list of statements under it, and their corresponding response options. The statements reflected the issues highlighted by the major themes studied in Phase 1 of the study.

Respondents who took part in the survey were those who were purposively selected and met the criteria of being a clan leader and also new, in the sense that, they should not be the same individuals who participated during Phase 1 of the study. Respondents who have accepted the interview invitation and made it to the provincial forestry office, were interviewed. The majority of these respondents were from the forest blocks where logging was taking place, who frequently visited the provincial forest office regarding issues related to timber royalties, logging operations or LOC business. For other groups of respondents, visits were made to their villages and their participation in the survey was only after they consented to it. Either a village councillor or community leader had to be informed prior to any survey being conducted in a village. Their input in directing me to respondents who were representative of the different forest blocks, the different locations within the same forest blocks, and who represented different traditional languages, and from villages with varying levels of basic infrastructure or services, was a bonus to the suitability of the participants.

The survey documents had their statements written in English and for those village participants who had problems completing them, the researcher had to rephrase the same statements in *pidgin*, a common language spoken by almost all the participants. Other invaluable information that could not be captured in the survey was also collected in conversation during the interview. It took between twenty and thirty minutes per participant to complete a survey.

5.3.3.5 Data analysis and interpretation

Prior to data analysis, numerical values were assigned to each of the five survey ratings as follows: 1 for '*strongly disagree*', 2 for '*disagree*', 3 for '*neutral*', 4 for '*agree*' and 5 for '*strongly agree*'. The analysis involve the calculation of the mean scores corresponding to each statement. To calculate the mean score for a particular statement, say Statement A, the frequency or tally total corresponding to each of the five rating is multiplied by its corresponding numerical value, then the product or total for each rating is added together to get the overall total. The overall total is then divided by the total number of respondents who took part in the survey to get the mean score for Statement B. The mean scores for all the statements are calculated in the same manner. For example, for Statement B, and for the total of 120 respondents from Hawain timber project, the results of the various ratings are as follows: 75 respondents with '*strongly disagree*', 40 respondents with '*disagree*', 5 respondents with '*neutral*', 0 respondents with '*agree*' and 0 respondents with '*strongly agree*'. The calculation of individual rating totals is: 75 (75x1), 80 (40x2) and 15 (5x3); this add to 170 and divide that by 120, with a mean score of 1.4.

For the interpretation of the mean scores, a mean score of 1 indicates the strongest disagreement, a mean score of 2 indicates disagreement, a mean score of 3 indicates neither agreement nor disagreement (neutral agreement), a mean score of 4 indicates agreement, while a mean score of 5 indicates the strongest agreement. Mid-mean score values are interpreted in reference to their nearest upper and lower mean score values. For example, a mean score of 1.5, is interpreted in reference to the mean scores 1 and 2, and since it is a mid point value, it can be interpreted as, some disagreement and some strong disagreement to a particular statement. However, if the mean score is 1.8, it can be interpreted as disagreement but not really strong disagreement to a particular statement.

5.3.3.6 Ensuring credibility, reliability and validity

This study was conducted in two phases where the findings of Phase 1 of the study were adopted in Phase 2 of the study; and while the second Phase of the study explored at greater depths and involved larger sample size than that for the Phase 1 of this study, it also sets out to ascertain or test the various themes that were developed in Phase 1 of the study. This approach offers credibility and validity to the findings of this study. Phase 2 of the study that involved three different case studies that differed from each other in terms of size, province of the country; forest policy regimes, forest concession agreement types, a new LOC name and executive members as in the case of Hawain LFA, the same LOC name but new executive member for

Raicoast TRP, and a new LOC and new executive member for Amanab FAM, making the results are highly reliable.

5.3.3.7 Study sites

The study sites for Phase 2 of the study were the same (same province, same timber projects and same LOCs) as those for Phase 1 of the study.

5.3.3.8 Sample population

Following Phase 1 of the study, the total number of villages per forest block in each timber project was known; however, the population of all these villages is still unknown. Some of the surveys for this study were conducted in towns, but some were not, and so it was difficult to verify the various figures provided by the respondents. But what is known is the fact that the grouping of landowners under what is referred to as Incorporated Landowner Groups (ILG) is done on a village by village basis, meaning all the different landowner clans from a single village were required to be incorporated as an ILG group. By a detailed examination of different ILGs on a village by village basis, it was established that, on average, there are between 10 to 20 landowner clans per village for the various villages through the three timber projects in this study. Using these values, the total number of landowner clans can be estimated. Details are shown in Table 5.1.

Table 5.1: Estimated total number of landowner for the interview per villages in each of the forest blocks of the three case study timber projects

Timber project	Forest blocks	No. of villages	Total no. of landowner clans (estimate)	Total no. landowner clans to be interviewed
Raicoast	1	13	195	52
	2	7	105	28
	3	8	120	32
	4	10	150	40
Hawain	1	5	75	20
	2	8	120	32
	3	7	107	28
	4	5	75	20
Amanab	1	10	150	40
	2	9	135	36
	3	8	120	32
	4	11	165	44

From Table 5.1, the estimated total number of participants is far less than the total number of landowner clans per forest block in each timber project, but three to four times more than the total number of villages. At least the villages are covered, and for each village, at least three to five clan leaders (survey participants), are represented; hence the sample size is good.

5.4 Chapter Summary

This chapter outlined the study approach or method for data collection and analysis for Phase 2 of the study. This study is qualitative and adopts a case study research strategy and a 5-point Likert scale survey. The survey contains statements that reflected various aspects of the major themes, and are grouped according to five broad components (as per the conceptual model): ‘Institutional arrangement’, ‘LOC business organisation’, ‘LOC business group’, ‘LOC business management’, and ‘PNGFA support’. Case study research protocols were emphasised and the cases of data collection are the landowners, particularly those identified as clan leaders and who are new or not the same as those who participated in Phase 1 of this study. Purposive sampling was used to select the cases for the survey. Ethical issues, together with the issues of ensuring credibility, reliability and validity were similar to those in Phase 1 of the study.

Chapter 6

Phase 2 Results

6.1 Introduction

This chapter presents the results of the survey of Phase 2 of the study. The results are in the form of mean scores corresponding to each of the statements and are presented under the four categories: '*Organisation of LOC businesses*', '*Management of LOC businesses*', '*LOC business groups*' and '*PNGFA support*'. These categories relate to aspects of the LOC businesses.

The various sections in this chapter after the introduction are Section 6.2, that recaps on the description of the survey participants, Section 6.3, that recaps on the data collection and analysis, and Section 6.4, which contains the results for Phase 2 of the study. Section 6.5 contains the summary of results for each of the different categories, and Section 6.6 contains the summary for this chapter.

6.2 Description of Survey Participants

The survey respondents were, once again, landowners from the same timber project, LOC business and, same village; however they had to be only those who had not participated in Phase 1 of the study. The total number of survey respondents from the Raicoast timber project or LOC business was 187, the Hawain timber project or LOC business was 120, and the Amanab timber project or LOC business was 157. These totals are two to three times higher than that in Phase 1 of this study, but some 10 to 20 percent less than the estimated total number of landowners, yet each village in each of the forest blocks in each timber project is still represented in the survey. Details of the survey respondents are contained in Table 6.1. Also contained in Table 6.1 is an updated estimate of the total number of landowner clans per forest block per timber project.

Table 6.1: Number of respondents per villages per forest block for the three case study timber projects (N=187 - Raicoast LOC, 120 – Hawain LOC, 157 – Amanab LOC)

Timber project	Forest block	No. of villages	No. of landowner clans	No. of respondents (clan leaders)
Raicoast TRP	1	13	242	54
	2	7	184	36
	3	8	230	53
	4	10	215	42
Hawain LFA	1	5	127	20
	2	8	132	40
	3	7	143	35
	4	5	112	25
Amanab Block 1-4 FMA	1	10	273	40
	2	9	145	37
	3	8	125	34
	4	11	240	46

The next section outlines the data collection and analysis process.

6.3 Data Collection and Analysis Process

Study data were collected using a 5-point Likert scale survey. The survey comprises statements relating to four main categories of LOC business study and includes: ‘*Organisation of LOC business*’, ‘*Management of LOC business*’, ‘*LOC business group*’ and ‘*PNGFA support*’. Corresponding to each of the statements are ratings from ‘*strongly disagree*’, ‘*disagree*’, ‘*neutral*’, ‘*agree*’ to ‘*strongly agree*’. Respondents responded by choosing only one of the ratings they judge offers the best answer to that statement. The entire survey was completed in this manner.

Prior to data analysis, numerical values were assigned to each of the five survey ratings as follows: 1 for ‘*strongly disagree*’, 2 for ‘*disagree*’, 3 for ‘*neutral*’, 4 for ‘*agree*’ and 5 for ‘*strongly agree*’. The analysis involve the calculation of the mean scores corresponding to each statement. To calculate the mean score for a particular statement, say Statement A, the frequency or tally total corresponding to each of the five rating is multiplied by its corresponding numerical value, then the product or total for each rating is added together to get

the overall total. The overall total is then divided by the total number of respondents who took part in the survey to get the mean score for Statement B. The mean scores for all the statements are calculated in the same manner. For example, for Statement B, and from the total of 120 respondents from Hawain timber project, the distribution of the ratings were: 75 respondents each indicated a rating of '*strongly disagree*', 40 respondents each indicated a rating of '*disagree*', and 5 respondents each indicated a rating of '*neutral*'. There were no respondents for the other two ratings (*agree and strongly agree*). Individual rating totals was calculated as: 75 (75x1), 80 (40x2) and 15 (5x3); thus an overall total of 170, that divided by 120, which resulted in a mean score of 1.4. The total number of respondents for Raicoast and Amanab timber projects were 185 and 157, respectively.

The interpretation of mean scores corresponding to the statements are: 1 indicates strongest disagreement, 2 indicates disagreement, 3 indicates a neutral response (neither disagree nor agree), 4 indicates agreement and 5 indicates strongest agreement. A mean score of 1, 2, 3, 4 or 5 corresponding to a statement means that is the average rating the respondents gave the statement. The interpretation of mid-value mean scores is done in reference to the lower and upper whole mean score values. Explanations on the interpretations of mean scores are contained in Section 5.4.3.5.

The next section contains the presentation of the results from the survey.

6.4 Phase 2 Results

The results comprise the various statements and their respective mean scores, presented individually for each LOC, and one for all three LOCs combined together. The four categories under which the results are presented are '*Organisation of LOC business*', '*Management of LOC business*', '*LOC business group*' and '*PNGFA support*'. The presentation of the results will be according to these categories, and begins with '*Organisation of the LOC business*'.

6.4.1 Organisation of LOC businesses

'*Organisation of LOC business*' is the first of the four categories. It contains seven sub-categories: '*Company structure elements*', '*LOC business objective*', '*LOC business plan*', '*LOC management structure and landowner representation*', '*Appointment of LOC business executive*', '*Business contract*', and '*LOC business capacity*'. The presentations of the results begins with the sub-category '*Company structure elements*'.

6.4.1.1 Company structure elements

‘Company structure elements’ is the first of the seven sub-categories under the category ‘Organisation of LOC business’. Every company is comprised of important elements that give it its structure as required by law (Company Act 1979) so it can function as a company and pursue its business interests and this should also be true of the three case study LOCs.

Issues related to company structure elements emerged from Phase 1 of the study and these were incorporated into the survey for Phase 2 of the study. The various issues are set out in Table 6.2, expressed in the form of statements and their corresponding results, which are the mean scores. The mean scores indicate the level of agreement by the respondents with each of the statements.

Table 6.2: Statements about company structure elements and corresponding mean scores for the three LOCs, and for all three combined (1=strong disagreement - 5=strongest agreement)

Statement about company structure elements	Mean scores			
	R-LOC (N=185)	H-LOC (N=120)	A-LOC (N=157)	ALL (N=462)
i. The LOC has a business name	5.0	5.0	5.0	5.0
ii. Membership was free and on the criteria of being a landowner clan that signed for the timber concession agreement.	5.0	5.0	5.0	5.0
iii. The LOC has an official address for service.	1.0	1.0	1.0	1.0
iv. The LOC offered shares to members.	1.0	1.0	1.0	1.0
v. The landowners purchased company shares and became shareholder of their LOC.	1.0	1.0	1.0	1.0
vi. The LOC business has a physical/permanent address for its business activities.	1.0	1.0	1.0	1.0
vii. The LOC has by-laws or constitution.	2.7	2.4	2.6	2.6

Note: R-LOC=Raicoast LOC; H-LOC=Hawain LOC; A-LOC=Amanab LOC; ALL= All three LOCs.

From Table 6.2, for all three LOC businesses, the overall mean score (ALL) is the highest for the first two statements, indicating the strongest agreement to these two statements by all the respondents from the three LOCs; the lowest overall mean scores came in for the next four statements, indicating the strongest disagreement by all the participants, and close to the mid mean score of 3, indicating some uncertainty about the statement by more than 90 percent of

the respondents from the three LOCs. The seven statements highlighted issues affecting the structure of the three LOC businesses.

The first statement, *'The LOC has a business name'*, and the second statement, *'Membership was free and on the criteria of being a landowner clan that signed for the timber concession agreement'*, have the highest mean scores of 5 each, indicating the strongest agreement to these two statements by all the respondents from the three LOCs. These results support respondents' views that all three LOCs were operating under their respective company name - Raicoast Holdings Limited (Raicoast timber project), Wianduo Limited (Hawain timber project) and Amgreen Limited (Amanab timber project) and membership of landowners to the LOC business was free and on the basis of being a landowner clan that was a signatory to the timber concession agreement for that timber project.

The third statement, *'The LOC has an official address for service'*, the fourth statement, *'The LOC offered shares to members'*, the fifth statement, *'The landowners purchased company shares and became shareholder of their LOC'* and the sixth statement, *'The LOC business has a physical/permanent address for its business activities'*, have a mean score of 1 each, indicating the strongest disagreement to each of these four statements by each respondents from the three LOCs. These results support respondents' views that the three LOCs had no official address for service, made no offers to purchase company shares and become company shareholders, and had no physical or permanent address for its business activities. Despite the absence of these important business structure elements, the three LOCs continued in business.

The seventh statement, *'The LOC has its own by-laws or constitution'*, has a mean score of 2.6, indicating less disagreement by 30 percent of respondents, but more uncertainly by 68 percent of respondents from the three LOCs to this statement. Regardless, this result (2.6) indicates that the respondents were doubtful about whether the three LOCs have by-laws or constitutions.

6.4.1.2 LOC objective

The LOC objective is the second of the seven sub-categories under the category, *'Organisation of LOC business'*. Every company operates with a set of objectives that it intends to achieve, and the case of the three case study LOCs is no different.

From Phase 1 of this study, issues relating to LOC business objectives emerged, which were adopted in the survey for Phase 2 of the study. The various issues are set out in Table 6.3, expressed as statements with their corresponding results in the form of mean scores. The mean

scores indicate the level of agreement by the respondents with each of the LOC business objectives statements.

Table 6.3: LOC business business objective statements and corresponding mean scores for the three LOCs, and for all three combined (*1=strongest disagreement – 5=strongest agreement*)

Statements about LOC objectives <i>The objective of my LOC business is:</i>	Mean scores			
	R-LOC (N=185)	H-LOC (N=120)	A-LOC (N=157)	ALL (N=462)
i. To fund or provide financial support to the construction of public facilities.	5.0	5.0	5.0	5.0
ii. To ensure that development benefits as agreed to under the business contract are delivered.	5.0	5.0	5.0	5.0
iii. To be attentive to landowners' concerns, issues or problems.	5.0	5.0	5.0	5.0
iv. To fund or provide financial support to groups or communities' activities.	2.9	2.6	2.8	2.8
v. To invest directly in businesses.	1.4	1.3	1.2	1.3

Note: R-LOC=Raicoast LOC; H-LOC Hawain LOC; A-LOC=Amanab LOC; ALL= All three LOCs.

From Table 6.3, for all three LOCs, the overall mean scores (ALL) for the three objective statements is highest at 5 each, indicating the strongest agreement or the most preferred objectives by all the respondents from the three LOCs; while for the two other objective statements, the overall mean scores are low to slightly higher, indicating disagreement (1.3) to less disagreement but more neutral (2.8) by the respondents from the three LOCs. The five statements highlight issues that relate to business objectives for the three LOC businesses.

The first objective statement, *'To fund or provide financial support to the construction of public facilities'*, the second objective statement, *'To ensure that development benefits as agreed to under the business contract are delivered'*, and the third objective statement, *'To be attentive to landowners' concerns, issues or problems'*, have the mean score of 5 each, indicating the strongest agreement by all the respondents from the three LOCs to these three statements. These results indicate the respondents' views that these objectives were needed those of their respective LOCs.

The fourth objective statement, *'To fund or provide financial support to groups or communities' activities'*, has a mean of 2.8, indicating less disagreement by 30 percent of the respondents and more uncertainty by 65 percent of the respondents from the three LOCs to this statement by the

respondents from the three LOCs. Regardless, this result (2.8) indicate respondents' views that they were neutral in their judgement on this objective. One of the reasons indicated for this was that such commitment was seen as an unnecessary waste of money which should instead be set aside to fund public infrastructure to benefit landowners in their many village communities.

The fifth objective statement, *'To invest directly in businesses'*, has a mean score of 1.3, indicating strong disagreement to this statement by more than 95 percent of the respondents from the three LOCs. The result shows the respondents' fear that the investments may not yield returns that will benefit the landowners as there is a strong possibility of misuse and hence, loss of landowner money that could have otherwise been committed to public infrastructure construction to benefit every landowner in the timber project area.

6.4.1.3 LOC business plan

The *'LOC business plan'* is the third of the six sub-categories under the broad category *'Organisation of the LOC'*. Every company including the three LOCs must have a plan of operation so as to be able to achieve their set objectives.

Issues relating to business plans emerged from Phase 1 of the study and these were incorporated into the survey for Phase 2 of the study. The various issues are set out in Table 6.4, expressed in the form of statements and their corresponding results, which are the mean scores. The mean scores indicate the level of agreement by the respondents with each of the statements.

Table 6.4: Statements about LOC business plan and corresponding mean scores for the three LOCs, and for all three LOCs combined (1=strongest disagreement – 5=strongest agreement)

Statements about LOC business plan	Mean scores			
	R-LOC (N=185)	H-LOC (N=120)	A-LOC (N=157)	ALL (N=462)
i. The LOC business has a written business plan.	3.5	3.8	4.4	3.9
ii. The plan contains much needed development projects for the village communities.	3.1	2.6	3.2	3.0
iii. The development projects are supported by all technical details.	1.0	1.0	1.0	1.0
iv. All landowner were involved in the development of the business plan.	1.0	1.0	1.0	1.0
v. The business plan was done in a great rush.	5.0	5.0	5.0	5.0

Note: R-LOC=Raicoast LOC; H-LOC Hawain LOC; A-LOC=Amanab LOC; ALL= All three LOCs.

From Table 6.4, for all three LOCs, the overall mean score (ALL) for the first statement is higher than the mid-mean score of 3 but less than 4, indicating some agreement with this statement by respondents from the three LOCs. For the second statement, it was close to 3, indicating neither disagreement or agreement with this statement by respondents from the three LOCs. The overall mean scores (ALL) for the third and fourth statements are the lowest, indicating strongest disagreement with these three statements by all the respondents from the three LOCs. Finally, the overall mean for the fifth statement is the highest, indicating strongest agreement. The five statements highlight issues that relate to business plans of the three LOC businesses.

The first statement, *'The LOC business has a written business plan'*, has an overall mean score of 3.9, indicating some agreement to this statement by more than 98 percent of the participants from the three LOCs. This result indicates that the some respondents were of the view that the three LOCs do have business plans while some were of the view that the business plans of the three LOCs were not detailed and comprehensive enough.

The second theme, *'The plan contained the much needed development projects for the village communities'*, has a mean score of 3, indicating a neutral response (neither in disagreement nor agreement) with this statement by more than 95 percent of the respondents from the three LOCs. This result indicates that the business plan was considered to be too brief, only listing the development projects with no detailed or supporting documentation, or hardly any. Much of this uncertainty is because they never got the chance to actually see them, and so they wondered if they existed at all.

The third statement, *'The development projects were supported by all technical details'*, and the fourth statement, *'All landowners were never involved in the development of the business plan'*, have mean scores of 1 each, indicating the strongest disagreement to these two statements by all the respondents from the three LOCs. These results indicate that the business plan could have contained a list of projects with no technical details or even a mere listing of the projects that the logging company planned to deliver. Roding was a common example being referred to by the respondents, who were of the view that there were no technical details about roding standards, and that roads were temporary, only for timber extraction and hauling, and went after the trees and away from the villages. It also emerged that landowners knew nothing about business plans as they were never involved with their development, or even knew of their existence.

The fifth statement, *'The business plan was done in a great rush'*, has a mean score of 5, indicating the strongest agreement to this statement by all respondents from the three LOCs. This result indicates that the business plans of their LOCs were done in hurry; that could be true, because the forest concession agreement, the incorporation of landowners, and the formation of the LOCs all happened at the same time and with the landowners through their LOC, particularly the executive having to sign for the timber concession agreement.

6.4.1.4 Management structure and landowner representation

'Management structure and landowner representation', is the fourth of the seven sub-categories under the category *'Organisation of LOC businesses'*. Every company has a management structure that comprises different positions to which representatives are appointed. The size of the management structure can be small, with only one representative, or more than ten.

Issues related to the management structure and landowner representation emerged from Phase 1 of the study and incorporated into the survey for the Phase 2 of the study. These issues are set out in Table 6.5, expressed in the form of a statement, with their corresponding results, which are the mean scores. The mean scores indicate the level of agreement by the respondents with each of the statements.

Table 6.5: Statements about the management structure and landowner representation and corresponding mean scores, for the three LOCs, and for all three combined (1=strongest disagreement – 5=strongest agreement)

Statements about management structure and landowner representation	Mean scores			
	R-LOC (N=185)	H-LOC (N=120)	A-LOC (N=157)	ALL (N=462)
i. The adopted management structure does adequately accommodate all the landowner clans.	1.0	1.0	1.0	1.0
ii. My landowner clan is represented by the composition of the current management team.	1.2	1.2	1.2	1.2
iii. I feel I have been adequately represented by our forest block representatives.	1.3	1.5	1.2	1.3
iv. Each of the management positions were defined by their responsibilities and powers.	1.3	1.1	1.2	1.2
v. The business leader has become too powerful under this management structure.	5.0	5.0	5.0	5.0
vi. The position of business leader should be rotated as the logging operation proceeds from one forest block to another.	5.0	5.0	5.0	5.0

Note: R-LOC=Raicoast LOC; H-LOC Hawain LOC; A-LOC=Amanab LOC; ALL= All three LOCs.

From Table 6.5, for all three LOCs, the overall mean scores (ALL) corresponding to the first four management structure statements are close to their lowest, indicating the strong disagreement with these statements by more than 95 percent of the respondents from the three LOCs, while the overall mean scores (ALL) for the last two statements are the highest, indicating the strongest agreement with these statements by all of the participants from three LOCs. The six statements highlight issues that relate to the management structure and landowner representation of the three LOC businesses.

The first statement, *'The adopted management structure does adequately accommodate all the landowner clans'*, has a mean score of 1, indicating the strongest disagreement by all the respondents from the three LOCs. This result indicates that the adopted management structure and, in particular, its size, does not adequately accommodate all the landowner clans within the boundary of the timber project area. For the landowners, the issue of being properly represented is paramount but unfortunately that has not been the case with their respective LOCs.

The second statement, *'My landowner clan is represented by the composition of the current management team'*, has a mean score of 1.2, indicating the strongest disagreement with this statement by more than 95 percent of the participants from the three LOCs. The issues reflected by this theme related to the issues reflected by the first statement and this is particularly true given the fact that the number of landowner clans involved is too many, at well over a hundred. This would mean that only eight to ten different landowner clans can be represented under the adopted management structure, and this is the nub of the problem.

While the adopted management structure is standard and works with a few representatives, the problem with the three LOCs is that the landowners were never very comfortable with being represented by a landowner from another landowner clan who is not related to them or with whom they have had some tribal differences in the past. This is reflected by the third statement, *'I feel I have been adequately represented by our forest block representatives'*, that has a mean score of 1.3, indicating strong disagreement with this statement by respondents from the three LOCs.

The fourth statement, *'Each of the management positions were defined by their responsibilities and powers'*, has a mean score of 1.2, indicating strong disagreement with this statement by more than 95 percent of the respondents from all three LOCs. This result indicates that the

various management positions under the management structure had poorly defined roles, responsibilities or power, allowing power to be concentrated in one person, i.e the business leader, as reflected by the fifth statement, *'The business leader has become too powerful under this management structure'*, that has a mean score of 5, indicating the strongest agreement with this statement by respondents from all three LOCs.

The sixth statement, *'The position of business leader should be rotated as the logging proceeds from one forest block to another'*, also has a mean score of 5, indicating the strongest agreement to this statement by all the respondents from all three LOCs. The result indicates that this change is important, to allow for equal landowner participation in decision making and equal benefits from the LOC funds (log export premium or levies) that come directly from their land when logging is actually taking place. However, there are disadvantages to this approach because the efforts are no longer holistic but fragmented.

6.4.1.5 Appointment of LOC executive

'Appointment of LOC executive' is the fifth of the seven sub-categories under the category *'Organisation of the LOC'*. Every business organisation has its own management team that is made up of individuals who have been appointed by its members through a secret ballot to serve in the various management or executive positions. This should also be the case with the three LOCs whose executive positions comprise the four directors (one per forest block), the business leader, the secretary and the treasurer.

Several issues related to the appointment of LOC executives emerged from Phase 1 of the and were adopted in a survey for the Phase 2 of this study. Contained in Table 6.6, are the various issues, expressed in the form of statements and their corresponding results expressed in the form of mean scores. The mean scores indicate the level of agreement by the respondents with each of the statements.

Table 6.6: Statements about the appointment of the LOC executive and corresponding mean scores, for the three LOCs, and for all three combined (*1=strongest disagreement – 5=strongest agreement*)

Statements about the LOC business executive appointment	Mean scores			
	R-LOC (N=185)	H-LOC (N=120)	A-LOC (N=157)	ALL (N=462)
i. I did receive written or verbal notice of the appointment meeting.	1.3	1.1	1.3	1.3
ii. I or my clan did participate at the meeting to appoint the business executive.	1.5	2.1	2.1	1.9
iii. The candidates for the business executive positions were nominated and voted for at the appointment meeting.	1.3	1.5	1.8	1.5
iv. The appointment of the business leader was through a secret ballot.	1.3	1.2	1.2	1.2
v. All members of the business executive were appointed at the appointment meeting.	1.2	1.1	1.3	1.2
vi. The appointed business executives were those few influential and vocal landowners who pushed for the timber project and wanted to be in charge (management) of the LOC business.	1.1	1.4	1.4	1.3

Note: R-LOC=Raicoast LOC; H-LOC Hawain LOC; A-LOC=Amanab LOC; ALL= All three LOCs.

From Table 6.6, for all three LOCs, the overall mean scores (ALL) corresponding to each of the six statements is low, indicating strong disagreement to each of the six statements by more than 95 percent of the respondents. The six statements highlight issues that relate to the appointment of executive for the three LOC businesses.

The first statement, ‘*I did receive written or verbal notice of the appointment meeting*’, has a mean score of 1.3, indicating strong disagreement with this statement by more than 95 percent of the respondents from the three LOCs. This result indicates that there were never any meeting notices sent out so many landowner clans never attended the meeting or participated in the appointment process, and so were unable to push for one of their own members to be part of the management team. That opportunity never eventuated, as reflected by the second statement, ‘*I or my clan did participate at the meeting to appoint the business executive*’, which also has a mean score of 1.9, indicating strong disagreement by 83 percent of the respondents (but some uncertainty, of 17 percent), by the respondents from the three LOCs with this statement.

The third statement, ‘*The candidates for the business executive positions were nominated and voted for at the appointment meeting*’, has a mean score of 1.5, indicating strong disagreement with this statement by 84 percent of the respondents, although with some uncertainty, of 13

percent, by the respondents from the three LOCs. Regardless, this result (1.5) indicates that the candidates for the business executive positions were never nominated and voted for at the appointment meeting. The issues highlighted by the statement are procedure related, which those individuals presiding over the appointment meetings failed to uphold.

The fourth statement, *'The appointment of the business leader was through a secret ballot'*, also has a mean score of 1.2, indicating strong disagreement with this statement by more than 95 percent of the respondents from the three LOCs. This statement is related to the third statement and the issues highlighted by this statement are procedural related, which the appointment meeting failed to uphold.

The fifth statement, *'All members of the business executives were appointed at the appointment meeting'* has a mean score of 1.2, indicating strong disagreement with this statement by over 95 percent of the respondents from the three LOCs. This result supports respondents' views that only the business leader was appointed at the business meetings where actual votes were counted. The majority of the respondents indicated that appointment of the business leader was the focus of the meeting; however, for the other positions, individuals were handpicked or endorsed by the landowner clans who were present at the meetings.

The sixth statement, *'The appointed business executives were those few influential and vocal landowners who wanted to be in charge (management) of the LOC business'*, has a mean score of 1.3, indicating strong disagreement with this statement by the respondents from the three LOCs. This result indicates that the appointed business executives were never independent, fair or transparent, with many respondents claiming that the process was influenced by very vocal and influential landowners who had vested interest in managing the LOCs. Many of these few, influential and vocal landowners who were the ones pushing for the timber projects, were prominent leaders at that time and had connections with local politicians. This is true for the Raicoast and Hawain timber projects.

6.4.1.6 Business contracts

'Business contracts' is the sixth of the seventh sub-categories, under the broad category *'Organisation of the LOC'*. Business contracts are common in businesses involving more than one party and, in the case of this study, the business contracts were between the three LOCs and their respective logging company as in the case of the Hawain timber projects, and between the State and the logging companies as in the case of the Raicoast and Amanab timber projects. A business contract offers the guarantee that besides the company's primary task of harvesting

the commercial logs from the forest and exporting them for their profits, they have to deliver the agreed development projects or their equivalent in the form of levies paid to the LOC or trust account kept by PNGFA which the LOCs can access for their use as planned.

Several issues related to the business contract emerged from Phase 1 of the study and were incorporated into the survey for Phase 2 of the study. The various issues are set out in Table 6.7, expressed in the form of statements and their corresponding results, which are the mean scores. The mean scores indicate the level of agreement by the respondents with each of the statements.

Table 6.7: Statements about the business contract and corresponding mean scores, for the three LOCs, and for all three combined (1=strongest disagreement – 5=strongest agreement)

Statements about business contract	Mean scores			
	R-LOC (N=185)	H-LOC (N=120)	A-LOC (N=157)	ALL (N=462)
i. The management had participated actively in the formulation of the business contract document.	1.2	1.0	1.2	1.3
ii. The management had a good understanding of the range of benefits the landowners were to receive under the business contract before signing it.	1.6	2.0	1.8	1.8
iii. The business contract is detailed and comprehensive, covering all the benefits (projects) to be received by the landowners.	1.0	1.0	1.00	1.0
iv. The landowners had the opportunity to contribute to or at least see the actual business contract.	1.0	1.0	1.0	1.0

Note: R-LOC=Raicoast LOC; H-LOC Hawain LOC; A-LOC=Amanab LOC; ALL= All three LOCs.

From Table 6.7, for all three LOCs, the overall mean scores (ALL) corresponding to the four statements are from the low to the lowest, indicating strong to strongest disagreement with all four statements by almost all the respondents from the three LOCs. The four statements highlight issues that relate to the business contracts of the three LOC businesses.

The first statement, ‘*The management had participated actively in the formulation of the business contract document*’, has a mean score of 1.3, indicating strong disagreement with this statement by respondents from the three LOCs. This result indicates that the management has performed poorly or was never able to put together the business contract, the respondents were of the view that the entire business contract document was probably done by the logging company or the State.

The second statement, *'The management had a good understanding of the range of benefits the landowners were to receive under the business contract before signing it'*, has a mean score of 1.8, indicating strong disagreement by more than 88 percent of respondents as well as some uncertainty, of 12 percent, by the respondents from the three LOCs to this statement. Regardless, this result (1.8) indicate that management never understood well the contents of the business contract before signing it, this could be true, given the fact that the business leader and his executive members lacked the necessary knowledge, skills and experience.

The third theme, *'The business contract is detailed and comprehensive, covering all the benefits (projects) to be received by the landowners'*, and the fourth theme, *'The landowners had the opportunity to contribute to or at least see the actual business contract'*, have a mean score of 1 each, indicating the strongest disagreement to both statements by all of respondents from the three LOCs. This result indicates that the business plan was probably below standard and lacked technical details due to lack of knowledge, skills and experience to develop a good and workable business plan. In addition, the executive may not have had adequate time to put together a business plan due the urgent need to form the LOCs to facilitate the timber concession agreements at that time.

6.4.1.7 The Capacity of the LOC

'The Capacity of the LOC' is the seventh of the seven sub-categories under the category *'Organisation of LOC'*. Capacity in the case of this study relates to the availability of finance, machinery and technical knowledge, as well as the skills and experience that enable the delivery of development projects expected by the landowners.

Issues related to the capacity of LOC business emerged from Phase of the study and were incorporated into the survey for Phase 2 of the study. The various issues are set out in Table 6.8, expressed in the form of statements and their corresponding results, which are the mean scores. The mean scores indicate the level of agreement by the respondents with each of the statements.

Table 6.8 Statement about capacity of LOC and corresponding mean scores, for the three LOCs, and for all three combined (1=strongest disagreement – 5=strongest agreement)

Statements about the capacity of LOC	Mean scores			
	R-LOC (N=185)	H-LOC (N=120)	A-LOC (N=157)	ALL (N=462)
i. The members of the LOC executive have the necessary business knowledge, skills and experience.	1.0	1.0	1.0	1.0
ii. The LOC funds in the form of log export premiums paid in by the logging company after every export are adequate to fund or support the construction of the many desirable development projects (public infrastructure and others).	3.1	3.0	3.2	3.1
iii. The LOC has the necessary machinery and technically-skilled personnel to undertake the construction of the development projects.	1.0	1.0	1.0	1.0
iv. The LOC has invested directly into businesses (properties, interest bearing deposits, share purchase) to generate funds to sustain its business activities.	1.5	1.1	1.2	1.3

Note: R-LOC=Raicoast LOC; H-LOC Hawain LOC; A-LOC=Amanab LOC; ALL= All three LOCs.

From Table 6.8, for the three LOCs, the overall mean scores (ALL) corresponding to the first, third and fourth statements are low, indicating strong disagreement with these statements by more than 95 percent of the respondents from the three LOCs. However, the overall mean score (ALL) for the second statement is close to the mid-score means of 3, indicating neither agreement nor disagreement to this statement by more than 95 percent of the respondents from the three LOCs. The four statements highlight issues that relate to the business capacity of the three LOC businesses.

The first statement, ‘*The members of the LOC executive have the necessary business knowledge, skills and experience*’, has a mean score of 1, indicating the strongest disagreement with this statement by all the participants from the three LOCs. This result indicates that the members of the LOC executive do not have the necessary business knowledge, skills and experience and this study was able to confirm with immediate family members of the business executive for the three LOCs that this was true.

The second themes, ‘*The LOC funds in the form of log export premiums paid by the logging company after every export are adequate to funds or support the construction of the many desirable development projects (public infrastructure and others)*’, has a mean score of 3.1, indicating neutral agreement with this statement by more than 95 percent of the respondents

from the three LOCs. This uncertainty is partly due to the lack of access to knowledge about how much the respective LOCs have been receiving, as this information is only known to the business leader.

The third statement, '*The LOC has the necessary machinery and technically skilled personnel to undertake the construction of the many development projects*', has a mean score of 1, indicating the strongest disagreement with this statement by all of the respondents from the three LOCs. This result indicates that the three LOCs do not have the necessary machinery and technically skilled personal to undertake the construction of the many development projects, and this was confirmed during the field studies.

The fourth statement, '*The LOC has invested directly into businesses (properties, interest bearing deposits, share purchase) to generate funds to sustain its business activities*', has a mean score of 1.3, indicating strong disagreement with this statement by more than 95 percent of the respondents from the three LOCs. Apparently, this statement is also one of the objective statements that was least popular among the interview participants during Phase 1 of the study, and the fact that its mean score was the lowest score possible further confirms that this activity was never performed by the three LOCs.

6.4.2 Management of the LOC business

'*Management of the LOC business*' is the second of the four categories and contained under this category are four sub-categories: '*Mandatory company responsibilities*', '*Funding of development projects*', '*Business contract enforcement*', and '*Working relationship*'. The results under each of these four sub-categories are presented below.

6.4.2.1 Mandatory company responsibilities

'*Mandatory company responsibilities*' is the first of the four sub categories under the category '*Management of the LOC*'. Company responsibilities are those responsibilities prescribed by the Company Act 1997 (PNGID, 2011) that all companies, including the three case study LOCs must uphold as required by law.

Issues related to the mandatory company responsibilities emerged from Phase 1 of the study and were incorporated into the survey for Phase 2 of this study. The various issues are set out in Table 6.9, expressed in the form of statements and their results expressed, which are the mean scores. The mean scores indicate the level of agreement by the respondents with each of the statements.

Table 6.9: Statements about mandatory company responsibilities and corresponding mean scores, for the three LOCs, and for all three combined (1=strongest disagreement – 5=strongest agreement)

Statements about mandatory company responsibilities	Mean scores			
	R-LOC (N=185)	H-LOC (N=120)	A-LOC (N=157)	ALL (N=462)
i. Business meetings between the LOC management and the landowners were held every year.	1.0	1.0	1.0	1.0
ii. Annual financial statements were prepared and presented to the landowners (members) every year.	1.0	1.0	1.0	1.0
iii. Financial, membership and other important business documents were kept in a safe place.	1.0	1.0	1.0	1.0
iv. Annual tax returns were filed every year.	3.1	3.0	3.2	3.1

Note: R-LOC=Raicoast LOC; H-LOC Hawain LOC; A-LOC=Amanab LOC; ALL= All three LOCs

From Table 6.9, for all three LOCs, the overall mean scores (ALL) for the first, second and third statements are 1 each, indicating the strongest disagreement with all three statements by all the participants from the three LOCs, while the mean score for the fourth statement is at the mid-range (3), indicating a neutral response (neither disagreement nor agreement) with this statement by more than 95 percent of the participants from the three LOCs. The four statements highlight issues that relate to mandatory company responsibilities of the business leaders of the three LOC businesses.

The first statement, '*Business meetings between the LOC management and the landowners were held every year*', has a mean score of 1, indicating the strongest disagreement with this statement by all the respondents from the three LOCs. In other words, there had been hardly any business meetings between the LOC management and the landowners since the start of the business.

The second statement, '*Annual financial statements were prepared and presented to the landowners (members) every year*', has a mean score of 1, indicating the strongest disagreement to this statement by all the respondents from the three LOCs. This result indicates that the LOC management never, during their many years of operation, prepared annual financial statements for their members. This issue together with that expressed in the first statement, has greatly concerned the landowners.

The third statement, ‘*Financial, membership and other important business documents were kept in a safe place*’, has a mean score of 1, indicating the strongest disagreement with this statement by all the respondents from the three LOCs. This result indicates respondents’ views that with no permanent office space and address, important business documents (if any) had to be kept elsewhere, and the respondents were extremely doubtful that ‘elsewhere’ was secure.

The fourth statement, ‘*Annual tax returns were filed every year*’, has a mean score of 3.1, indicating neither agreement nor disagreement with this statement by more than 95 percent of the participants from the three LOCs. This company responsibility (filing of annual tax returns) is unknown to the majority of the respondents and their uncertainty is reflected by such mean score, but they do know that their LOC is getting its share of the timber revenues.

6.4.2.2 Funding of development projects

‘*Funding of development projects*’ is the second of the four sub-categories under the category ‘*Management of the LOC*’. Landowners have very high expectations from their respective LOCs and the timber project, in general, to deliver the many development projects, particularly public infrastructure. The funding of these projects may be the responsibility of the LOC or the logging company or both, depending on the business contract.

Issues related to the funding of the development projects emerged from Phase 2 of the study and were incorporated into the survey for Phase 2 of the study. The various issues are set out in Table 6.10, expressed in the form of statements and their corresponding results, which are the mean scores. The mean scores indicate the level of agreement by the respondents with each of the statements.

Table 6.10: Statements about funding of development projects and corresponding mean scores, for the three LOCs and for all three combined (1=strongest disagreement – 5=strongest agreement)

Statements about funding of development projects	Mean scores			
	R-LOC (N=185)	H-LOC (N=120)	A-LOC (N=157)	ALL (N=462)
i. The management funded or provided financial support for the construction of some public facilities (roads, bridges, schools or water supplies)	1.1	1.2	1.2	1.1
ii. The management funded or provided financial support to some of the groups’ or communities’ social activities.	1.5	1.3	1.2	1.3

Note: R-LOC=Raicoast LOC; H-LOC Hawain LOC; A-LOC=Amanab LOC; ALL= All three LOCs

From Table 6.10, for all three LOCs, the overall mean score (ALL) is low for these two statements, indicating strong disagreement with these statements by more than 95 percent of the respondents from the three LOCs. The two statements highlight issues that relate to the funding of development projects for the three LOC businesses.

The first statement, '*The management funded or provided financial support for the construction of some public facilities (roads, bridges, schools, or water supply)*', has a mean score of 1.1, indicating strong disagreement with this statement by respondents from the three LOCs. This result indicates that much or all of the money received by the three LOCs in the form of log export premiums or levies had not been used for the construction of any public facilities, and this is one of the concerns of the landowners.

The second statement, '*The management funded or provided financial support to some of the groups' or communities' social activities (sports events, religious conventions, agriculture extension, or traditional dance festivals)*', has a mean score of 1.3, indicating strong agreement to this statement by more than 95 percent of the respondents from the three LOCs. This result supports respondents' views that the LOC management, besides not funding the construction of public infrastructures greatly needed by the landowners or their communities, was also not able to fund or provide financial support to some of the social groups in the village communities for their planned activities. Although the respondents see such projects as secondary in priority compared to the construction of public facilities, the failure by the management on both commitments leaves much to be desired of their business leaders.

6.4.2.3 Enforcement of business contracts

'*Enforcement of business contracts*' is the third of the four sub-categories under the broad category '*Management of LOC the business*'. This (enforcement) responsibility, as perceived by the landowners, was necessary particularly to ensure that the logging company actually delivers those development projects agreed to under the business contract. Generally, logging companies give second priority to this responsibility, do not want to waste much of their resources, and furthermore get away with it if not monitored by PNGFA. The role of PNGFA in monitoring has not been very effective and the landowners have seen their respective LOCs as the body that should enforce the business contract.

Issues related to the enforcement of business contract emerged from Phase 1 of the study and were incorporated into the survey for Phase 2 of the study. The various issues are set out in Table 6.11, expressed in the form of statements and their corresponding results, which are the

form of mean scores. The mean scores are a measure of the level of agreement by the respondents with each of the statements.

Table 6.11: Statements about enforcement of the business contract and corresponding mean scores, for the three LOCs and for all three combined (*1=strongest disagreement – 5=strongest agreement*)

Statements about enforcement of the business contract	Mean score			
	R-LOC (N=185)	H-LOC (N=120)	A-LOC (N=157)	ALL N=462)
i. The LOC management applied pressure on the logging company to implement the development projects agreed in the business contract.	1.3	1.3	1.1	1.2
ii. The development projects to be implemented by the logging company have actually been implemented.	1.5	2.1	2.0	1.9
iii. The LOC management was able to get the logging company to compensate the landowners for damage done to their properties.	1.0	1.0	1.0	1.0
iv. LOC management was able to ensure that the logging activities of the logging company were within the logging laws of PNG.	1.0	1.0	1.0	1.0
v. The business leader and the logging company have a too-cosy working relationship that has impacted negatively on the business leader's willingness to enforce the business contract.	5.0	5.0	5.0	5.0
vi. Landowners usually have had to take the law into their own hands to force the logging company to compensate them for damages done to their properties or stop the logging operation from progressing due to lack of commitment to the implementation of the agreed dev. projects.	5.0	5.0	5.0	5.0

Note: R-LOC=Raicoast LOC; H-LOC Hawain LOC; A-LOC=Amanab LOC; ALL= All three LOCs

From Table 6.11, for all three LOCs, the overall mean scores (ALL) corresponding to each of the statements about enforcement of the business contract varies; the first four statements have low mean scores, indicating strong disagreement with these statements by more than 95 percent of respondents from the three LOCs, while the last two statements, have the highest mean scores, indicating the strongest agreement with these statements by all the respondents from the three LOCs. The six statements highlight issues that relate to the enforcement of the business contract by the executives of the three LOC businesses.

The first statement, '*The LOC management applied pressure on the logging company to implement the development projects agreed in the business contract*', has a mean score of 1.2,

indicating strong disagreement with this statement by more than 95 percent of the respondents from the three LOCs. This result indicates that the LOC management failed to pursue the development interests of the landowners by forcing the logging companies to honour their part of the responsibilities in the business contract. This, together with the lack of commitment on the part of the PNGFA, has led to the logging companies failing to implement many of the development projects, such as public infrastructure, roads and bridges. This is reflected by mean score of 1.9 for the second statement, *'The development projects to be implemented by the logging company have actually been implemented'*, as indicated by more than 95 percent of respondents from the three LOCs.

The third statement, *'The LOC management was able to get the logging company compensate the landowners for damage done to their properties'*, has a mean score of 1, indicating the strongest disagreement with this statement by the respondents from the three LOCs. This result indicates that the LOC management never assisted the landowners in getting the logging companies to compensate them for damage done to their property. The same applies with the fourth statement, *'LOC management was able to ensure that the logging activities of the logging company were within the logging laws of PNG'*, which has a mean score of 1.0, indicating the strongest disagreement with this statement by the respondents from the three LOCs. This result indicates that the LOC management was not able to ensure that the logging activities of the logging company complied with the logging laws of PNG. Various damages done to landowners' properties during the course of logging was reported to PNGFA and the LOC management, but they did nothing. Such behaviour was of great concern to the landowners.

The fifth statement, *'The business leader and the logging company have a too-cosy working relationship that has impacted negatively on the business leader's willingness to enforce the business contract'*, has a mean score of 5, indicating the strongest agreement with the statement by all the respondents from the three LOCs. This result indicates that the too-cosy working relationships between the LOC management and the logging companies have made the LOC management unwilling to apply pressure on the logging companies to commit to their development project responsibilities. The respondents added that such a situation was created by the fact that 1) they were being accommodated or had office spaces in the buildings or camps of the respective logging companies; and 2) they had received favours (for example, cash advances) from the logging company. With their hands tied like this, there was nothing much they could have done, and hence, the failure to enforce the business contract.

The sixth statement, '*Landowners usually have had to take the law into their own hand to force the logging company to compensate them for damages done to their property or stop the logging operation from progressing due to lack of commitment to the implementation of the agreed development projects*', also has a mean score of 5, indicating the strongest agreement with this statement by all the respondents from the three LOCs. This result indicates that the landowners normally have to take their own steps to force the logging company to compensate them for damage done to their property, common examples being damage to food gardens, cash crops, cutting down trees on secret and protected sites, pollution of the water ways, and leaving behind damaged logs that resulted from their poor harvesting practices. The respondents added that when the logging company showed no commitment to these concern or issues, the landowners often forced the logging operation to stop and only allowed to continue after the issues were resolved.

6.4.2.4 Working relationships

'*Working relationship*' is the fourth sub-category under the broad category '*Management of LOC business*'. The working relationship in the case of the three LOCs pertains to formal business interactions at the management level, i.e. between the business leader and his executive members, and also at the general level, i.e. between them and the landowners. Such interactions are a part of the management's responsibilities towards promoting a healthy business environment.

Issues related to working relationships (management and landowners) emerged from Phase 1 of the study and were incorporated into the survey for Phase 2 of the study. The various issues are set out in Table 6.12, expressed in the form of statements and their corresponding results, which are the mean scores. The mean scores indicate the level of agreement by the respondents with each of the statements.

Table 6.12: Statements about working relationships and corresponding mean scores, for the three LOCs, and for all three combined (1=strongest disagreement – 5=strongest agreement)

Statements about working relationships among members of the management team and between them and the landowners	Mean scores			
	R-LOC (N=185)	H-LOC (N=120)	A-LOC (N=157)	ALL (N=462)
i. The business leader and his executive members are seen to be working together as a team.	1.1	1.2	1.2	1.2
ii. The business leader and his executive members have had frequent business meetings since the start of the LOC business.	2.6	1.7	1.2	1.8
iii. The business leader and his executive members have had frequent business meetings with the landowners since the start of the LOC business.	1.0	1.0	1.0	1.0
iv. The business leader worked closely with the landowners and addressed their many issues, concerns or problems.	1.0	1.0	1.0	1.0
v. The landowners were well informed of what is happening with their business, particularly how their funds were being managed.	1.0	1.0	1.0	1.0
vi. The landowners were able to offer comments relating to the management of their business.	1.0	1.0	1.0	1.0
vii. All financial and management decisions were made collectively.	1.0	1.0	1.0	1.0
viii. The business leader has demonstrated good managerial skills.	1.0	1.0	1.0	1.0
ix. The business leader has demonstrated good leadership skills.	1.0	1.0	1.0	1.0

Note: R-LOC=Raicoast LOC; H-LOC Hawain LOC; A-LOC=Amanab LOC; ALL= All three LOCs.

From Table 6.12, for the three LOCs, the overall mean scores (ALL) corresponding to all nine statements varies from a low (first two statements) to the very lowest (second, third, fourth, fifth, sixth, eighth and ninth statements), that indicate strong to the strongest disagreement with these statement by 95 to 100 percent of respondents from the three LOCs. The nine statements highlight issues that relate to the working relationships among members of the management team and between them and the landowners, of the three LOC businesses.

The first statement, *‘The business leader and his executive members are seen to be working together as a team’*, has a mean score of 1.2, indicate strong disagreement with this statement by more than 95 percent of the respondents from the three LOCs. This result indicates that the business leader has never worked closely with members of the executive team as expected. This statement is supported by the second statement, *‘The business leader and his executive members*

have had frequent meeting since the start of the LOC business', which has a mean score of 1.8, indicating strong disagreement with this statement by more than 95 percent of the respondents from the three LOCs. This result indicates that the business leader and his executive members have never had frequent business meetings since the start of the LOC businesses and this was confirmed by the respondents.

The third statement, *'The business leader and his executive members have had frequent business meetings with the landowners since the start of the LOC business'*, has a mean score of 1, indicating the strongest disagreement with this statement by all the respondents from all three LOCs. This result indicates that there had never been a business meeting, since the start of the LOC businesses between the LOC management and the landowners. The lack of frequent business meetings has denied effective participation to the landowners, as reflected by the results relating to the fifth statement, *'The landowners were well informed of what is happening with their business, particularly how their funds were being managed'*; and the sixth statement, *'The landowners were able to offer comments relating to the management of their business'*, with both having a mean score of 1, indicating the strongest disagreement by the respondents to these statements by all respondents of the three LOC businesses.

The fourth statement, *'The business leader worked closely with the landowners and addressed their many issues, concerns or problems'*, has a mean score of 1, indicating the strongest disagreement with this statement by all the respondents from the three LOCs. This statement relates to the third statement where the lack of business meetings between the LOC management and the landowners has made it impossible to address the many landowners' issues, concerns or problems. Also contributing to this, is the problem of locating the business leader, who does not have a permanent office space. This same issue is reflected by the results in the section on company structure elements.

The seventh statement, *'All financial and management decisions were made collectively'*, has a mean score of 1, indicating the strongest disagreement to this statement by all the respondents from the three LOCs. This result indicates that the business leader made all management and financial decisions without the participation of the executive members and landowners, or from meetings.

The eighth statement, *'The business leader has demonstrated good managerial skills'*, and the ninth statement, *'The business leader has demonstrated good leadership skill'*, both have a mean score of 1 each, indicating strongest disagreement to both statements by all the

participants. These results indicates that the business leaders of the three LOC businesses never demonstrated good managerial and leadership skills.

6.4.3 LOC business Group

‘The LOC business group’ is the third of the four categories under which the results from the survey are presented. A LOC business group is a group that is made up of all the landowners from within the boundary of a study timber projects; all three case study timber project have a LOC. The landowners come together as a group and through their LOC business or Incorporate Landowner Group, they are legally recognised; and through their executives, they can participate in timber project agreements as they (LOC and ILG) are an official entity.

Issue related to the suitability of the LOC business group, and the knowledge and understanding of each other (different landowner clans that make up the business group) emeged from Phase 1 of the study, and resulted presented below.

6.4.3.1 Suitability of the LOC busines group

Issues related to the suitability of the LOPC business group emerged from Phase 1 of the study and these were incorporated into the survey for Phase 2 of the study. The various issues are set out in Table 6.13, expressed in the form of statements and their corresponding results, which are the mean scores. The mean scores indicate the level of agreement by the respondents with each of the statements.

Table 6.13: Statements about knowledge and understanding of different landowner clans and corresponding mean scores, for the three LOCs, and for all three combined (1=strongest disagreement – 5=strongest agreement)

Statement about knowledge and understanding of different landowner clans	Mean scores			
	R-LOC (N=185)	H-LOC (N=120)	A-LOC (N=157)	ALL (N=462)
i. I know all the landowner clans in my ILG group.	5.0	5.0	5.0	5.0
ii. I know all the landowner clan in my forest block.	1.6	4.9	1.8	2.8
iii. I know all the landowner clans from other forest blocks.	1.0	3.4	1.0	1.8

Note: R-LOC=Raicoast LOC; H-LOC Hawain LOC; A-LOC=Amanab LOC; ALL= All three LOCs.

From Table 6.13, and for all three LOCs, the overall mean scores (ALL) corresponding to the first statement is 5, indicating the strongest agreement to this statement by all the respondents

from the three LOCs. The mean score for the second and third statements for Raociast the LOC and Amanab LOC, are very low, indicating disagreement to these statements by more than 95 percent of the respondents from these two LOCs; while the mean score for the same statements for Hawain LOC vary from just above mid-range of 3 right up to the highest score, indicating agreement to strongest agreement with these statements by the participants from the Hawain LOC. In general, these three statements highlight issues relating to the knowledge and understanding of all the landowner clans in the timber projects.

The first statement, '*I know all the landowners in my ILG group*', has a mean score of 5, indicating the strongest agreement with this statement by all the participants from the three LOCs. This result indicates that they all knew all the other landowners from the same ILG. The ILG is a small group of landowners often from the same village, with ideally, just one ILG per village, as is the case with the three case study timber projects.

The second statement, '*I know all the landowners in my forest block*', has a mean score of 1.6 and 1.8 for Raicoast LOC and Amanab LOC, respectively, indicating some disagreement with this statement by more than 95 percent of the respondents from these two LOCs. This result indicates that the majority of the landowners from the same forest block of the Raicoast and Amanab timber projects did not know each other. In contrast, the mean score corresponding to the same statement is 4.9 for Hawain LOC, indicating strong agreement by more than 95 percent of the respondents. This result indicates that the landowners from the same forest block did know each other.

The third statement, '*I know all the landowners from other forest blocks*', has a mean score of 1, indicating the strongest disagreement with this statement by all respondents from the three LOCs. This result indicates the respondents' views that all the landowners from the four forest blocks of the case study timber projects did not know each other.

6.4.3.2 Landowner groups and working relationships

Issues related to knowledge and understanding of the different landowner clans that makeup the LOC busiesss group emerged from phase 1 of the study and were incorporated into the survey for Phase 2 of the study. The various issues are set out in Tables 6.14, expressed in the form of statements and their corresponding results, which are the mean scores. The mean scores indicate the level of agreement with each of the statements.

Table 6.14: Statements about landowner groups and working relationships and corresponding mean scores, for the three LOCs, and for all three combined (1=strongest disagreement – 5=strongest agreement)

Statement about the landowner group and working relationship	Mean scores			
	R-LOC (N=185)	H-LOC (N=120)	A-LOC (N=157)	ALL (N=462)
i. The size of the business group makes it easy for the business executive to arrange business meetings.	1.4	2.0	1.9	1.8
ii. The size of the business group makes it easy to get every landowner to attend meetings.	1.2	2.1	1.9	1.7
iii. The number of landowner clans that make up the LOC business group is too big.	5.0	5.0	5.0	5.0
iv. I have no problem working together with other landowners (landowner clans) whom I have no knowledge of or relationship with.	2.1	3.1	1.9	2.4
v. I would have no problem working with other landowner clans whom I have had disputes or tribal differences with before.	1.0	1.0	1.0	1.0
vi. Should there be a business meeting, I would be able to speak freely.	3.3	3.7	3.2	3.4
vii. Should there be business meetings, it would be easy to arrive at agreement, decisions or a consensus	3.1	3.3	3.0	3.1
viii. Should there be business meetings, landowners from the same forest block would be respected for their opinions and business ideas.	4.3	4.3	4.0	4.2
ix. Should there be business meetings, landowners from other forest blocks would respect my opinions and business ideas.	1.4	1.1	1.4	1.3
x. The group members or landowners were united or worked together as a team when addressing issues that related to the management of the LOC business and the timber project in general.	1.0	1.0	1.0	1.0

Note: R-LOC=Raicoast LOC; H-LOC Hawain LOC; A-LOC=Amanab LOC; ALL= All three LOCs.

From Table 6.14, for all three LOCs, the overall mean scores (ALL) corresponding to each of the 10 statements vary from the lowest to the highest. The third and tenth statements each have the lowest mean score, indicating the strongest disagreement with these two statements by the respondents from all three LOCs. The first, second, fourth, and ninth statements have low mean scores, indicating strong disagreement with each of these statements by the respondents from the three LOCs. The sixth and seventh statements have mean scores around the mid-value of 3, indicating neither agreement nor disagreement with these statements by the respondents from

the three LOCs. The eighth statement has a high mean score of 4.2, indicating strong agreement with this statement by the respondents from the three LOCs. The ten statements highlight issues relating to landowner groups and their working relationships for the three LOC business.

The first statement, *'The size of the LOC business group makes it easy for the business executive to arrange business meetings'*, has a mean score of 1.8, indicating strong disagreement with this statement by more than 95 percent of the respondents from the three LOCs. This result indicated that the size of the LOC business group is too big and it is difficult to arrange business meetings. Looking at the number of landowner clans per forest block and the size of the whole timber project (Table 6.1), it has to be said that this is true for the three LOC businesses.

The second statement, *'The size of the LOC business group makes it easy to get every landowner to attend meetings'*, has a mean score of 1.7, indicating strong disagreement with this statement by more than 95 percent of the respondents from the three LOC. This result indicates that LOC business group is too big, making it quite inconvenient for the management to get in touch with all of them as well as to get them to attend business group meetings.

The third statement, *'The number of landowner clans that make up the LOC business group is too big'*, has a mean score of 5, indicating strongest agreement to this statement by all the respondents from the three LOCs. This result indicates that there too many landowner clans in the three LOC business groups. Looking at the total number of landowner clans per forest block, one has to agree (Table 6.1).

The fourth statement, *'I have no problem working together with other landowners (landowner clans) whom I have no knowledge of or relationship with'*, has a mean score of 2.39, indicating some disagreement (albeit with more uncertainty) by more than 95 percent of the respondents from the three LOCs. This result indicates that landowners still have problems working together, especially when they are not related to each other; just a few have no problems with that.

The fifth statement, *'I would have no problem working with other landowner clans whom I have had disputes or tribal differences with before'*, has the lowest mean score of 1, indicating strongest agreement with this statement by all the respondents from the three LOCs. This result indicates that landowners will have great problems working as a group because of their past tribal differences.

The sixth statement, '*Should there be a business meeting, I would be able to speak freely*', has a mean score of 3.4, indicating uncertainty about this statement by more than 95 percent of the respondents from the three LOCs. This result indicates the uncertainty about the ability of the landowners to speak freely at business meetings.

The seventh statement, '*Should there be business meetings, it would be easy to arrive at agreement, decisions or a consensus*', has a mean score of 3.1, indicating uncertainty about this statement by more than 95 percent of the respondents from the three LOCs. This result indicates uncertainty about whether business meetings would ever arrive at agreement, decisions or a consensus.

The eighth statement, '*Should there be business meetings, landowners from the same forest block would be respected of their opinions and business ideas*', has a mean score of 4.2, indicating strong agreement with this statement by more than 95 percent of the respondents from the three LOCs. This result indicates that in a reasonably small group size, same forest block in this case, many landowners know each other and there is a possibility of greater respect for each other's business opinions or ideas during a business meeting.

The ninth statement, '*Should there be business meetings, landowners from other forest blocks would respect my opinions and business ideas*', has a mean score of 1.3, indicating strong disagreement with this statement by more than 95 percent of the respondents of the three LOCs. This results indicates that as the size of the group gets bigger, this time involving all the forest blocks, many of the landowner are unknown to each other and so the possibilities of respecting each other's business opinion or ideas during a business meeting is low.

The tenth statement, '*The group members or landowners were united or worked together as a team when addressing issues that related to the management of the LOC business and the timber project in general*', has a mean score of 1, indicating strongest disagreement with this statement by all the respondents from the three LOCs. The result indicates that there is no unity or teamwork among the landowners when pursuing issues of interest.

6.4.3.3 Organisation of LOC business group

Issues related to the organisation of LOC business group emerged from Phase 1 of the study and were incorporated into the survey for Phase 2 of the study. The various issues are set out in Table 6.15, expressed in the form of statements and their corresponding results, which are the mean scores. The mean scores indicate the level of agreement with each of the statements.

Table 6.15: Statements about the organisation of the LOC business group and corresponding mean scores, for the three LOCs, and for all three combined (1=strongest disagreement – 5-strongest agreement)

Statements about organisation of the LOC business group	Mean scores			
	R-LOC (N=185)	H-LOC (N=120)	A-LOC (N=157)	ALL (N=462)
i. There are formal criteria for landowner membership in the LOC business group.	1.0	1.0	1.0	1.0
ii. There are rules or laws that protect the interests of all the group members and allow for orderly conduct of the group members.	1.0	1.0	1.0	1.0

Note: R-LOC=Raicoast LOC; H-LOC Hawain LOC; A-LOC=Amanab LOC; ALL= All three LOCs.

From Table 6.15, for all three LOCs, the overall mean scores (ALL) corresponding to the two statements are the lowest, indicating the strongest disagreement with both of the statements by all the respondents from the three LOCs. On the whole, these two statements highlight issues relating to organisation of the LOC business groups.

The first statement, ‘*There are formal criteria for landowner membership in the LOC business group*’, has a mean score of 1, indicating strongest disagreement with this statement by all of the participants from the three LOCs. This result indicates that there were no formal criteria for landowners’ membership in their respective LOC business groups. They added that clan consent to the timber projects as a condition for membership should be on the basis of the size of the clan’s timber resources, and the determination of voting rights and general status should be determined on that basis.

The second statement, ‘*There are rules or laws that protected the interests of all the group members and allows for orderly conduct of the group members*’, has a mean score of 1, indicating strongest disagreement with this statement by all the respondents from the three LOCs. This result indicates that there were no rules or laws that protect the interests of group members and also allow for the orderly conduct of the group members. The respondents further added that the presence of rules or laws is necessary especially given the hundreds of different landowner clans in each of the LOC business groups who are not related to each other but were together as a group for the purpose of pursuing their business interests.

6.4.4 Support by PNGFA

‘*Support by PNGFA*’ is the fourth of the categories under which the results of this study are presented. ‘*Support by PNGFA*’, in the case of this study, is viewed from the perspective of the landowners who were identified as having been faced with many issues relating to the logging

activities of the logging company, the payment of timber revenues, landowner disputes, or the emergence of landowner faction groups fighting to replace the management. These were the many issues that emerged from Phase 1 of this study and were incorporated into the survey for Phase 2 of the study. The various issues are set out in Tables 6.16, expressed in the form of statements and their corresponding results, which are the mean scores. The mean scores indicate the level of agreement with each of the statements.

Table 6.16: Statements about support by PNGFA and the corresponding mean scores, for the three LOCs, and for all three combined (1=strongest disagreement – 5=strongest agreement)

Statements about support by PNGFA	Mean Scores			
	R-LOC (N=185)	H-LOC (N=120)	A-LOC (N=157)	ALL (N=462)
i. PNGFA ensured that the logging company actually delivered on those development projects agreed to under the business contract.	3.5	2.7	3.3	3.1
ii. The PNGFA has supported the landowners with their many concerns, issues or problems relating to the logging operation.	2.7	2.1	2.5	2.4
iii. The PNGFA has supported the landowners who wanted to replace their business leader for managing the LOC business poorly.	1.0	1.0	1.0	1.0

Note: R-LOC=Raicoast LOC; H-LOC Hawain LOC; A-LOC=Amanab LOC; ALL= All three LOCs.

From Table 6.16, and for all three LOCs, the overall mean score (ALL) corresponding to the first and second statements are around the mid-range, indicating less agreement to more uncertainty by more than 95 percent of the respondents from the three LOCs with these statements, while the third statement has the lowest mean score, indicating the strongest disagreement with this statement by all the respondents from the three LOCs. The three statements highlight issues relating to PNGFA support.

The first statement, ‘PNGFA ensured that the logging company actually delivered on those development projects agreed to under the business contract’, has a mean score of 3.1, indicating a neutral response (neither agreement nor disagreement) with this statement by more than 95 percent of the participants from the three LOCs. This result indicates that the majority of the respondents were not too sure about whether PNGFA had applied pressure to the logging company to fulfil its commitment or no. This may be true, as the majority of the landowners would not be able to know the responsibilities or commitments of PNGFA.

The second statement, '*PNGFA has supported the landowners with their many concerns, issues or problems relating to the logging operation*', has a mean score of 2.4, indicating some agreement and more uncertainty with this statement by more than 95 percent of respondents from the three LOCs. This result supports respondents' view that PNGFA has not supported the landowners well with their many issues relating to the logging operation as claimed by the majority of the respondents, while only a few respondents were of the view that PNGFA did support them. The respondents added that landowners were also uncertain as to the extent and nature of support in general coming from PNGFA.

The third statement, '*PNGFA has supported the landowners who wanted to replace their business leader for managing the LOC business poorly*', has a mean score of 1, indicating strongest disagreement with this statement by all the respondents from the three LOCs. This result indicates that this is one of the areas where landowners needed the support of the PNGFA most but it was very much lacking.

6.5 Summary of Results

The results of Phase 2 of the study were presented under four categories: '*Organisation of the LOC business*', '*Management of the LOC business*', '*LOC business group*' and '*Support by PNGFA*'. The category '*Organisation of the LOC business*' has seven sub-categories, the category '*Management of the LOC business*' has four sub-categories, the category '*LOC business group*' has two sub-categories and the category '*Support by PNGFA*' has one sub-categories. The summary of the results is presented according to the four categories and their sub-categories.

The category '*Organisation of the LOC business*':

- '*Company structure elements*': All of the respondents from the three LOCs agreed strongly that their LOCs had nothing more than an operating business name. They never had an official address for service or even a physical or permanent address for their business activities. Membership of the LOC business was free and on the criteria of being an incorporated landowner clan that had consented to a timber concession agreement. Furthermore, the three LOC respondents were uncertain as to whether their LOC business had any by-laws or a constitution to govern the conduct of members and business in general. On the whole, the results demonstrated that the three LOCs lacked necessary company structure elements.

- *'Business objective'*: All of the respondents from the three LOCs agreed strongly to social or service orientated objectives and disagreed strongly to profit orientated objectives. The social or service orientated objectives relate to major impact projects that would benefit every landowner in the community. Such projects include roads and bridges, and permanent buildings for schools and community use. On the whole, the results demonstrated that the respondents from the three LOCs had a higher preference for social or service orientated objectives than for profit orientated objectives.
- *'Business plan'*: Over 95 percent of the respondents from the three LOCs were uncertain as to whether a business plan existed, but if it did exist, the respondents agreed strongly that much needed development projects probably were not be in the plan. Even if they were in the plan, it would be only a listing of the projects without their technical details. The greatest disappointment expressed by the respondents of the three LOCs was their inability to contribute to the development of the business plan, as everything was done in a hurry so as to get their LOCs registered quickly to enter into the forest concession agreement. On the whole, the respondents from the three LOCs and through the results, demonstrated that the three LOCs probably had a business plan that was incapable of delivering to the expectations of their landowners.
- *'Management structure and landowner representation'*: The management structure typical of a company adopted like that of the three LOCs, would comprise a business leader, a secretary, a treasurer and four representatives from each of the forest blocks of the timber project area. While this structure is standard and requires representatives to manage the LOCs, all the respondents from the three LOCs through this had not happened to their LOCs. Over 95 percent of them were of the view that the composition of the executive positions, was not representative of the different landowner clans or groups of a timber project. In addition, over 95 percent of the respondents from the three LOCs agreed strongly that none of the management positions were ever defined in terms of their responsibilities and power, and as a result the business leader became too powerful. All respondents agreed strongly to the idea of rotating the position of business leader on a forest-block by forest-block basis with leadership changing hands when the logging operation moved from one forest block to another. On the whole, the adopted management structure and the composition of individuals in the different executive positions for the three LOCs was poorly reflective of the full number of landowners in the timber project area.
- *'Appointment of LOC executive'*: Over 95 percent of respondents from the three LOCs agreed strongly that the appointments of their business executives was poorly done, as proper

processes such as meeting notices, attendance of representatives of the different landowner clans, call for nominations, and use of secret ballots, were never adopted. Furthermore, the respondents also agreed strongly that process of appointment was too much influenced by the same individuals who had pushed for the introduction of the timber projects in the first place. On the whole, the process through which individuals got appointed to the different executive positions was never fair and transparent.

- *'Business contract'*: Over 95 percent of the respondents from the three LOCs agreed strongly that the documentation of the business contracts between the State and the LOCs for the acquisition of forest resources for the commercial logging operation, were never prepared by executives of the three LOCs. Landowners know nothing about it or was never consulted for their input. More than 95 percent of the respondents did not even know what was contained in the business contract, but what they did know for sure was that, the business executive could not have done better in negotiating for them the range of tangible benefits for their communities as they did not have the capacity to do so. On the whole, and for all three LOCs, the business contracts and in particular their documentation, was done in isolation from the landowners, signed by the State and LOCs, and never made known to the majority of the landowners.
- *'Business capacity'*: Over 95 of the respondents agreed strongly that the three LOCs lacked the necessary business knowledge, skills, experience, machinery and funds to serve the needs of the landowners. Particularly with regard to the funds, the payments were irregular and varied in amounts, and were inadequate and unrealistic for the kinds of projects expected by the landowners in their village communities.

The category *'Management of LOC business'*:

- *'Mandatory company responsibility'*: All the respondents from the three LOCs agreed strongly that mandatory responsibilities such as regular business meetings, annual financial reports, safe keeping of all business information or records, and filing of annual tax returns, were never performed by the three LOC executives at any time in all the years after the formation of the LOCs. On the whole, and for all three LOCs, the LOC executives failed in their many mandatory responsibilities as head of a business organisation.
- *'Funding of development projects'*: More than 98 percent of respondents from the LOCs agreed strongly that no funds were ever committed by their businesses for the construction of a single project that would have benefited the village communities. Ideally, the

construction of roads and bridges was what the landowners wanted but over 95 percent of the respondents were unsure as to whether the LOCs had the funds for that or not, as such information hardly ever got to the landowners. On the whole, the ability of the LOCs to fund development projects was severely limited and anyway unknown to the landowners from the three LOCs.

- *'Enforcement of the business contract'*: More than 95 percent of respondents from the three LOCs agreed strongly that the LOC executive had failed to apply pressure on the logging company as well as PNGFA, for the timber project to deliver tangible development projects to the communities involved in the timber projects. It was because of the promise of tangible development projects that landowners consented and allowed access to their forest resources. Similarly, all the respondents from the three LOCs agreed strongly that the LOC executive never helped the landowners with their compensation demands against the logging company, nor did they insist the logging company operate according to the set logging and environment protection laws of the country. The landowners also felt that the too-cosy working relationship between the business leaders and the logging company had compromised the ability of the business leader to act independently and in the interest of the LOC business. In general, all the respondents from the three LOCs agreed strongly that the business leaders, never at any time, went out of their way and did things for the benefit of the landowners and their LOC businesses. On the whole, and for the three LOCs, the business executives failed in their part to enforce the business contract so that funds intended for development projects, (if any), actually did get delivered for the benefit of all the landowners.
- *'Working relationship'*: Over 98 percent of the respondents from the three LOCs agreed strongly that the business leader never worked with or had frequent business meetings with their executive members and the landowners, never addressed their many issues, never informed them on what was going on with their business or how their funds were being managed, and never involved them in the many business decisions. The leadership and managerial qualities of the three LOC executives was poor. For all three LOCs, the working relationship was poor, due to poor leadership and managerial conduct on the part of the business leaders.

The category *'LOC business group'*:

- *'Knowledge and understanding of different landowner clans'*: All the three LOC respondents indicated that they knew all of the landowners in their ILG group (at the village

level), however as the group got bigger, as in the case of large forest blocks, they did not know all. And regarding the entire timber project area or the forest blocks, the landowners did not know each other at all. On the whole, knowledge and understanding of the other landowners was an asset with smaller groups but was absent in the case of the larger group.

- *'Landowner group and working relationship'*: More than 95 percent of the respondents from the three LOCs agreed that size of the LOC business group made it practically difficult for all the landowners to attend meetings. A general agreement by all respondents is that the size of the LOC business group is big, however over 95 percent of the respondents from the three LOCs saw no problems about working with other landowners whom they have no knowledge of or relationship with, and in some cases were tribal enemies or rivals before. The respondents mentioned the difficulty that with such a large size of the LOC business group, the opinion of the landowners may not be given due respect, and it could be very hard to arrive at agreement, decisions or consensus. On the whole, the LOC business groups were too large, creating problems relating to unity, participation and collective decision making; but the respondents saw it differently, attributing most of the problems to the three executive or business leaders of the three LOCs.

The category *'Support by PNGFA'*:

- *'Support by PNGFA'*: More than 95 percent of the respondents from the three LOCs were uncertain as to whether PNGFA had ensured that the logging companies actually delivered on the development projects agreed to under the business contract; and they were uncertain in general as to exactly what the role of PNGFA was with regard to their many issues. On the whole, PNGFA has appeared very much unaware of the many concerns and issues in total contrast to the beginning of the timber projects when they mobilised landowners to come on board.

6.6 Chapter Summary

This chapter contained results from Phase 2 of the study. The results were in the form of mean scores for the different statements. The statements highlight issues that relate to each of the aspects of LOC businesses. These aspects focus on their organisation, management, business groups, and support by PNGFA. The results were presented in Section 6.4, with a summary in Section 6.5 as follows:

- *The three LOC businesses were noted to have similar problems relating to the many aspects of organisation;*
- *The three LOC executives have failed in their many business responsibilities that were of benefit to the landowners;*
- *The LOC business groups were too big, complex, diverse and lacked structure, resulting in problems with their management;*
- *PNGFA was never supportive of the many landowners' problems, concerns, and issues.*

The ends the presentation of the results from Phase 2 of the study.

Chapter 7

Discussion

7.1 Introduction

This chapter contains a discussion of the results of Phase 2 of the study for the three case study LOCs. The discussion is carried out in the five different section of this chapter. After this introduction section, Section 7.2 contains discussion on LOC business groups, Section 7.3 contains discussion on Organisation of LOC businesses, Section 7.4 contains discussion on Management of LOC businesses, Section 7.5 contains discussions on Support by PNGFA, and Section 7.6 contains discussion on Institutional arrangements. Section 7.7 contains the summary for this chapter.

7.2 LOC Business Group

The literature on group and, in particular, the suitability of different groups for pursuing collective social or business interests points out that the group composition is crucial, as it also to group cohesion and group action. In view of this, the discussion will begin by looking at the group composition of the three case study LOCs.

7.2.1 Group composition

The three case study landowner groups have been described as big, diverse and complex, for a number of reasons: the size of the timber project areas (Raicoast TRP had 181,033 hectare, Hawain LFA had 53,230 hectares and Amanab FMA had 103,200 hectares); and the number of diverse languages spoken by landowners in the groups (although only one traditional language covered the Hawain timber project area, there were fourteen (14) languages in the Raicoast timber projects area and nineteen (19) in the Amanab timber project area). The next issue is landowners' knowledge and understanding of each other. At the village community level, this was good; the landowners knew each other well, because of long historical social relations such as family relationships, intermarriages, the sharing of common land boundaries, working together as trading partners, and even in some cases reaching a *modus vivendi* as tribal enemies. However, at the forest block level, where many different village communities were involved, and at the forest area level (as with all four forest blocks), hardly anyone knew each other. Landowners in such big groups had never worked together before. The majority were unrelated

to each other, and perhaps had once been tribal enemies. Most were illiterate and did not trust each other at all.

However, of all the different attributes of this complex LOC business group, the study found one that stood out: all the landowners initially expressed their willingness to work together as a group for the collective benefit of all. This was because of their understanding and expectation their LOCs or the timber project would bring them public infrastructure like roads, bridges, and permanent buildings for schools and community halls.

Despite such positive ambitions, the LOC business groups did not have a good structure to guide their activities. No rules or constitutions were put in place, and despite all members having a common service or social interest as reflected by their perception of the objectives of their LOCs, it was a very difficult challenge to manage such a big and diverse group.

7.2.2 Group cohesiveness and action

The composition of the three LOC business groups has greatly impacted on the landowners' ability to get together and address problem or issues facing their LOCs. Landowners have expressed their feeling of not being strongly connected to the group. They sense the absence of 'glue' that could have bonded them together as one unified group. The presence of rules or a constitutions and proper membership arrangements could have promoted some level of cohesion, as well as protection, when addressing problems, concerns or issues relating to the LOC businesses.

This lack of group cohesiveness among the three LOCs has contributed to their poor performance. The business leaders, ran the businesses as if they were their private businesses. They failed all mandatory business responsibilities such as holding of frequent business meetings, and they never accepted business related comments or suggestions from the landowners. As a group, landowners could have made some progress but there were always risks involved, particularly the risk of retribution by clan members supporting the business leader, and the danger of this leading to tribal confrontations.

The assessment of the LOC business groups regarding their appropriateness through an analysis involving group composition, group cohesion and action, leads to a verdict of failure in all aspects. However, the outlook is not all doom and gloom, since positive attitudes remain, which if they are properly supported, and if the structure is strengthened, things could be achieved. After all, the landowner have a common interest. Awareness and education could clear uncertainties and improve the relationships.

7.3 Organisation of LOC Business

The three LOC businesses were collectively owned by the landowners and, having already discussed the human (landowner) aspect, the discussions in this section will focus on the structural elements, landowner representations, appointment processes, business objectives, business motivation and attitudes, rules and policy, decision making structures, capacity and the business plan. These important elements will provide the framework for the discussion of the results.

7.3.1 Organisation structural elements

Organisations have to be supported with necessary structural elements and the three LOCs, as business organisations, were obliged to have in place certain requirements as defined by the Company law. These were, a business name, a membership structure, an official address for service, a physical address for business activities, arrangements concerning shares and shareholding, and a constitution. Assessing the three LOCs against these requirements, this study saw all of them fulfilling only one: a business or company name, Raicoast Holdings Limited, Wianduo Limited and Amgreen Limited.

Concerns relating to the absence of a physical or permanent address were the most common ones expressed by the landowners from the three LOCs. Landowners were unable to meet with their business executives for resolution to their many logging related issues.

Concerns relating to membership were also common among the landowners, with every landowner having the same right and power without regard to the size and value of the timber resources the landowner clan owned. The incorporation of landowner groups provided for the membership of the LOC businesses on the basis of clan name alone, and controlling or managing such a group that had no general structure, together with a poorly defined management structure, proved problematic.

The difficulties to effectively address problems with the management, particularly their unethical and irresponsible business behaviour was greatly hampered by the absence of rules or a constitution of the LOC business. The absence of rules or a constitution was also a contributing factor to the poor level of group cohesiveness, hence their inability to engage in group action. Taking action individually involves great risks, particularly the risk of retribution by clan members supporting the business leader, and the danger of this leading to tribal confrontations.

7.3.2 Organisational structure and landowner representation

A LOC, as a company, has a structure that can only allow for seven to ten representatives (the business leader or chairman, four directors representing the four forest blocks, a treasurer and a secretary). This is consistent with any other company or organisation, as their management is performed by representatives appointed by the members. These are the positions of trust and responsibility, and individuals occupying them were assessed by the members to be the most appropriate individuals.

Issues relating to poor landowner representation under the current organisational structure were the most commonly expressed concerns among the landowners from the three LOCs. Since the structure can only allow for a limited number of individuals (representatives), these concerns are rather unrealistic, when the total number of landowner clans is considered: 871 for the Raicoast TRP, 448 for the Hawain LFA and 783 for the Amanab FMA. Nevertheless, under the current arrangements, with just one representative from each forest block, the ratio of the landowners to their representatives is certainly very high, and this has concerned landowners especially when it comes to decision making over their resources by someone not from their clan or tribe.

This problem of poor landowner representation under the current organisational structure would not been so much of issue, had the LOC management done it job properly and also maintained good working relationships with the landowners. Ultimately, this issue reflects on the poor performance of the LOC executives.

7.3.3 Appointment process

The appointment of individuals to the various executive positions of a business organisation had to always follow standard processes of appointment. But in the case of all three LOCs, no meeting notice was sent out and the majority of the landowner clans were not present when the appointments were made. At the meeting where the appointment were made, there was no secret ballot and only the business leader got appointed through a show of hands, while the other executive members were appointed by the business leader later. Clearly, the landowners present at that meeting knew who they were voting for; and not surprisingly, the LOC executives were the same individuals who were vocal in pushing for the timber project in the first place. For all three LOC business, the appointments of business executives were informal and heavily influenced by individuals with vested interests.

7.3.4 LOC objectives

The exact objectives of the three LOCs were not known due to difficulties in accessing them, but drawing from the list of objectives of other LOCs, a generalised list of objective was prepared to help determine the landowner perceptions of the objectives of their LOCs. The perception of objectives appeared to be common among all the landowners from the three LOCs. Social or service orientated objectives were the most preferred objectives. And that is exactly what they expected from the start for their LOC and the timber project to deliver. The social or service orientated objectives relate mostly to infrastructure projects such as good all-weather roads, permanent bridges, and permanent buildings for schools and communities. These kinds of services are absent in the many communities within the timber project area. This perceived social or service orientated objective were the reason that many landowner clans consented to the forest concession agreements in the first place.

7.3.5 Business motivation and attitude

Business organisations, and in particular their establishment are often motivated by specific reasons or objectives. This, together with the right attitude, strategy, capacity and law or policy will lead to the business achieving the objectives set. Such was not the case with the three LOC businesses. The landowners had to accept the business model (LOC concept) that allowed for access to the forest resources, all in the name of development. At least the State was motivated, but it did not have the right attitude, as its presence was evident only during the facilitation of the forest concession agreements. It then went on to arranging for a foreign developer to develop the forest resources while leaving the landowners, although they received the timber royalties, to deal with all their logging and LOC related issues. That has been the gripe of the landowners.

7.3.6 Rules and policy

Every organisation, whether formal or informal, has rules that guide the general conduct of its members. In the traditional societies of PNG, the landowners have customary rules that provide for the general conduct of individuals in their village communities. The same should apply to a LOC, but that has not been the case with all three LOC businesses. It defeats the purpose of a business organisation when rules, policy or constitution are lacking; and the problems are exacerbated when dealing with a landowner group that is big, complex and diverse. Despite these unusual problems for an organisation to have to face, they are a part of a LOC business, and at least a constitution would have represented a start at solving the many issues.

7.3.7 Decision making structure

The literature has identified a number of decision making structures in an organisation, they include hierarchy, majority rule, consensus, unanimity and no structure. Organisational structure of the three LOCs align well with the hierarchy structure, with the business leader or chairman and other executive officers; however the behaviour of the business leaders aligned their LOCs with the 'no structure' structure model. Attributes of non-existence of a decision making structure include rugged individualism, free of rules and penalties, often chaotic proceedings, hidden decision-making and domination by a few (often aggressive males), and resulting in most people becoming dissatisfied and leaving. These attributes depict the three LOCs in every sense. What could have been an ideal decision making structure is one that encompasses attributes of consensus and majority rule.

7.3.8 Capacity

The capacity of any organisation is defined by its personnel attributes; knowledge, skills and experience, finance and machinery. The results of the study will be discussed in reference to these capacity elements to conclude this study examination of the capacity status of the three LOCs.

7.3.8.1 Personnel attributes

The majority of the landowners from the three LOCs were illiterate, with only a few of them having secondary or tertiary level education. None of the landowners had business knowledge, skills or experience. At the LOC executive level, the business leaders had no business knowledge, skills or experience either, even though some executive members had primary and secondary levels of education.

7.3.8.2 Capital

Funding for the three LOCs came mainly in the form of project development levies specified under the timber project development contracts or timber permits. In cases where the contract specifies more than one project to be funded by the logging company, various levies were to be paid. As an example, reference is made to the Amanab timber project, where after a log shipment or after a number of shipments, the fee break-up sees the provincial government getting PGK2/m³, infrastructure maintenance getting PGK2/m³, reforestation getting PGK2/m³, forest management getting PGK1/m³, agriculture getting PGK1/m³, the environment getting

PGK1/m³, while the LOC gets between PGK2/m³ (if the log are sold at a low price) up to PGK13/m³ (if the log are sold at a high price). The revenue for export logs can be as low as PGK50/m³ to as high as PGK200/m³, the price range relating to the different kinds of tree species (hardwood to softwood/mixed species).

According to personal communications with an SGS officer, for the Amanab timber project, a total sum of PGK1,027,300.00 was paid in levies over a period of three years (2008-2010), of which ten percent went on various levies, five percent went to the LOC and the difference went to landowners in the form of royalties. This five percent is no more than PGK50,000 in three years or less than PGK20,000.00 per year. This arrangement with the payment of various levies is similar to that with the Raicoast and Hawain timber projects.

What good can you do with such an amount of money? This reflect problems with the contractual arrangement. Under the old 1979 Forest Policy regime, the logging companies were made to build infrastructure projects during the term of their operation. Under the current 1991 Forest Policy, this has been relaxed, and instead, the logging companies simply pay levy. This was never made known to the landowners, who continued to have high expectations from their LOC businesses and the timber projects in general. It created a situation where the the development needs of the landowners outweighed the financial capacity of the LOC businesses, while the logging companies worry about how much profit they will make from the tress in the forests.

7.3.8.3 Machinery

The three LOCs did not have the needed capacity, whether in personnel, capital, or machinery. Unfortunately, it was never the intention of the landowners to deal with a LOC, but they accepted the initiative of the State to do things in this way, only to be left struggling with the lack of capacity. The situation would have been a lot better had the logging companies been made responsible for the construction of the much needed public infrastructure since, they had the capacity to do so, rather than allowing them to the easy way out of just paying development project levies.

7.3.9 Business plan

A business plan provides for the coordinated use of resources to achieve intended objectives. Every business or social organisation, including the three LOCs, need a business plan. However, it emerged from the study that none of the three LOCs ever had a properly defined

business plan. Given the fact that landowners never had access to seeing one, they tended to simply assume that one existed; but even if it did, it could only have contained listing of the projects the executives perceived as important but with no technical details. This assumption is based on the fact that the LOC executives were assessed to have lacked necessary business knowledge, skills and experience in developing a thorough and comprehensive business plan.

7.4 Management of LOC Business

The various attributes of management that will guide the discussion of the results relating to management of LOC businesses include managerial skills, knowledge and experiences, and general business conduct.

7.4.1 Managerial skill, knowledge and experiences

Ideally, individuals with managerial skills, knowledge and experience should be the ones running the affairs of the three LOCs. However, getting the right people with business and managerial skills, knowledge and experience was an impossible task in the village communities of the three timber projects, as the majority of the landowners were illiterate. A few educated ones have secured employment at the provincial town or other provinces, but their willingness and acceptance to accept work with the LOC was another issue. That leaves the positions open to any individual who wanted to put themselves forward, and the case of the three LOCs has been that individuals with some basic education, but more importantly outspoken on issues affecting the community and have the support of other landowner clans, stood out as potential candidates for the job. Thus, the experience has been that a few landowners with vested interests in the LOC businesses managed to convince landowners through promises of development benefits that the timber project would deliver, got themselves appointed to the management positions of the LOC. Unfortunately that was the case with all three LOC businesses.

7.4.2 General business conduct

The attributes of general business conduct include mandatory business responsibilities, working relationship and the enforcement of business contracts. Discussion of results relating to business conduct of the three LOC executives will be made under each of these attributes.

7.4.2.1 Mandatory business responsibilities

The three LOC executives and in particular the business leaders had the responsibility to manage the LOCs in an open and transparent manner, as well as giving opportunity to the landowners to offer their business opinions. That should have been the case with the three LOCs, however the study found total failure on the part of the business executives and in particular the business leaders to carry out any of their mandatory responsibilities. There were hardly any business meetings, and no formal business reports on the LOC business. Consequently, the many landowner issues remained unaddressed.

With no law or constitution, dissatisfied landowners were unable to challenge the business leaders of their poor business conduct.

7.4.2.2 Working relationships

The promises of development benefits flowing from the three timber projects led to the landowners having consented to the forest concession agreement. The landowners had high expectations from their LOC businesses and the timber projects in general. Frequent business meetings to keep the landowners updated on developments and the financial situation of their businesses; as well as attention to the many landowner issues, were the kinds of expectations landowners had of their LOCs. Unfortunately, none of this happened with any of the three LOCs. The business leaders did not facilitate frequent meetings with the landowners after the start of the timber projects, and never attended to the landowner issues.

The situation was of little help to the landowners especially when the logging companies and PNGFA insisted that the LOC executives were the appropriate authorities representing the landowners and that they only listened to or worked with them and would not deal directly with the landowners. With no form of working relationship between the landowners and the LOC executive, the landowners' many logging related issues remained unresolved, while logging operations moved on into new forest areas. Such should not have been the case as these poor landowners had expected their their business leaders and PNGFA to work closely with them during the course of the logging operation. This kind of behaviour was the complete opposite to that exhibited during the initial phases of the timber project leading to the signing of the forest concession agreement.

The situation is the same at the management level. The three LOC business leaders and their executive members were never worked together as a team in managing the affairs of their LOC businesses. This study found the business leaders to have been working in isolation from their

executive members as well as the landowners. The business leaders made themselves indispensable, and they became aggressive towards their critics as they found comfortable niche in the logging companies.

7.4.2.3 Enforcement of business contract

Logging companies have an attitude of ignorance, and unless they are reminded and pressured, time and again, they will never give priority to other commitments that are of cost to them. This includes any infrastructure to be delivered by them under their business contract. As evident from this study, even if delivered, they will never be to the expected standard for public use. For example, many roads built by the logging companies were purely for their logging needs, but a few roads that could be used more frequently by the landowners, needed upgrading with river gravel, culverts installed at waterways, and additional road works such as to divert rain water from the road. These expectations will never eventuate, unless the business leaders apply pressure on the logging company. That should have been the case with the three LOCs, but the study found the three LOC business leaders did nothing about that.

The poor enforcement of the business contract by the LOC executives raised doubt among the landowners, as to whether they really knew their job. The situation was not helped by the too-cosy working relationships between the business leaders and the logging companies. That compromised the ability of the business leaders to enforce the business contracts, as was the perception of all the landowners of the three case study LOC businesses.

7.5 Support by the PNGFA

The LOC concept was the initiative of the 1979 Forest Policy (repealed) and continued under the current 1991 Forest Policy. The forest policy, while adopting this concept for the primary purpose of enabling access to forest resources owned by the landowners under the traditional tenure system, certainly expected the LOCs to provide for the participation of customary landowners, and they would benefit meaningfully from the development of their forest resources. The forest policy also made mention of the management structure and their participation in the forest industries. That was about all it said, all on only one page, about the LOC concept and structure, and with passing reference made to the Company law, particularly the various requirements for the formation of a company.

The timber projects raised many landowner issues because their LOC executives did not even seem to exist, there was nowhere to go and seek help except PNGFA. However, the support

from PNGFA was unsatisfactory, as identified in this study. The most common issues that surfaced during the study included destruction of waterways and gardens (food and cash crops), ignoring of river buffer zones, violation of prohibited sites (historical significance, cemetery), dumping of machinery waste, and large volumes of trimmed log being unaccounted for in the payment of royalties. The situation was worse in the case of LFA, and particularly for the Hawain timber project, where the concession agreement was a private deal and so by law, PNGFA had very limited input in terms of on-site supervision as compared to TRP and FMA timber projects where an officer was assigned to monitor the project on a full time basis. In all the situations, this study found that the commitment of the PNGFA officers to ensuring that the logging operations continued without any disruption was their top priority rather than to address landowner issues. The trend has been that the logging company only listens to the LOC executive and not the ordinary landowners. With the PNGFA officers, the results indicate poor commitment on their part to addressing landowner issues, and in most cases, they remained unresolved while the logging progressed on to new forest areas. This is the same with attempts by the landowners to change their LOC executives for reasons of poor performance, which to every landowners was genuine and in their interest, but PNGFA was never concerned to assist.

The timber projects, and the LOC business concept were all initiated by the State through PNGFA. Even the conditions of the forest concession agreements were prepared by PNGFA. The landowners through their LOC executive signed without understanding any of the details as this study has found. Even, the LOC could not have done a better job, as they did not have the knowledge, skills and experiences. The PNGFA took the lead in everything. Even with the case of timber project development agreement or timber permit, which was done by PNGFA without the input of landowners. The landowners also expected PNGFA to enforce the conditions of the contract. Unfortunately, this study found that whatever it was that the contract actually stipulated, they did not have the chance of knowing.

The support to LOC and the landowners by PNGFA was poor and never seemed particularly serious.

7.5.1 Timber project development agreement

Timber project development agreement or timber permit conditions were unrealistic in terms of provision for infrastructure projects expected by the landowners. Under the old 1979 Forest Policy, the logging companies were responsible for the actual construction of those projects, but under the current 1991 Forest Policy, the LOCs are responsible. The arrangements are that the logging companies pay the LOCs the money equivalent to the cost of the projects. However

this amount is determined, the landowner have no input in it. Moreover, the money is not paid upfront in a lump sum. Instead, it is spread over the lifespan of the timber project, and paid at a set rate based on the expected volume of timber resources to be exported. Reference can be made to Section 7.3.8.3 on the various levy rates. Unbelievably, the rates are unrealistic when compared to the real cost of the infrastructure projects and the instalment payments. The PNGFA already knew about the many management related issues of LOC would face, and expecting them to manage those infrastructure projects on levy money was never going to happen and this study has confirmed that to be true.

The many conditions of the timber permit that affected the landowners and their LOCs were made know to them only by this researcher. The study found that the current funding arrangements involving levy payments had provided greatly relaxed conditions for the logging company, which the majority of the landowners were unaware of, continuing in their high expectations of their LOC businesses. This is an area that needs urgent addressing.

7.6 Institutional Arrangements

Institutional arrangements are essentially ‘rules’ influencing human behaviour and include both formal and informal rules. Formal institutions are codified in constitutions, statutes, regulations, plans and policies. Informal institutional arrangements, in the case of this study, are codified rule of traditional PNG village societies, and particularly, traditional laws and customs, the land tenure system, social expectations such as rules governing relationships within a family, community, and societal norms and expectations. Land use, property rights, decision making and natural resource management in the context of the systems of traditional landowners are guided by informal institutional arrangement.

In the situation examined by this study, formal rule apply and they should have been enforced by the three LOC businesses. However, that wasn’t the case. The three LOC businesses were found to be without set or established laws, rules, polices or a constitution to govern the business conduct of both the executive, the group members (landowners), and the conduct of the business in general. Such has led to the unprofessional and unethical business conduct of the business leaders, making them very powerful and indeed indispensable.

The forest policy besides its recommendation for the LOC concept as a medium through which landowners would pursue their business interests by participating and benefiting meaningfully

from the large scale commercial development of their forest resources, should have in place mandatory requirements. Laws, rules or a constitution should have been a must.

The timber project development agreement or timber permit, particularly the arrangement through the payment of project development levies for the infrastructure projects needed by the landowners of the three timber project areas was unrealistic and may never lead to the actual delivery of the intended projects during the lifespan of the timber project. An example was used in Section 7.3.8.2 and this is one arrangement that landowner were never been informed. There is serious problem in this arrangement that needs to be addressed as it has failed to the true spirit of honest business practice where every parties involved must benefit. In this case, the landowners will end up with nothing.

7.7 Chapter Summary

The summary of discussion relating to '*LOC business group*' are as follows:

- The size of the group was extra ordinarily big as it was made up of hundreds of different landowner clans (landowners) of the timber project area. That was unavoidable.
- The composition of landowners in the landowner group was diverse and complex. Of the hundreds of different landowner clans, all did not know each other well, were unrelated to each other, never worked together in such a large group before, spoken many different tribal languages (except for landowner of Hawain timber project area), and some had once been tribal enemies.
- Despite the LOC business group being big, diverse and complex, the landowner see no problem working together to pursue their common interest. However, the level of cohesiveness is poor and that is due to the absence of law or constitution for the group that act as a 'glue' to bond them together as one unified group that can work together effectively when addressing problems, concerns, and issues affecting them or their LOCs.

The summary of discussion relating to '*Organisation of LOC business*' are as follows:

- Organisational structural elements: Important structural elements were absent for the three LOCs included: physical or permanent address, the poor membership arrangement that fails to acknowledge different landowners according to the size and value of timber resources they own, and rules or a constitution. The three LOCs existed only by their business names;

- Organisational structure and landowner representation: Concerns of inadequate landowner representation under the adopted management structure was unrealistic. The organisational structure typical of a company and including the three LOCs, allow for representatives (business leader, the deputy, the secretary, treasurer, and four representatives from each of the four forest block) in the management of the LOC business. It is not possible to accommodate the hundreds of landowner representatives under the adopted organisational structure. This would not have been an issue had the executives of the three LOC businesses performed their management responsibilities adequately while also having maintained a good working relationship with the landowners. This issue reflects on the poor working relationship of the LOC executives.
- Appointment process: Standard processes of appointment were never followed. No meeting notices were sent out, the majority of the landowner clans never participated in the appointment meeting. The appointment meeting did not adopt a secret ballot. Instead, the appointment of the business leader was done through show of hands, and other executive members were later appointed by the business leaders. The appointments were never fair and transparent, and was influenced by individuals with vested interest in the LOC business.
- LOC objective: The landowners from the three LOCs had high perception for social or service orientated objectives. This is reflected by their high expectation from their LOCs to deliver to these objectives;
- Business motivation and attitude: The never existing a business motivation for the three LOC business. It was a business forced onto the landowners by the State in the name of economic development. That also created more problems as the landowners never had the business attitude to drive the business forward. Instead they were expecting more from their LOCs and timber projects while not working together a unified group;
- Laws, rules, policy or a constitution was absent among the three LOC business group as well as for their business organisation;
- Decision making structures: The three LOC businesses lacked an effective decision making structure as all the decisions were made individually by the business leaders;
- The three LOCs lacked the required capacities (personnel, capital and machinery) to perform to the expectations of the landowners;

- The three LOCs did not have properly developed plans for their businesses. The majority of the landowners were illiterate and did not have the business knowledge, skills and experience to develop business plans.

The summary of discussion relating to '*Management of LOC business*' are as follows:

- The three LOC executives lacked managerial skills, knowledge and experiences. This is despite their ability as often been outspoken on issues affecting the community, had the support of their community, and behaved as if they were capable of managing the LOC business;
- The general business conduct of the LOC executives was poor, they failed to uphold all mandatory responsibilities, particularly the frequent business meetings and providing to the landowners financial and other reports, while also giving them the opportunity to be heard of their business opinions. In fact, the working relationship between them and the landowners was bad or non-existent, and even failed in their responsibility to enforce the business contract with the logging company for their promised development benefits. Alternately, there existed a too-cosy working relationship between the business leaders and the logging company and that could have compromised the ability of the business leader to enforce the business contract, as was the perception of the landowners from the three case study LOC businesses.

The summary of discussion relating to '*Support by PNGFA*' are as follows:

- Support by PNGFA to various landowner problems, concerns and issues was poor and never seems particularly serious. That was also the case with the enforcement of the business contracts. It was also unfortunately to learn that the landowners were never involved with the development of the business contracts and as indicated from this study, they did not have the change of knowing whatever it was that the contract actually stipulated.

The summary of discussion relating to '*Institutional arrangement*' are as follows:

- There is absence of laws, rules, or a constitution for the three LOC business. The unprofessional and unethical conduct of the business leaders cannot be deal with given the absences of laws, rules or a constitution. LOC business leaders have become very powerful and indeed indispensable.

- The timber project development agreement or timber permit whose contribution to infrastructure development needed by the landowners from the three timber project areas, through project development levies are unrealistic, unfeasible and will never deliver those intended project during the lifetime of the timber projects.

This end the discussion of the result for the study.

Chapter 8

Conclusions

8.1 Introduction

The objective of the study has been to develop a better understanding of those factors that determine the performance of LOCs in the timber projects of PNG's forest industry. Given the limited availability of information on the general situation of LOCs of interest in this study (particularly those LOCs in the timber projects that came into operation under the current forest policy regime), a two-phase study approach was adopted. Phase 1 of the study aimed to develop major research themes, hence the adoption of a qualitative study approach with an exploratory focus that uses a case study (CS) research strategy, and grounded theory (GT) as a research methodology, supported by in-depth interview and probing techniques. The guiding research question for Phase 1 of the study is: Are the landowners actually benefiting from their LOCs? In this chapter, the various findings from Phase 1 of these study are presented and conclusions drawn in reference to the research question and the study objective.

Phase 2 of the study adopted a survey. The various issues highlighted by the themes from Phase 1 of the study were incorporated into the survey for Phase 2 of the study. Guiding Phase 2 of the study were a number of research questions that were developed based on the findings from Phase 1 of the study. In this chapter, the various findings are also presented and conclusions drawn in reference to the research questions and the study objective.

Other sections in this chapter after the introduction are Section 8.2, that recaps on the findings of Phase 1 and Phase 2 of the study and their conclusions; Section 8.3, that contains statements on the implications and contribution of the study; Section 8.4, that contains the various recommendations; Sections 8.5, that outlines the study limitations and suggestions, and Section 8.6, which ends this chapter with a summary.

8.2 Findings of Phase 1 and Phase 2 of the Study

Phase 1 of the study was guided by the research questions: Are the landowners actually benefiting from their LOCs? And if not, what are the key problems?

The findings from Phase 1 of the study were in the form of themes. The themes highlighted issues that related to various aspects of the LOC businesses, particularly relating to their

organisation, management, LOC business group and support by PNGFA. The summary of the themes according to the different aspects of LOC businesses are:

- *‘Organisation of LOC’*: Specific issues relating to organisation include absence of company structure elements, social or service orientated objectives being preferred by the majority of landowners rather than profit, the adopted management structure with a small number of representative being inadequate to represent the many different landowner clans of a timber project, the appointment of LOC executives never being done in a fair and transparent manner, the poorly done business contract, the lack of business capacity to effectively participate and benefit in the timber business, and most importantly, the absence of laws or constitution.
- *‘Management of LOC’*: Specific issues include the failure to perform the many management responsibilities that include frequent meetings, financial and progress reports for landowners, the lack of funding of development projects, lack of enforcement of business contracts, the failure by the LOC executives to attend to the many landowner problems, concerns and issues, and the too-cosy working relationship between the LOC executives and the logging companies.
- *‘LOC business group’*: Specific issues include the size of the group; they were too big, with landowners not knowing each other well, or worse, never having met before. What’s more, some landowner clans grouped together were once tribal enemies and spoke different tribal languages. Trust, respect and cohesiveness were of concern.
- *‘Support by PNGFA’*: Specific issues include PNGFA’s their lack of support for landowners with their many logging related problems, concerns and issues, such as logging damage to food and cash crops, and water-ways, violation of prohibited sites, environment pollution from machinery waste, and cheating through log scaling that saw landowners uncompensated for big trimmings that were just left as waste due to poor felling and skidding techniques. Many of these problems were within their PNGFA’s domain of responsibility but their non-performance led to landowners having bring it to their notice for intervention, but generally, they fail to get the needed support.

The findings indicated that the landowners have not benefited from their LOCs and the key problems were to do with their organisation, having lacked important structural elements as well as not having in place other fundamental elements necessary for it business activities; the unprofessional and unethical conduct of the business leaders in managing the affairs of the LOCs; the too big, diverse and complex nature of the business groups that lacks structure, hence

was too problematic to manage; and the lack of support from PNGFA. The problems related to the organisation of LOC, management of LOC, LOC business group and support by PNGFA, whose details were summarised above. That answers the research question: Are the landowners actually benefiting from their LOCs? And if not, what are the key problems?

Phase 2 of the study incorporated the issues relating to the various aspects of LOC businesses as highlighted by the themes into a survey to be tested over a larger population. The objective was to check on the validity of findings from Phase 1 of the study. Guiding Phase 2 of the study were six specific research questions:

1. *Is the organisation of the three case study LOC businesses adequate and appropriate?*
2. *Have the three LOC executives delivered on their management responsibilities adequately and professionally?*
3. *How capable are the three LOC businesses of performing to the expectations of landowners?*
4. *How capable are the landowner groups of pursuing their interests through their LOC business?*
5. *Could PNGFA do any better in their support to the landowners in their many issues, as well as with their development needs?*
6. *What are the key institutional barriers to LOC business success?*

The findings from Phase 2 of the study are presented according to the six research questions:

- **Is the organisation of the three case study LOC businesses adequate and appropriate?**

The three LOC businesses had issues relating to their organisation, particularly to do with absence of important organisational structure elements, the poor representation of the landowners under the adopted management structure, the informal processes of appointment of business executives, the absence of business motivation and attitude, decision making structures, capacity, business strategy, and most importantly, the law.

The important organisational structure elements that were absent include a physical or permanent addresses for the business, an official address for service, membership arrangements and the absence of law or constitution. The absence of a physical or permanent address for the business made it very difficult for landowners to meet with their LOC executives over their

many logging related problems, concerns and issues. This is made worse with no official address for communication.

While landowners become shareholders in the LOCs through their incorporated landowner groups, LOC membership criteria failed to reflect the size of the timber resources a landowner clan owned as compared to another landowner clan. The fact that every landowner was given exactly equal representation disputes the size of its holdings created problems when it came to decision making and voting rights in the LOC business.

The problem of poor landowner representation under the adopted management structure is unfortunate as nothing much could be done with it. This issue should not have eventuated had the management performed their many responsibilities as well as they could, and maintained continuous interaction with the landowners. It is the poor business conduct of the LOC executives as well as the unfair and non-transparent process of appointment that saw the general makeup of the executive positions dominated by individuals from one forest block.

Given these findings, it is sufficient to answer this research question with: No, the organisation of the three case study LOC businesses was inadequate and inappropriate for what is expected of a business.

- **Have the three case study LOC executives delivered on their many business responsibilities?**

The LOC executives non-performance has been the focus of the landowners issues. The many issues encountered and noted in this study were the direct result of their inaction on the very basic to more serious issues. This relates to their failure to uphold mandatory business responsibilities such as frequent business meetings, keeping landowners updated with financial and business progress, attending to landowners' logging related problems, concerns and issues, involving landowners in important business decisions. All this depicts a poor working relationship between the LOC executive and the landowners. In addition, there was a lack of commitment towards enforcing the business agreements or contracts that had the potential of benefiting landowners and their village communities.

These findings in relation to the failure on the part of the LOC executive to deliver on their many business responsibilities are sufficient to answer this research question with: No, the three case study LOC executives failed miserably to deliver on their many business responsibilities.

- **How capable are the three case study LOC businesses of performing to the expectations of landowners?**

The capabilities of the three LOC businesses were assessed in terms of their personnel resources, as well as in terms of their capital and machinery, having in mind the collective objectives of the LOCs. The study found the business executives and in particular the business leaders had no business knowledge, skills and experience; funding was irregular and inconsistent; and there was no machinery for the construction of infrastructure projects landowners needed the most in the timber project areas. Given these findings and combined with the earlier finding (above research question) that executives of the three LOCs were never able to deliver on their many business responsibilities', the answer to this research question is: No, the three case study LOC businesses were never capable of performing to the expectation of their landowners.

- **How capable are the landowner groups of pursuing their interests through their LOC business?**

The LOC business groups were described as big, complex and diverse. One specific aspect of the group members was their poor knowledge and understanding of others in their group as the size of the group increased from the village community level to include other village communities far and wide within the boundary of the timber project area. Among the village communities and also between the different village communities there existed different traditional languages, tribal differences and different development needs. In many cases, the different landowner clans had never interacted or worked with each other before. However, a positive thing about all the landowners from each of the three LOCs was their assurance (initially at least) that they saw no problem working in such a large group as they all had a common interest.

Problems relating to the organisation of the LOC business group were noted. Of particular concern was the lack of law, rule or constitution; all three LOCs failed in this requirement. It would have been very difficult for a LOC business group to operate without the necessary laws that could govern members' conduct, as their composition is completely different to what is ideal and usually required of conventional organisations that pursue a business interest. In fact, management of a LOC business group would have been a massive challenge. The evidence of factional landowner groups as in the case of the Raicoast and Hawain timber projects are an indication of how easily the group could become fragmented.

The findings relating to LOC business groups and the poor performance of the LOC business executives, particularly the poor working relationship with the landowners, are sufficient towards answer this research question with: No, the landowner groups were incapable of pursuing their interests through their LOC business.

- **Could PNGFA do any better in their support to the landowners in their many issues, as well as their development needs?**

Landowners' concerns with PNGFA relate to the lack of support given them with their many logging and LOC related issues. Logging related issues include damage to food and cash crop gardens, violation of protected or restricted sites, waterways, buffer zones, dumping of machinery waste everywhere, unnecessary damage through unnecessary clearance of forest, and under-payment of timber royalty with the exclusion of trimmed log end(s) damaged through careless felling and extraction techniques. Many of these problems were with the responsibility of PNGFA, but because of their poor monitoring of the operation, the landowners were left to try bring them to the PNGFA's attention, only for the PNGFA to ignore them.

The failure by PNGFA to address many logging and LOC related issues is unacceptable as far as fair and honest business practice is concerned, given their statutory responsibility to manage the forest resources on behalf of the landowners. Logging companies have never been honest since operating in the forest areas, and landowners expected PNGFA to ensure acceptable logging practice as well as enforcing the business contract on agreed development projects for the village communities in the timber project area.

The findings indicate poor support from PNGFA and are adequate to answer this research question with: Yes, PNGFA could improve on their support to the landowners in their many logging and LOC related issues.

- **What are the key institutional barriers to LOC business success?**

Laws or rules are necessary in every business. However the three LOC businesses failed to adopt necessary laws, rules or constitutions to govern the general conduct of members (landowners) as well as the LOC executives. The LOC executives did not care about the development need of the landowners, worked in total isolation from the landowners, and were law unto themselves, while both the landowners and PNGFA did nothing. The landowners wanted to challenge the business leaders but feared retribution as there is no law protecting them when addressing LOC management related issues.

Another key institutional barrier relates to the forest policy and nature of the business contracts. The forest policy does not support landowners with their LOC businesses; all it does is to recommend the LOC concept and present it as a vehicle to pursue landowners' business interests by participation and benefiting meaningfully in the large scale commercial development of their timber resources. Given these forest policy limitations, the problem of their LOCs having no law or constitution gave landowners no more avenues to take. Given that the LOC concept been forced onto the landowners, at least there should have been some seriousness on the part of PNGFA to ensure that landowners were participating and benefiting meaningfully from the timber projects.

Timber project agreements have failed to support landowners in their many village communities. The former arrangement, where logging companies were made responsible to deliver the infrastructure projects themselves, was a better arrangement than the payment of levies, as under the current arrangement. For example, almost all the country's national highways were constructed by the logging companies. By contrast, there has been hardly any physical evidence of infrastructure put in place under the present arrangement.

Given these findings, they are sufficient to answer to this research question with: Yes, the key institutional barriers to LOC business success were the lack of law or constitution for the LOC businesses that involved the many different landowner clans, the unrealistic conditions of the timber project agreements (timber permits) that stipulated levy payments rather than making the logging companies actually construct the infrastructure projects themselves, and the lack of enforcement of the mandatory requirement of law or constitution for the LOC businesses.

In conclusion, the research questions for both Phase 1 and Phase 2 of the study were answered satisfactorily by the findings from both Phases of the study. At the objective level, the study has indeed led to a much better understanding of the various factors that contributed one way or another to affecting the performance of the LOCs in the timber projects of PNG's forest industry. In conclusion, the research objective of the study has been achieved.

8.3 Implications and Contribution to Existing Knowledge Base

PNG's forest industry, its development prior to and after political independence in 1975, the issues affecting the industry leading to the major State Commission of Inquiry in 1989 (The Barnett Enquiry), are well documented and understood. Development in the forest industry following after the findings of the Barnett Enquiry are also well documented and understood. The same can be said of the LOCs in the timber projects that came into operation at that time or just before or just after the first (repealed) 1979 Forest Policy. This is the same with the LOCs in the timber projects that began bore 1991 and have continued in operation under the current *1991 Forest Policy* regime.

However, the case of those LOCs in the timber projects that only came into operation under the current *1991 Forest Policy* is not well understood. This study and particularly its findings have contributed to filling that knowledge gap.

Some issues identified in the study that are similar to those with earlier LOCs include: mismanagement of LOC funds, the too-cosy working relationship between the landowners and the business leaders and the failure to uphold mandatory business responsibilities such as frequent business meetings where landowners get to be informed of how their funds are being used and how the project is going, as well as giving them a chance to offer their business suggestions.

While the earlier known issues facing early LOCs were mostly management related, the findings from this study involving the three case study LOCs have highlighted serious issues relating to management, organisation, business group composition (particularly landowner representation), support by PNGFA, and institutional arrangements. Details of these issues have been presented in the results chapter and are the contributions from this study.

8.4 Recommendations

The three case study LOCs have been identified to have lacked capacity, particularly the appropriate knowledge, skills and experience need to manage the business. As a recommendation, organised training should be provided in that area.

The forest policy only made recommendation for the adoption of the LOC concept, the management structure and its formation using the requirements specific under the *Company Act 1997*. The study, has found that the three LOCs have been operating without law or constitution, and have never met their mandatory requirements such as frequent meetings, and providing

financial and other reports to the landowners. Landowners were unable to challenge the management of their LOCs as there were no laws to make reference to. As a recommendation, the forest policy should emphasise some of the mandatory requirements in their policy statement that allows for checks and balances in the management of the LOC businesses.

Currently, all negotiations for timber project development agreements or timber permits that specify the various conditions the logging companies are subject to are done by PNGFA. Landowners have never been represented, and the experience has been that the conditions were never beneficial to the landowners. For instance, the current arrangement where various project levies are paid to the LOCs instead of the logging companies delivering those projects themselves. The study found this to be a cheap and cost saving situation that is benefits the logging company. As a recommendation, this and other conditions of the timber permits should be done with the full knowledge of the landowners (through their representatives) and not by PNGFA alone. The study also found that PNGFA has never been supportive to the landowners, so it is only fair that landowners are part of the team that puts in place the timber permit conditions.

These three recommendations are intended for the PNGFA.

8.5 Study Limitations and Suggestion for Future Research

Even though the case study ensured diversity of insights and understanding into issues that affect the performance of LOC businesses in the forest industry of PNG, it can only be generalised to the case study and theory, and not the wider population.

This study was initially intended to cover all landowners, including the LOC executive; but the unwillingness of the executives of the three LOCs, particularly the business leaders, to participate in in the interviews (Phase 1) and the surveys (Phase 2), affected the diversity of data for the study. Hence, the findings from both Phase 1 and Phase 2 of the study reflected the landowners' perceptions rather than those of the three LOC business executives. In addition, access to crucial pieces of information relating to LOC (financial and other documents) was never possible, as all this information was in the hands of the business leaders.

As a way forward, this study can be expanded to a large number of LOCs in the timber projects throughout PNG as well as LOCs in the oil palm and the extractive industries (minerals, oil and liquefied gas), to see if the findings are similar or different.

8.6 Summary

This study has achieved its intended objective through the two-phase study approach. The objective was to develop a better understanding of those factors that determine the performance of LOCs in the timber projects of PNG forest industry, and that was made possible from the findings of Phase 1 and Phase 2 of the study. In summary, the performances of LOCs in the timber projects in PNG's forest industry have been adversely affected by a range of issues that relate to their organisation, management, business groups, the PNGFA, and the laws or policy (institutional arrangements). These have been thoroughly discussed in the results and discussion sections, and they summary provided in chapter.

The implications and contributions of this study have also been pointed out. Recommendations have been suggested (tempered by acknowledgement of the study limitations), and suggestions have been put forward for future research that can add more new knowledge to the pool of knowledge on those factors that determine the LOCs in the timber projects of PNG's forest industry, under the current *1991 Forest Policy* regime.

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Appendix A: Research Information Sheet – Phase 1 & 2 of Study

Lincoln University Policies and Procedures

Commerce Division, Lincoln University, New Zealand

Research Information Sheet

Dear Sir/Madam,

You are invited to participate as a subject in a study on “**Performance of Landowner Companies in the Timber Projects of Papua New Guinea’s Forest Industry**”. This study will focus on selected forestry-based landowner companies (LOCs) to find out how well each one of them have done in meeting the needs and interests of the landowner and what might be done in order to improve their performance.

Your participation is representative of you clan that has a stake in the LOC business which this study would greatly value your participation. This study is being undertaken for the fulfilment of the requirements for my PhD degree in Economics offered by the Commerce Division of Lincoln University, New Zealand. The study will be conducted using a survey questionnaire containing both close and open ended questions that will be asked to you. There will be room for you to add any information during the interview. Much of the answers you provide will be hand written. I will be pleased to discuss any concerns you have about your participation in the project, during the time of the field work. I am mindful of the various risks associated as a participant when providing information about yourself, other people or organisations and should this be the case, you have the right to withdraw the information. You also have the right to refuse to answer any of the questions asked during the interview.

The result of the study may be published or may also be provided to PNGFA who have some interest in this study and in either case, any information you provide will be kept confidential. Your identity and that of other people or organisation will not be made public.

To ensure anonymity and confidentiality, the following steps are taken:

- √ All field notes will be processes and saved in my laptop, documents containing the field data/information will be password protected.
- √ You won’t be identified by name. Instead, you will be identified using unique codes or

This research is being carried out by:

Name of Researcher	Michael Hasagama Lincoln University, PO Box 30, Lincoln 7647, Christchurch, New Zealand. Email: Michael.Hasagama@lincolnuni.ac.nz
Principal Supervisor	Associate Professor Hugh Bigsby, Commerce Division, Lincoln University, Box 84, Lincoln 7647, Christchurch, New Zealand. Email: bigsbyh@lincoln.ac.nz
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Appendix B: Consent Form – Phase 1 & 2 of the Study

Lincoln University Policies and Procedures

Consent Form

Name of Project: Performance of Landowner Companies in the Timber Project of Papua New Guinea's Forest Industry

I have read and understood the description of the above-named project or I have understood the verbal explanation of the above project provided by the researcher. On this basis, I agree to participate as a subject in the project, and I consent to publication or use of the results of the study with the understanding that anonymity will be preserved. I understand also that I may at any time withdraw from the project, including withdrawal of any information I have provided during the interview anytime during the time of the field work while the researcher is still in country.

Indicate your intention by placing a tick in one of the boxes below:

- I agree to take part in the interview
- I do not agree to take part in the interview

Name: _____

Signed: _____

Date: _____

Appendix C: Survey – Phase 2 of the Study

INFORMATION ABOUT YOU					
Timber Project Name:	Business Name:	Landowner Group Name:			
Your status in the business organisation: <input type="checkbox"/> Landowner group representative <input type="checkbox"/> Business executive <input type="checkbox"/> Ordinary landowner	How big is your clan? <input type="checkbox"/> <5 families <input type="checkbox"/> 5-10 families <input type="checkbox"/> >10 families	How big is your landowner group? <input type="checkbox"/> <5 clans <input type="checkbox"/> 5-10 clans <input type="checkbox"/> >10 clans	Level of education: <input type="checkbox"/> Primary <input type="checkbox"/> Secondary <input type="checkbox"/> Tertiary <input type="checkbox"/> N/A		
ORGANISATION OF LOC BUSINESS					
Statement about company structure element					
Please rate your <i>agreement</i> with the following statements:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The LOC has a business name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Membership was free and on the criteria of being a landowner clan that signed for the timber concession agreement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The LOC has an official address for service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The LOC offered shares to members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The landowners purchased company shares and became shareholder of their LOC.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The LOC business has a physical/permanent address for its business activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The LOC has by-laws or constitution.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Statement of LOC objectives					
Please rate your <i>agreement</i> with the following statements. An objective of your business entity is:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. To fund or provide financial support to the construction of public facilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. To ensure that development benefits as agreed to under the business contract are delivered.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. To be attentive to landowners' concerns, issues or problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. To fund or provide financial support to groups or communities' activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. To invest directly in businesses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Statement about LOC business plan

Please rate your <i>agreement</i> with the following statements:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The LOC business has a written business plan.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The plan contains much needed development projects for the village communities. .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The development projects are supported by all technical details.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. All landowner were involved in the development of the business plan.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The business plan was done in a great rush.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Statement about management structure and landowner representation

Please rate your <i>agreement</i> with the following statements:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The adopted management structure does adequately accommodate all the landowner clans.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. My landowner clan is represented by the composition of the current management team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I feel I have been adequately represented by our forest block representatives. .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Each of the management positions were defined by their responsibilities and powers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The business leader has become too powerful under this management structure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The position of business leader should be rotated as the logging operation proceeds from one forest block to another.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Statement about the LOC business executive appointment

Please rate your <i>agreement</i> with the following statements:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I did receive written/verbal notice of the appointment meeting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I or my clan did participate at the meeting to appoint the business executive.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The candidates for the business executive positions were nominated and voted for at the appointment meeting. .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The appointment of the business leader was through a secret ballot.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. All members of the business executive were appointed at the appointment meeting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The appointed business executives were those few influential and vocal landowners who pushed for the timber project and wanted to be in charge (management) of the LOC business.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Statement about business contract

Please rate your <i>agreement</i> with the following statements:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The management had participated actively in the formulation of the business contract document	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The management had a good understanding of the range of benefits the landowners were to receive under the business contract before signing it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The business contract is detailed and comprehensive, covering all the benefits (projects) to be received by the landowners.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The landowners had the opportunity to contribute to or at least see the actual business contract.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Statement about business capacity

Please rate your <i>agreement</i> with the following statements:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The members of the LOC executive have the necessary business knowledge, skills and experience.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The LOC funds in the form of log export premiums paid in by the logging company after every export are adequate to fund or support the construction of the many desirable development projects (public infrastructure and others).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The LOC has the necessary machinery and technically-skilled personnel to undertake the construction of the development projects.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The LOC has invested directly into businesses (properties, interest bearing deposits, share purchase) to generate funds to sustain its business activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MANAGEMENT OF LOC BUSINESS

Statements about mandatory company responsibilities

Please rate your <i>agreement</i> with the following statements:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Business meetings between the LOC management and the landowners were held every year.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Annual financial statements were prepared and presented to the landowners (members) every year.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Financial, membership and other important business documents were kept in a safe place.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Annual tax returns were filed every year.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Statements about funding of development projects

Please rate your <i>agreement</i> with the following statements:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The management funded or provided financial support for the construction of some public facilities (roads, bridges, schools or water supplies)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The management funded or provided financial support to some of the groups' or communities' social activities (sports events, religious conventions, agriculture extension, or traditional dance festivals).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Statements about enforcement of the business contract

Please rate your <i>agreement</i> with the following statements.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The LOC management was able to apply pressure on the logging company to implement the development projects agreed in the business contract.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The development projects to be implemented by the logging company have actually been implemented.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The LOC management was able to get the logging company to compensate the landowners for damage done to their properties.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. LOC management was able to ensure that the logging activities of the logging company were within the logging laws of PNG.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The business leader and the logging company have a too-cosy working relationship that has impacted negatively on the business leader's willingness to enforce the business contract.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Landowners usually have had to take the law into their own hands to force the logging company to compensate them for damages done to their properties or stop the logging operation from progressing due to lack of commitment to the implementation of the agreed development projects.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Statements about working relationships among members of the management team and between them and the landowners

Please rate your <i>agreement</i> with the following statements.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The business leader and his executive members are seen to be working together as a team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The business leader and his executive members have had frequent business meetings since the start of the LOC business.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The business leader and his executive members have had frequent business meetings with the landowners since the start of the LOC business.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The business leader worked closely with the landowners and addressed their many issues, concerns or problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The landowners were well informed of what is happening with their business, particularly how their funds were being managed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The landowners were able to offer comments relating to the management of their business.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. All financial and management decisions were made collectively.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. The business leader has demonstrated good managerial skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. The business leader has demonstrated good leadership skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

LOC BUSINESS GROUP

Statements about knowledge and understanding of different landowner clans

Please rate your <i>agreement</i> with the following statements:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I know all the landowner clans in my ILG group. .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I know all the landowner clan in my forest block.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I know all the landowner clans from other forest blocks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Statements about the organisation of LOC business group

Please rate your <i>agreement</i> with the following statements:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. There are formal criteria for landowner membership in the LOC business group.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. There are rules or laws that protect the interests of all the group members and allow for orderly conduct of the group members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUPPORT BY PNGFA

Statement about support by PNGFA

Please rate your <i>agreement</i> with the following statements:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. PNGFA ensured that the logging company actually delivered on those development projects agreed to under the business contract.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The PNGFA has supported the landowners with their many concerns, issues or problems relating to the logging operation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The PNGFA has supported the landowners who wanted to replace their business leader for managing the LOC business poorly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>