Determinants of Domestic Private Savings in Sierra Leone

By

Abie. E. Turay

Submitted in Partial Fulfilment of the Requirements for the Award of the Degree of Master of Arts in Economic Policy and Management at the African Institute for Economic Development and Planning (IDEP), has been read and approved by:

Chief Supervisor: Dr. P. K. Quarcoo
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INSTITUT AFRICAIN DE DEVELOPPEMENT ECONOMIQUE ET DE PLANIFICATION
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DEDICATION

Dedicated to my dear mother who passed away during the course of my study. I miss you Mama.
Acknowledgements

I have the greatest pleasure of acknowledging all those who provided assistance toward the successful completion of this thesis.

I wish foremost to thank my sponsor, CFTC, for granting the funds that enabled me to pursue the study for the Master of Arts degree in Economic Policy and Management, of which this study is the final requirement.

My appreciation also goes to my employer, the Government of Sierra Leone and the Ministry of Finance, Development and Economic Planning for granting me the study leave in order for me to undertake this study.

Special thanks go to my supervisor Prof. P. K. Quarcoo for his invaluable contributions to the study. To my external examiner, Dr. C. Atta-Mills and my thesis committee members, Dr. G. Mwau and Dr. R. Noumon, I say a big thank you for your useful comments that made the thesis more interesting. I also owe a lot of thanks to Dr. B. Kalasa for the role he played in guiding me through this work. I am indeed very grateful.

I wish to express my sincere thanks to my family, especially my husband, Nabillahi, and my son, for all the inconveniences they had to endure during my absence for such a long period of time. They are indeed very wonderful. I am especially grateful to my sister, Khadi, who, despite being miles away, was a great source of inspiration and courage to me, especially during the trying moment when we lost our dear mother.
Special appreciation is expressed to the Director of IDEP, Dr. Jeggan Senghor, for his good leadership of the institute. Thanks are also due to the Administrative and Finance staff who have contributed in no small way to the successful completion of my study. I will be doing injustice if I fail to acknowledge the contribution of all professors, lecturers and the translators without whose contribution the course would not have been possible.

I am thankful to all others who have made my stay at IDEP a successful one. Thanks are due to the chief librarian, Mr. M. Nageri and his entire staff, as well as Mrs. H. Traore and the computer unit staff, for their useful service throughout the duration of this study.

My heartfelt thanks go to other persons and institutions that in one way or the other have contributed to the success of this study. Only God knows how thankful I am to all of you.

Finally, I am greatly indebted to my colleagues who come from different parts of Africa, for the friendship, experience and above all the sense of oneness that we shared throughout the period of our study. May God guide us in our different undertakings.

Beside all these, the responsibility for any errors or shortcomings that the study might contain will be entirely mine.
**ABSTRACT**

Most developing countries, including Sierra Leone, face resource constraints during the process of their economic development. Recent trends in the world economy have led to a decline in traditional sources of development finance. Hence policy makers are faced with the problem of harnessing sufficient resources to finance economic development and growth. In theory, with the decline in net resources flows, domestic resources should be playing an increasingly important role. However this has not been the case due to the country’s inability to generate significant domestic resources. It is, therefore, pertinent to understand what is/has been responsible for this state of affairs.

This study investigates the determinants of private domestic savings in Sierra Leone. It specifically looks at the empirical determinants of private domestic savings through econometric analysis and the role of the informal sector in mobilising savings through rapid assessment appraisal.

The data used covered the period 1967-1995. Estimated results from the econometric analysis indicated that income and government savings have a positive impact on private savings, while foreign savings and private savings are negatively related. The rapid assessment appraisal indicated that the informal financial sector could play an important role in mobilising savings from the broad mass of the people who, for various reasons, do not utilise the banking system. The study however observed very weak linkages between the formal and informal financial sector.

The study made certain recommendations in line with its findings. These are: increasing the productive base of the country to ensure real income growth, employment and private savings; providing access to financial institutions, and accelerating the integration of the formal and informal financial sectors; and reduction of the government budget deficit. Implementing these recommendations would significantly improve domestic private savings mobilisation.
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CHAPTER ONE

INTRODUCTION

1.1. Background to the Study

Concerns for the ever-increasing need for growth in developing countries have often centred on the crucial role that savings can play in the development process. This role is predicated on the intricate relationship existing between the rate of savings, investment and economic growth. Economic theory has shown that the engine of growth is the production of an initial surplus, transferring the surplus to productive investment that will lead to capital formation and consequently economic growth. It is presumed that a high rate of investment will increase the growth rate. However, savings whether domestically or externally, must finance investment. When investment is constrained by savings, efforts for the expansion of domestic and/or external savings can expand investment and raise growth. Thus, the mobilisation of domestic savings is a pivotal force in investment and economic growth.
In the past two decades, since mid 1970s, the rates of growth in most Sub-Saharan African countries, including Sierra Leone, have steadily declined. The growth rate for Sub-Saharan countries between 1990-1995 stood at 1.1 percent at 1990 prices (ECA, 1997). The ECA’s report on the economic and social situation in Africa has indicated that for Africa to achieve a target rate of GDP growth of 8 percent per annum for instance, such that per capita income would double over the next decade, its investment needs to be raised by at least a third ECA (ibid). Financing the additional investment necessary to spur vigorous growth in Africa has emerged as a challenge, considering that the traditional sources of development support and mechanisms for channelling aid and credit are weakening. Consequently, domestic resources must now play an increasingly important role. These countries, therefore, are faced with the problem of generating domestic resources to cover for the shortfall in investable funds arising from inadequate resources.

There have also been concerns over the growth of external indebtedness and external dependency of the Sierra Leone economy (its external debt standing at US $1.143 billion in 1996).

Increased external dependency will increase the external indebtedness of the country and, besides, the decline in the net concessionary capital inflow from external sources is a pointer that the expanding reliance of the economy on foreign capital flows is not acceptable in the long run. As the country strives to wriggle out of her present quagmire and attain a faster pace of economic development, it is necessary to increase the rate of capital formation in the economy. In the face of the reduction in external resources flows, capital formation is only possible through an increase in resources mobilised domestically. The situation, therefore, demands instituting measures that will encourage such mobilisation of domestic resources in order for the country to sustain and even augment past levels of capital formation and development without incurring unsustainable external indebtedness and external dependence.

An empirical study on the determinants of long-run growth in 55 developing countries (13 from Africa) by Otani and Villanueva (1988) among others, identified the domestic savings ratio as a very important contributory factor in the growth performance of these countries. This goes to buttress the significance of savings in the growth process and the need to conduct studies aimed at improving the mobilisation of such savings.

Domestic savings are made of (1) public savings (government savings plus retained profits of public enterprises), and (2) private savings. Public savings are
those that are made by government at all levels including those of state enterprises. Private savings, on the other hand, refer to savings made by private corporate enterprises and households. In many developing countries, public savings more often than not constitute an insignificant proportion of total domestic savings due to structural problems in the economy. For most African countries, therefore, there is a dominance of private savings in total savings.

The informal sector in these countries plays a crucial role in mobilising private savings. The informal financial sector refers to economic activities which are involved in mobilising financial and non-financial resources and/or in lending those resources, but which are neither registered nor directly amenable to control by monetary and financial policy instruments (Chipeta and Mkandawire, 1992). In the informal sector, savings are deposited with savings and credit associations, and rotating savings and credit associations (ROSCAs).

1.2. Statement of the Problem

Sierra Leone’s growth performance in the last three decades has been dismal with savings and investment too low to spur sustainable expansion in output. The country has a lower growth rate than other Sub-Saharan African countries, and

---

2 These are mutual savings associations found in many parts of Africa, South America, the Caribbean, Middle East and South Asia.
this has declined overtime. The saving rate is also one of the lowest in the African region. The average gross domestic saving rate was 7.4 per cent between 1986-1990 and 6.0 per cent of GDP between 1991-1995, highlighting a problem of declining savings in the economy (see Table 1.1 below). This restricts the country from undertaking ambitious development programmes that its present state of underdevelopment requires.

Table 1.1: Gross Domestic Savings as a percentage of GDP

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<tbody>
<tr>
<td>Sierra Leone</td>
<td>14.0</td>
<td>6.7</td>
<td>2.9</td>
<td>-7.0</td>
<td>7.4</td>
<td>6.0</td>
</tr>
<tr>
<td>Gambia</td>
<td>8.5</td>
<td>7.0</td>
<td>5.6</td>
<td>3.5</td>
<td>8.2</td>
<td>6.7</td>
</tr>
<tr>
<td>Botswana</td>
<td>28.7</td>
<td>28.6</td>
<td>29.3</td>
<td>30.3</td>
<td>40.4</td>
<td>30.0</td>
</tr>
<tr>
<td>Africa</td>
<td>18.0</td>
<td>16.1</td>
<td>16.6</td>
<td>18.1</td>
<td>17.2</td>
<td>17.7</td>
</tr>
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With the savings-investment gap widened, the country has increasingly relied on external resource flows to finance its capital formation. Such an over reliance is not sustainable not only because of the decline in concessionary capital caused by donor fatigue and increased competition for these resources, but also the tendency for the external debt to keep rising without concomitant increases in the country's capacity for debt servicing. An increase in the average national saving rate is therefore needed to enhance investment and accelerate the pace of economic development without incurring unsustainable external indebtedness.
Table 1.2: Key Economic Ratios and Long-Term Trends

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<tr>
<td>Gross Domestic Product</td>
<td>703.2</td>
<td>1202.7</td>
<td>883.8</td>
<td>823.9</td>
</tr>
<tr>
<td>(million US$)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Domestic Investment</td>
<td>12.5</td>
<td>10.2</td>
<td>8.3</td>
<td>5.7</td>
</tr>
<tr>
<td>/GDP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross National Savings</td>
<td>2.8</td>
<td>4.1</td>
<td>-10.1</td>
<td>-15.8</td>
</tr>
<tr>
<td>/GDP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Account Balance</td>
<td>-10.7</td>
<td>-6.1</td>
<td>-18.3</td>
<td>-21.5</td>
</tr>
<tr>
<td>/GDP</td>
<td></td>
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Average annual growth

<table>
<thead>
<tr>
<th></th>
<th>1974-84</th>
<th>1985-95</th>
<th>1994</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Domestic Product</td>
<td>2.3</td>
<td>2.0</td>
<td>3.5</td>
<td>-10.0</td>
</tr>
<tr>
<td>GNP per capita</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Domestic Investment</td>
<td>0.2</td>
<td>-1.7</td>
<td>-0.9</td>
<td>-7.9</td>
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<td></td>
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Source: World Bank, 1996

1.3 Justification of the Study

In recent years the need to understand the various factors influencing savings behaviour in Sub-Saharan African countries has assumed greater significance given the decline in finance available to these economies from abroad. There is need to enhance the mobilisation of domestic savings, given the declining trends in external capital flows, declining export receipts and mounting external debt in Sierra Leone, leading to severe constraints in resources required for development purposes.

Domestic private savings are at the centre of ongoing concerns for the economies of most developing countries, and Sierra Leone is no exception. Several factors
allegedly influence savings. It requires empirically identifying and analysing the various factors influencing savings in the country. This will help in proposing appropriate policies needed to encourage the mobilisation of domestic private savings. Besides, very little attention has been devoted to the motivating factors that influence private savings in Sierra Leone in the current economic literature. The scanty nature of empirical literature on private savings in Sierra Leone also provides justification for the study.

1.4 Research Objectives

The principal objective of the study is to determine the factors that influence private savings behaviour in Sierra Leone. Thus, the specific objectives include the following:

• to investigate, empirically, the determinants of private savings in the economy of Sierra Leone;

• to determine the role of the informal sector in mobilising savings;

• to establish the existence of linkages between formal and informal financial sectors and their significance for savings mobilisation; and

• to propose policy recommendations that will be useful for generating and sustaining savings mobilisation.
1.5 Hypotheses Tested

There are two testable hypotheses in this study. These are:

- That interest rate, income, and the level of financial development positively affect the private saving rate.
- That foreign saving, population dependency ratio and government savings impact negatively on private savings.

In addition to these, we seek to know whether the informal financial sector has a potential for mobilising private savings and whether increasing the linkages between the formal and informal financial sectors increases private savings.

1.6 Methodology

In order to achieve the above, two approaches are used. The first is through econometric analysis employed to test the hypothesised relationships in the testable hypothesis. The second is the rapid assessment survey method aimed at assessing the informal financial sector's potential to mobilise savings, and to determine the existence of linkages between the formal and informal financial sectors.
1.8 Organisation of Thesis

The thesis is organised into five chapters as follows. Chapter 1 is an introductory chapter giving the general background of the study. Chapter 2 discusses savings in Sierra Leone. Chapter 3 gives the literature review examining the determinants of domestic private savings in developing countries. The methodology adopted, data considerations and analysis of empirical results are presented in Chapter 4. Finally, Chapter 5 presents the summary conclusions and policy recommendations.
CHAPTER TWO

THE SIERRA LEONE ECONOMY AND THE STATE OF SAVINGS

3.1 The Sierra Leone Economy

Sierra Leone is a small country located on the West Coast of Africa with a land area of approximately 72,000 square kilometres and a population estimated at 4.5 million in 1995. It is bordered by Liberia to the south-east, Guinea borders it to the north and east, and a coastline of 570 kilometres border along the Atlantic Ocean. About a third of its 4.5 million inhabitants live in the urban areas. The country is endowed with substantial mineral resources - diamonds, rutile, bauxite, gold and iron ore as well as rich agricultural and marine resources.

Though small and endowed with tremendous natural resources, Sierra Leone is characterised by an extremely high incidence of poverty, physical under development and marginalisation. This is reflected in the country's consistent
ranking on the lowest scales of the UNDP Human Development Index since 1990.

This, essentially, is Sierra Leone’s development problem: a pronounced failure to harness abundant human and natural resources for sustainable human development in spite of incipient gains at independence vis-a-vis other Sub-Saharan African countries.

Sierra Leone’s economic prosperity, was, since independence, based on mining of diamond and iron ore. While these exports grew, the economy prospered. When they began an irreversible decline, prosperity changed to stagnation and then to decline. Diamond exports peaked in 1970 at just over two million carats and iron ore reached its maximum a year later with a volume of 2.6 million tons. The general inflation in product prices during the 1970s disguised the fall in the volume of mineral exports, but import prices rose more.

With the stagnation of the mining sector, the agricultural sector dominates the economy, accounting for 42 percent of GDP in 1995. Three quarters of the land area is suitable for agricultural production. Agricultural activity that is characteristically subsistence smallholding is based on rudimentary technology. Its main sub-sectors are crop production (cocoa and coffee, among other crops), livestock, forestry, and fisheries. Close to 80 percent of the labour force is absorbed by the agricultural sector.
The manufacturing sector is underdeveloped accounting for 6 percent of GDP as at 1995 (World Bank, 1996) and about 10 percent of employment. It includes both modern factories that produce consumer goods with a high import component and small-scale and handicraft establishments. The small and medium scale enterprises are numerically dominant, operating mainly in the informal sector.

Mining is the second most important economic activity in Sierra Leone. Mineral production accounts for 10 percent of GDP, 14 per cent of employment, and 90 percent of export earnings. The mining sector comprises a capital-intensive enclave and substantial alluvial operations. Services, consisting mainly of trade and related activities, constitute 31 percent of GDP in 1995 (World Bank, 1996).

Despite an impressive mineral wealth, ample land, and rich fisheries, Sierra Leone is one of the poorest countries in the world. The population living in poverty between 1989-94 is 75 percent (UNDP 1997). During the period 1987-93, per capita real GDP in Sierra Leone declined 0.6 percent a year.

The income distribution is markedly uneven in Sierra Leone. In the last few years, poverty has deepened mainly due to a population growth rate of 2.6 a year and a massive influx of refugees leaving the volatile Liberian border.
According to the poverty profile of Sierra Leone published in 1996 (Government of Sierra Leone, 1996), more than 80 percent of the population are 'moderately poor' living below the poverty line of one dollar a day in 1989/90. More than 60 percent of the population constitute the 'core poor', living on less than a dollar a day. 57 percent of the poor are in the rural areas, 24 percent in large towns and the rest in small towns. This shows that poverty is more common in rural areas than in urban areas. Poverty is high in polygamous households where 8 out of every 10 persons are poor (UNDP, Sierra Leone, 1997).

The human development indicators provide further evidence of the state of poverty in the country. Human resource development has been neglected for many years in Sierra Leone. Infant mortality is one of the highest on the continent (162 per 1000 live births) and life expectancy at birth is quite low (33.6 years). Population not expected to survive to age 40 is 52.1 percent of the population as at 1990. Safe drinking water, access to basic health services, and sanitation are beyond the reach of the majority of the population, especially in the rural areas. About 62 percent of the population do not have access to health services between 1990 and 1995, and 66 percent of the population lack access to safe drinking water for the period 1990-96. Urban living conditions are extremely difficult, and rural villagers struggle to remain at subsistence levels. Primary school enrolment is among the lowest in the African region and illiteracy rate of the population age
15+ is 79 percent. In 1997 the UNDP ranked Sierra Leone at the very bottom out of 175 countries on its Human Development Index.

3.1.1 The Macroeconomic Situation

Brisk economic performance in the first decade after independence in 1961, with a growth rate of national income of nearly 4 percent a year gave way to a slower growth rate of 1.5 percent in the 1970s. By the 1980s GDP growth rate was virtually nil, and by the end of that decade, it turned negative.

The country’s rates of economic growth declined as export earnings fell drastically while the import bill continued to rise. The country recorded an average annual growth of 2.6 percent between 1986-1990 and 0.4 between 1991-1995 (ADB, 1997). Exports slumped by 55 percent during 1995-1996 while imports rose by 19 percent. The decline in agricultural production and the adverse terms of trade have meant a reduction in incomes. These have consequently reduced savings as the agricultural sector employs a majority of the working population.

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3 Central Statistics Office, Sierra Leone.
In addition, the low level of disposable income of people employed in the formal sector leads to the low level of per capita income which was $150 in 1994 (World Bank, 1996). It is in general argued that private savings are low due to smuggling and social tolerance for conspicuous use of illegitimately acquired wealth. Public savings are almost non-existent because of the ever-rising public expenditure and stagnation in revenue realisation. Table 1.2 in chapter 1 gives a clear indication of the state of the economy for the past two decades.

The serious difficulties that the economy experienced in the 1980s, despite its rich resource base, are attributable to both external shocks and inappropriate domestic policies and strategies. Factors such as heavy external indebtedness the sharp fall in the world market prices for the main agricultural products and the deterioration of the mining sector contributed to the economic malaise. These led to extra-budgetary expenditure, inflation, capital flight, an expanding informal economy, large scale smuggling, and the breakdown of the administrative machinery of government.

Major cuts in capital expenditure followed. Investments in new social and physical infrastructure came to a halt leading to the rapid decay of the existing facilities with chronic shortages in essential services like health, education, water, transportation, and electricity. Basic imported commodities - rice and petroleum, and manufactured imports - became very scarce. Parallel markets for rice and
petroleum and foreign currency developed. The declining real wages and shortages of materials and supplies led to a demoralised civil service. Inflation which adversely affects the poor by reducing the purchasing power of their income, accelerated, reaching a record high of 170 percent a year in 1986-1987\textsuperscript{4}. External payments arrears accumulated and international reserves were depleted. Thus, the gains of the early years of independence were systematically eroded subsequently leading to a sharp deterioration in living standards.

The macroeconomic imbalances that characterised the economy went along with significant increase in consumption. Hence the country has not been able to invest a substantial proportion of its national income. The country invested very little via domestic savings with most of the investment largely financed from external sources. The resource gap therefore widened over time increasing from US -$3 million in 1975 to US -$28 million in 1985 and to an alarming US -$121 in 1995\textsuperscript{5}.

To crown it all, the country's rich mineral resources were either grossly underused or were used to generate income that continued to escape official channels. Pervasive government attempts to manipulate the exchange rate through exchange controls created more problems than they were meant to solve. Invariably by the late 1980s, the economy became practically unmanageable.

\textsuperscript{5} Bank of Sierra Leone Bulletin, 1996.
In a bid to arrest the deteriorating social and economic environment, the government in the late 1989 initiated a comprehensive reform programme with the IMF and the World Bank. This was aimed at stabilising the economy through fiscal, monetary and exchange rate policies; improve fiscal management by enhancing the efficiency of revenue collection and improve accountability in the public sector. The programme was also aimed at achieving private sector led growth and poverty alleviation.

The influx of nearly 200,000 Liberian refugees and Sierra Leone’s participation in the West African peacekeeping initiative exerted pressure on government revenue. The rebel incursion into the eastern and southern parts of the country that followed in March 1991 and subsequent guerrilla activities have left nearly half of the country’s population displaced internally or ended up as refugees in neighbouring countries. Poverty was also aggravated as most of those who were involved in subsistence farming had to flee their homes in fear of the atrocities of the war.

Consequently, alluvial diamond mining was curtailed, and rice production as well as that of cocoa and coffee exports were drastically reduced. The exchange rate depreciated due to falling foreign exchange earnings following the disruption or discontinuation of mining activities. This imposed additional strains
on the economy and thus constrained the economy from responding meaningfully to the reform measures.

The inflow of foreign capital to finance productive investment in Sierra Leone has been on the decline. Economic activities in the rural areas have been depressed as a result of the ongoing rebel war which has imposed a serious setback particularly to agricultural and mineral production which have declined considerably. Consequently, the possibility of increasing the country's export earnings from the exportation of these commodities has diminished.

3.2 Institutional Framework for Savings Mobilisation in Sierra Leone

As in many countries, savings are mobilised through the financial sector - formal financial sector (the banking system) and the informal financial sector (rotating savings and credit associations). Sierra Leone's formal financial sector (which is concentrated in Freetown, the capital) is rudimentary by any estimation, that is, in terms of the scope of services offered, total outreach or degree of intermediation. The sector consists of the Central Bank (Bank of Sierra Leone), four commercial banks (Barclays, Standard Chartered, Union Trust, and Sierra Leone Commercial Bank), two development banks (National Development Bank and the National Co-operative Bank), four rural banks, and thirteen insurance companies.
Supplementing the activities of these institutions, the post office offers banking services on a small scale, primarily the acceptance of savings deposits.

In the 1980s, numerous controls and weak institutions sowed the seeds of inefficiency and financial distress. This scenario was further complicated by inadequate supervision. As a result, banks became overexposed and undercapitalised, thereby undermining the viability of the entire system. The fragility of the financial system was manifested by the growing contamination of loan portfolios, significant losses, liquidity crisis and interest rate stickiness. Like the rest of the economy, Sierra Leones's financial sector deteriorated during this period.

The Bank of Sierra Leone's efforts in domestic capital resources mobilisation has mainly been focused on Open Market Operations (OMO) activities, that is, treasury bills and bearer bonds operations. The Bank, before the military coup in May 1997, operated a system in which it issued on behalf of the Government short and medium-term securities (treasury bills and treasury bearer bonds respectively) to banks and non-bank public. At the weekly auction for treasury bills, market forces determine the discount prices of the security instrument, whereas for the treasury bearer bonds auctions, a single interest rate cleared the market.
The monetary policy of the Central Bank has had no effect on the interest rate structure. For the Central Bank to transmit the impulses of its monetary policy, the financial market needs to be developed. There is practically no such market worth talking about in the country. The financial markets are at a rudimentary stage in Sierra Leone, with only a few commercial banks constituting an oligopolistic structure (BSL, 1996). Additionally, the Central Bank has not been given any responsibility for the institutionalisation of savings and investment.

The economy is characterised by tremendous dis-investment since the 1980s. Thus there is the pervasive situation of consumption being an exorbitant proportion of GDP. The bulk of foreign savings are used to finance consumption activities, leading to a general fall in savings, especially by households. The government, in a bid to arrest this trend, liberalised the financial market and restructured the banking system to raise interest rates thereby inducing private investment. The administrative fixation of interest rates was done by the Central Bank before the liberalisation of the financial market in 1989. After financial liberalisation, the Central Bank gave up administrative fixation of the interest rates - both on the deposit and on the lending side. The five commercial banks decide the rate based on an assessment of their needs and market constraints. Deposits mobilised by the existing commercial banks in the country constitute the major source of domestic capital for investment, particularly in the urban areas of the country.

6 It is oligopolistic in nature since only two out of the five commercial banks account for 70 per cent of
The bulk of national resources are mobilised by the private sector. The public sector has not played any major role and contributes little or nothing to investment finance, even though it is potentially an important source of savings. The government has been a net dis-saver since the late 1960s (Bank of Sierra Leone Bulletin 1996.)

Savings in the form of premiums collected from holders of insurance policies are being mobilised by the various insurance companies operating in the country. Part of the income from private savings generated by the insurance companies from policyholders is invested in government securities, especially treasury bills issued by the Central Bank.

The Post Office Savings Bank (POSB) that was established to foster the mobilisation of savings and to encourage thrift in the society has a network of offices throughout the country. Available information on the operations of POSBs indicates that these banks in recent times have been playing an important role in the mobilisation of savings in the country.

Rural banks are private unit banking institutions based in the rural areas which mobilise financial resources and control and extend credits to farmers, cottage deposit and allowances.
industrialists and other rural-based economic operators in their defined areas of operation. They have no branches but operate through a network of agencies.

In addition to the existing formal financial institutions, informal organisations are also engaged in savings mobilisation in Sierra Leone. These informal organisations abound in Sierra Leone and nearly all adults belong to at least one savings group, commercial organisation, or family financial network. These organisations are the osusu groups and savings and credit cooperatives (SSCs) that raise savings from members and make loans to them. The osusu functions as a depository for savings while the savings and credit association allows members to save and earn profits. However, the SSCs are not common in Sierra Leone. What is common is the osusu arrangement.

The osusu groups are savings groups often composed of people who know one another through family, ethnic, or professional relationships. A manager who acts as a money collector and as a payment enforcer heads each osusu. Every osusu member is required to deposit a fixed amount in a common pool on a regular basis. The leader usually collects and disburses the money based on what was agreed upon between the members.

7 This is the local version of the ROSCAs in Sierra Leone. This form of savings started in the 1950s. However, the only documented evidence of it is from Banton (1957), who studied the practice in the 1950s.
The next chapter gives the literature review examining the determinants of domestic private savings in developing countries.

among residents of Freetown and lately, by Conteh (1995), who studied the role of ROSCAs in Sierra Leone.
This chapter deals with how economic theory generally perceives saving and reviews works that have been devoted to this phenomenon in the economic literature. The section therefore seeks to bring out the determinants of savings based on the empirical literature. The section is divided into two: the theoretical background and determinants of savings.

2.1 Theoretical Background

Savings represent the part of one's current income not spent on current consumption and constitute a large part of a nation's aggregate savings and investment. The aggregate saving rate, the fraction of national income that is not spent on current consumption has, long been widely regarded as a key factor in economic growth. Economic literature has identified various motives for saving. This include the motive of smoothing out consumption over time as indicated in the life-cycle hypothesis, the bequest motive where the current generation saves
to provide for their heirs, the precautionary motive against unforeseen circumstances and speculative motive induced by the investment opportunities available and rate of returns.

The theory explaining savings was for long dominated by the Keynesian approach which postulates that savings are determined largely by disposable income. According to Keynes' absolute income hypothesis, the average propensity to save rises with per capita income at least in the short-run. In this hypothesis, consumption is a positive function of income and saving is positively related to income, as it is a residual of income after consumption. His theory did not however include interest rate, which has become a controversial factor in determining modern savings behaviour.

However, the most commonly utilised frameworks for analysing household savings behaviour are the permanent income hypothesis and the life cycle model due to Milton Friedman and Franco Modigliani respectively.

The permanent income hypothesis postulates that savings are a function of permanent income, which can be proxied by the weighted average of past levels of income, or the growth of income.
The life-cycle hypothesis predicts that given the intertemporal nature of the savings process it is the lifetime income of the individual and not just the current income as implied in the Keynesian consumption function that should influence current savings. The hypothesis postulates that as income earnings are low in early life, high in mid-life and low in retirement, savings thus follow the same pattern in order to smooth consumption. The life-cycle model suggests a higher rate of saving during certain periods, e.g., in pre-retirement years in order to provide for consumption in old age.

The hypothesis also predicts that the rate of growth in per capita income and stock of wealth affect the rates of savings and consumption. In addition, other determinants include various demographic factors such as life expectancy, the normal age of retirement, age distribution, family size and the share of the population that is of working age and employed. It is worth noting that no one theory captures all the variables that affect private savings.

McKinnon (1973) and Shaw (1973) postulated the financial repression theory. The McKinnon and Shaw doctrine argued that in countries characterised by "financial repression" raising interest rate relative to inflation would increase savings and the supply of investable resources in an economy. According to these two economists, financial repression arises mostly when a country imposes ceilings on nominal deposit and lending rates at low levels relative to inflation. The low or
negative real interest rates that results discourage savings mobilisation and the channelling of the mobilised savings through the financial system. This has a negative impact on the quality and quantity of investment and hence on economic growth.

However, the impact of real interest elasticity on private savings has been the subject of many debates. Despite this the impact of interest rate on household savings remains ambiguous. In economic theory, the influence of real interest rate on saving depends on the relative strength of the offsetting substitution and income effects. Higher interest rates increases the opportunity cost of consumption, hence households will increase their savings as future consumption becomes cheaper relative to current consumption (substitution effect). At the same time higher interest rates increases the wealth of positive savers, hence their consumption increases thereby reducing the savings necessary to purchase a given amount of future consumption (income effect).

Thus the net effect of an increase in interest rate depends on the interplay between the substitution effect and income effect, working in opposite directions. The Mckinnon and Shaw doctrine therefore postulates that under conditions of financial repression the substitution effect dominates the income effect.
Household savings are usually the largest component of domestic savings in developing countries, especially the lower-income, predominantly agricultural least developed countries (LDC's). Households will consider, among other things, the safety, stability and yield from surrendering their purchasing power in making their surplus resources available to investors. In giving up present consumption, the expected yield from future consumption must be sufficient to compensate them for whatever is lost now. A number of factors need to be taken into account in deciding to forego present for future consumption. For example, where interest rates are low or negative, as is the case in many developing countries, it becomes more difficult to want to postpone consumption in the present to a future date.

Development economists writing in the context of the "two-gap" model of economic development ascertain that foreign assistance was essential if least developing countries (LDCs) were to break the savings deadlock and achieve some meaningful economic progress. But the experience of many LDCs in the last three decades has, however, brought the view of the complimentary and essential role of foreign capital under severe scrutiny. In developing countries, quite unlike developed countries, where consumption is an exorbitant proportion of GDP, foreign savings may not be positively correlated to domestic savings and in turn to domestic investment.
While foreign savings have traditionally been regarded as complementary there is now a contention that they may partially or fully crowd-out domestic savings. This implies that foreign savings will on average act as a substitute to domestic savings by easing liquidity constraints. This argument is valid for a country where foreign borrowing, instead of financing investment, finances consumption, which imply lower domestic savings. This contention is very controversial and can only be resolved empirically.

Studies on savings behaviour in LDCs have centred on analysing total domestic savings or total national savings without distinguishing between private and public savings. The use of aggregate savings obscures the fact that an important relationship might exist between private and public savings. According to the so-called Ricardian equivalence the effect on national savings is the same whether a government deficit is financed by current taxes or by borrowing from the future. In other words, it does not matter whether a deficit is financed by taxes or by government borrowing. When the deficit is financed by government sale of bonds, this creates current government dissavings and imposes a tax liability on future generations.

The Ricardian equivalence assumed that if individuals are altruistic toward their children, the current generation will have adjusted its private savings to completely offset the increased tax liabilities of future generations caused by
increased public dissavings. The aggregate savings will be the same if instead taxes are imposed on the current generation to finance the deficit. In this case individuals will respond to the increased public savings by lowering their savings, in anticipation of lower taxes in the future.

This in simple terms suggests that variations in government savings can be neutralised by opposite movements in private savings (an inverse relationship is assumed between the two). Including government savings as an explanatory variable in the private savings function is therefore necessary to determine the relationship that exists between government savings and private savings.

In many LDCs, the population structure has also been seen as an influencing factor in mobilising savings. In the life cycle model, the age composition of the population is postulated to have a significant influence on household savings. While the youth and the elderly have low incomes and low savings, those in the middle age have higher incomes and save more to repay past obligations and to finance their retirement. Rapid population growth will increase the proportion of the youth and may adversely affect savings unless an increase in income or a decrease in consumption by the working population offsets it.

The postulated inverse relationship between private savings and dependency ratio meant that rapidly growing populations are characterised by high ratio of
dependants (young people) to the working age population who, because they contribute to consumption but not production, impose a severe constraint on society's potential for saving. In like manner, people in the very high age group are seen as putting a strain on society's resources without making a concomitant contribution to production. The life-cycle model predicts an inverse relationship between the private savings rate and the dependency ratio. This holds only if the life-cycle motive for saving to finance retirement is important. Where the bequest motive is very strong among the elderly, there may actually be a positive relationship between private savings and the dependency ratio.

2.2 Determinants of Savings in Developing Countries

2.2.1 Empirical Studies

There has been an extensive review of the determinants of savings in the literature of both developed and developing countries. Studies on savings behaviour in developing countries have identified variables such as the level of national income, real interest rates, some measure of capital inflows (which could be considered as foreign savings), demographic structure and government savings as important determinants of private savings.[see Mwega (1995)].
The central role that savings play in the development process has given rise to a number of studies mainly geared at investigating, empirically and otherwise, the determinants of savings in developing countries. A summary of the results of some of these studies is presented below:

Many factors allegedly influence savings behaviour. The rate of interest is prominent among these factors. Mikesell and Zinser (1973) first reviewed the effects of interest rates on savings in developing countries. Before this, only two published studies on the subject were available. The two studies are by Williamson (1968) and Gupta (1970) who examined the relationship between interest rate and savings. Williamson working on six Asian countries and using time series analysis found the interest elasticity of savings to be negative whereas Gupta found it positive and statistically significant at the 1-percentage level for India. Both studies used the real interest rate as explanatory variables while the dependent variable was private savings.

Brown (1973) in his study of the Korean economy employed the real interest rate and alternatively the nominal interest rate and rate of inflation combined as explanatory variables. The dependent variable was the ratio of private savings to private disposable income. His study concluded that the coefficients of the real interest rate and nominal interest rate were positive and statistically significant at the 1-percentage level.
There has been no consensus in the literature on the impact of real interest rates on aggregate savings. By far, the most extensive and controversial of all studies is that of Fry who has consistently found support for a positive effect of real interest rates on savings (cited in ECA, 1992). Fry (1978, 1980) using 1960 pooled time series data found aggregate savings significantly interest elastic in 7 Asian countries. Fry (1981) in a study of Turkey also showed savings responding to real interest rates. In this study the interest rate coefficient was positive and significant.

The main criticism or deficiency of Fry’s work has been the inability of researchers to replicate his results under similar circumstances. Giovannini (1983) re-estimated Fry’s equation for a later period using domestic rather than national savings but did not find a significant coefficient for the interest rate. Later, in 1985, he re-estimated Fry’s equation for the original period but omitting observations for Korea for the years 1967 and 1968 and found that this eliminated the statistical significance of the real interest rate variable. But this finding may not in any way be disproving Fry’s as the two studies used different forms of savings.

Later, Gupta (1984) estimated saving functions for twelve Asian countries separating financial savings and savings in physical assets to test the hypothesis
that increased rates of interest will affect financial savings positively and physical savings negatively. His explanatory variables included permanent income, transitory income, expected inflation, unanticipated inflation, the nominal interest rate, and the financial intermediation ratio. The interest rate variable coefficient was positive in 9 countries for the financial saving equations but significant in only 3 cases. In the physical savings equation, the coefficient of the interest rate variable was generally negative. In four cases, the coefficient was statistically significant.

Again in 1987, Gupta analysed separately countries from Asia and Latin America using pooled cross-section and time series data for the 1967-1976 period. He regressed gross national savings on nominal interest rate, permanent income, transitory income, the expected rate of inflation, the financial intermediation ratio and an inflation uncertainty variable. While a positive and significant interest rate coefficient was reported for Asian countries, in Latin America the variable was found to be insignificant which highlight, the problems of pooling data across geographical areas.

Empirical literature on the effect of real interest rate on private savings in Africa is scanty. From the few studies available, the results have been mixed. In a study reported by the joint ECA/ADB Economic Report on Africa (1987), the level of
income, external capital inflow, nominal interest on deposits, exports and total tax revenue are found to be determinants of savings.

Mwega, et al (1990) studied the impact of real interest rate on the mobilisation of private savings in Kenya for the period 1966 to 1985. The study aimed at testing, within Kenya's institutional framework, the Mckinnon-Shaw hypothesis that an upward adjustment in real deposit rates significantly increases the private sectors' financial and non-financial savings, which are then utilised to support a high level of credit supply and investment in the economy. The result of this study failed to support the Mckinnon-Shaw hypothesis and rather found the private saving rate and the real demand for money to be non-significantly responsive to a representative deposit rate of interest.

ECA (1992) conducted a study aimed at understanding the various magnitudes that affect banks in the mobilisation of private savings in a sample of 22 selected African countries. The study covered the period 1971 to 1990 and used pooled series and individual country regressions. The gross domestic savings ratio was the dependent variable while the explanatory variables were per capita income, real interest rate, real effective exchange rate, population per bank branch and lagged gross domestic savings rate.
The results of the analysis generally showed that the real domestic interest rate was not very significant in explaining changes in the saving rate. Out of the sample of 22 countries, the variable is positive and significant in only 6 countries and positive in another 7 countries. Real per capita income and real effective exchange rate had noticeable impact on aggregate savings. In Sierra Leone, which was one of the countries studied, the real interest rate variable was significant at less than 10% level but wrongly signed. Per capita income was neither significant nor rightly signed while the real effective exchange rate variable, though rightly signed, is barely significant at the 10% level.

Soyibo and Adekanye (1992) undertook a study on the Nigerian economy to test the validity of the hypothesis that financial conditions do matter in savings behaviour. From their study they came up with the finding that positive real interest rate impacts positively on savings. The study also established that the determinants of savings in Nigeria are lagged aggregate savings ratio, lagged aggregate savings, current Gross Domestic Product, foreign savings and expost real interest rate.

Khan (1993) analysed savings behaviour in Pakistan for the period 1959 to 1988. He used the financial ratio (Fr), to represent financial development. He included Fr (defined as the ratio of broadest money M3 to GNP), transitory income, permanent income, expected inflation, unanticipated inflation, nominal returns
on deposits and inflation variability or price uncertainty as explanatory variables and the aggregate savings as the dependent variable. Using econometric analysis, the study identified the causes of low savings to be the existence of financial repression and the lack of financial development.

Mwega (1995) investigated the factors influencing the private saving rate in a sample of LDCs for the period 1970-1993. He also analysed whether the average saving behaviour of Sub-Saharan African (SSA) countries differs from that of other LDCs with respect to the behavioural coefficients and the initial economic conditions that characterised the region. Employing ordinary least square (OLS) estimation technique and a homoscedastic consistence variance-matrix, he found that private savings behaviour in SSA is influenced by the dependency ratio, level of per capita income, economic growth, terms of trade, growth, and the public savings rate. The study also found that Africa has a larger and more robust per capita income growth effect while the public savings offset coefficient is smaller than in other LDCs.

Reichel (1997) studied the impact of negative interest rate in Nigeria. He estimated the interest elasticity of the savings rate. He introduced real income as an explanatory variable to capture the Keynesian absolute income hypothesis. He specified a lagged savings function in order to account for the sluggish adjustment of the savings rate. His findings were similar to those of other
researchers who found a positive but hardly significant interest elasticity of gross savings. The gross domestic savings are positively affected by the real interest rate although the corresponding regression coefficient is statistically insignificant. He attributed the low interest rate elasticity to the fact that the encouraging effect of rising real interest rates on private savings is partly offset by a depressing effect on business savings through the decreasing capacity for self-finance.

One thing that stands out in the literature reviewed is the controversies that still surround the relationship between real interest rate and savings. This may be due to the varying forms of savings used and on the focus of the study. Such a relationship needs to be studied for individual countries to see how it differs from country to country.

A study of the determinants of private savings in Barbados by Wood (1995), is of particular importance for this study since it was done for a small developing economy which shares similar characteristics with the Sierra Leone economy. The following rather long presentation of his methodology is justified by the fact that part of the methodology used by this study is largely drawn from his work.

Wood (1995) studied the economy of Barbados to investigate the various factors influencing private savings for the period 1965-1989. He employed the
cointegration technique to model private savings behaviour in the Barbadian economy. He followed three steps in this exercise as outlined below:

(i) He investigated the temporal characteristics of the variables in the savings function. This involved testing for unit roots to determine the degree of differencing required in inducing stationarity;

(ii) He formulated the static long run theoretical relationship and tested for a vector of cointegrated variables. He assumed that the normalisation is on gross private savings and used the Dickey-Fuller (DF), and Augmented Dickey-Fuller (ADF) and Cointegration Regression Durbin-Watson statistics to test for the stationarity of the error term in the static regression equation; and

(iii) Estimated the error correction or dynamic short-run representation of the relationship and tested for the adequacy of the resulting equation. This dynamic equation included the lagged error term from the estimated long-run equation, as a regressor, which measures the extent of deviation from the long-run equilibrium.

In general, the estimation results for the error correction model indicated that changes in income, government savings, foreign savings and labour market constraints (proxied by the unemployment rate) are significant in explaining
short-run variations in private savings. These variables together with the real interest rates have significant influences on private savings in the long run.

### 2.2.2 Institutional Arrangement

The financial structure of many developing countries has recently been the focus of attention due to the perceived role that it can play in mobilising domestic resources. This section summarises research findings demonstrating the importance of the institutional framework and the role and significance of the informal sector in private savings mobilisation.

The financial sector is supposed to perform four basic growth functions in the economy. These are the mobilisation of domestic savings, the efficient allocation of capital, the maturity transformation function, and the attraction of foreign capital (ECA, 1992). Efficient capital mobilisation requires reducing the cost of financial intermediation.

In reality, the fragmented state of domestic resources mobilisation and the resultant inefficient intermediation between savings and investment is one of the key bottlenecks for self-sustained development in Sub-Saharan Africa. Not only has the system been segmented into formal and informal sectors, but also, little
interaction has taken place among the formal institutions, inhibiting the financial system overall from actively contributing to the real sector economic development.

There is very little complementarity or competition in financial market relationships in Sub-Saharan Africa. Aryeetey et al (1994) found no de facto financial intermediation through on-lending by large enterprises to smaller subcontractors as occurred in some Asian countries (Biggs, 1991). This reflects the limited scope for forward and backward linkages in real sector activities in Sub-Saharan Africa.

Financial sector reforms so far have had little effect in closing this gap through existing institutions. Banks remain focused on large customers and the growing small enterprises get very little finance from informal sources (Aryeetey et al, ibid.).

It is expected that direct or institutional linkages will be reflected in flows of funds between formal and informal segments. Institutional or direct linkages should affect activities in various segments through the influence of the financial market. Both links are actually weak in most countries (Aryeetey et al 1997a).
Linkages between the formal and informal financial sectors in many African countries are insubstantial. The weak linkages between the formal and informal financial sectors have affected negatively resources mobilisation and financial intermediation. There is little sharing of information between formal and informal deposit mobilisers. Though there are indications that many operators of informal financial units use facilities made available by formal institutions, there is considerable variation in the scope of such interaction and the rationale behind it by type of informal unit [Aryeeetey et al (ibid.)].

In Ghana, most susu8 collectors involved in the 'Single-collector susu' system use deposit facilities made available by banks for safe keeping purposes (Aryeeetey and Gockel 1990). This serves as a linkage between the formal and informal financial sector that would be significant for the development of financial intermediation. The implication of such a relationship is that the banking system may provide an avenue for carrying out financial intermediation with informally mobilised deposit. This means that the intermediary role of the banking system is enhanced through a growth in the volume of deposit (a part of the money deposits) that originates from informal mobilisation efforts.

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8 This the local version of ROCSAs in Ghana.
Chipeta and Mkandawire (1992) found that out of a sample of 30 SCAs studied in Malawi, only seven deposited money at formal financial institutions. Out of these seven, 43 percent made use of the Post Office Savings Bank and 57 percent made use of commercial banks. These funds are deposited at banks for a short period of time, usually a month or two when lending to members stopped or was curtailed pending the distribution of the principal and interest among members.

Despite the fact that informal deposit mobilisers generally operate bank accounts, the banks are mainly used for safekeeping. Soyibo (1996) discovered that only 18 per cent of his total sample of informal lenders in Nigeria had no accounts with a bank. In Ghana, only 11 per cent of the sample of informal operators studied by Aryeetey (1994) had no bank accounts. Those with no accounts were mainly rotating su-su groups that had no need for such accounts, as they gave out whatever they collected immediately after collection. The use of bank facilities is generally more widespread among urban operators than among their rural counterparts, in view of the skewed distribution of bank facilities in some countries. In Malawi, only a third of informal deposit mobilisers (co-operative savings association) studied by Chipeta and Mkandawire (1996) have bank accounts.

It is generally not easy to measure the volume of informal deposits placed with banks. Informal operators are often the most frequent depositors that West
African bank branches have (Aryeetey et al 1997b). In Nigeria, Soyibo (1996) suggested that savings collectors make an average of 11 deposits and withdrawals in a month. Savings collectors make about the same number of deposits in Ghana, where they indicated that they went to their banks an average of three times a week (Aryeetey, 1994).

The excessive rules and regulations (including credit rationing) of the formal financial sector is perpetuating the enlargement of the informal financial sector in these countries. In addition, a great deal of effort was geared towards the provision of credit rather than the mobilisation of savings. These factors have led African countries to rely on foreign aid and relax its own resource mobilisation efforts (Bouman, 1977). If African countries are committed to the mobilisation of domestic resources, they can generate enough domestic resources to raise the rate of investment. Abebe (1995, pp 5) buttressed this point by noting that “no country is too poor to save if the available potential is effectively harnessed”.

2.3 Informal Financial Sector and Savings Mobilisation

In conformity with recent trends in the literature, informal financial sector is defined as economic entities which are involved in mobilising financial and non-financial resources and/or in lending those resources but which are neither
licensed or registered nor directly amenable to control by monetary and financial policy instruments. The various sets of formal financial institutions that have emerged in Africa have not been deeply involved in extracting the savings potential of the rural hinterland. Consequently, more and more people are seeking refuge in the informal financial sector. The financial difficulties faced by banks have led to a de-facto rationing of deposit withdrawals and have seriously circumvented the banks' capacity to engage in financing the economy.

In the African socio-economic environment, it is important to underscore that the great bulk of the population makes little use of formal savings institutions. Banking services are largely urban-based, and even in the urban areas, the number of people using modern banking services is limited. Also formal financial structures are transferred from abroad with little thought for the needs of the African saver (Abebe, 1995).

Quite unlike the formal financial sector, the informal financial sector's operations derive their rules from the country's culture and customs. Informal transactions are conducted based on trust and ultimate knowledge of customers.

Informal savings activities are widespread but generally self-contained and isolated from formal institutions [Bouman, (1995)]. While many of the traditional forms of savings and informal financial activities have existed for a long time in
many African countries, a dynamism has begun to gain momentum as the formal financial sector has failed to stimulate economic growth or respond to the need of real sector development, in particular, that of the private sector. Instead, it was observed that financial crisis permeated the formal system in many countries as the financial position of governments and many parastatals sharply deteriorated during the 1980s.

At present various thriving forces are operating on a visible scale within parts of the informal financial sector. In Ghana, the informal sector performs a dynamic role in savings mobilisation (Aryeetey, 1992). In Malawi and Tanzania the informal financial sector plays a more active role in lending, enjoying considerable comparative advantages over the formal sector in terms of accessibility, flexibility, transactions costs and low default rates (Chipeta and Mkandawire, 1992; Hyuha, Ndanshau and Kipokola, 1993).

The evidence attesting to the widespread use of informal finance in developing Africa is overwhelming. In Ethiopia, a non-institutional savings group known as *equb* brings savings and credit facilities down to the very poorest segments of the population. Mauri (1988) suggested that the sum of 393 million Birr which constituted the net savings of 13261 individuals accounted for 44.5 per cent of total savings deposited with the Commercial Bank of Ethiopia in July 1986.
Informal credit in rural Ghana is four to five times as important as formal credit. A *susu* collector at Yendi (in Northern Ghana) collected 1.6 million Cedis per month from his customers and another from Savelugu (also in Northern Ghana), collected 1.8 million Cedis. These figures compared with an average amount of roughly 10 million Cedis in rural banks, reveals how significant the savings mobilisation potential of the *susu* collector is9.

In Cameroon, Heidhues and Weinschenck (1986) noted that the *tontines* are likely to account for something like 75 per cent of rural financial assets and obligations. In Niger, the average member contribution of 56 tontines in 22 villages ranged from 100 CFA francs to CFA 25000 (US $70). The total size of all 56 *tontines*, as measured by member contribution per meeting, was equivalent of US $72000 suggesting a promising base for deposit mobilisation in rural Niger (World Development Report (1989)).

The emerging dynamism of the informal financial sector (IFFS) has not been transmitted to the formal financial sector through complimentary relationships and links in any significant scale. It is indeed true that the informal financial sector has continued to thrive out of a need to fill gaps in the financial system. In the absence of sufficient information and market signals, funds mobilised through the informal sector are rarely channelled into economic activities beyond a

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confined sphere. For example, most of the savings mobilised by *susu* collectors in Ghana from small-scale trading activity are channelled into the expansion of that sector only (Nissanke, 1994).

### 2.4 Overview

From the above literature survey, we postulate that private savings is generally influenced by factors such as real interest rate, level of income, external capital flows, population dependency ratio and government savings [see for example Mwega et al (1990), Mwega (1995), Soyibo and Adekaye (1992), ECA (1992), Wood 1995, Richel 1997]. Khan (1993) identified financial development among other variables, as an important determinant of savings.

All of these studies except that of Wood used the traditional econometric techniques, which assumes that variables are stationary (that is, have constant mean and variance and independent of time). In reality, however, most economic magnitudes are non-stationary which makes it impossible to obtain valid estimates if the stationarity of variables is not put to test. This justifies the adoption of Wood’s methodology.
Wood (ibid.) used the modern econometric technique of cointegration, which involves testing the variables of the model for stationarity. This is necessary in order to obtain valid estimation results from which better inferences could be made. The study therefore adopts the methodology of Woods (1995). This methodology is employed for studying the determinants of private savings in the Sierra Leone economy so as to enable us obtain valid estimates for the variables. This, it is expected, will enable us to make policy recommendations that will reflect the reality of the situation being studied.

It has also been seen that the informal financial sector can play a very significant role in mobilising domestic savings for most Africa countries. The survey has also indicated that the creation of better linkages between the formal and informal financial sectors would be significant for mobilising private savings in African countries where the financial market is so fragmented. Institutional factors such as income, accessibility, appropriateness of savings instruments and procedures are important in explaining saving behaviour [see Aryeetey and Gockel (1990); Aryeetey (1992, 1994, 1997); Hyuha et al (1993); Chipeta and Mkandawire (1992, 1996); Nissanke (1994); Nisanke and Aryeetey (1995); Abebe (1995); Soyibo (1996)]. This aspect will also be considered in this study.
The next chapter seeks to identify the factors that determine private domestic savings in Sierra Leone, using a regression analysis and a rapid assessment survey.
CHAPTER FOUR

METHODOLOGY AND EMPIRICAL ANALYSIS

The first section of this chapter presents the approach adopted in conducting this study and the analysis of the estimates obtained. The specification of the model used and the scope of the study are given in this section. The second section deals with the empirical analysis.

4.1 Section A: Methodology and Model Specification

In this section, we present the methodology used to accomplish the objectives of the study. We also look at the data used and how the variables are defined for the purpose of the study.
4.1.1 Methodology

As stated in the objectives, the main focus of this study is to examine the determinants of private savings in Sierra Leone. Thus, both econometric analysis and the rapid assessment appraisal approaches are used as suitable analytical frameworks for the study.

4.1.1.1 Cointegration Technique

Concerning the regression analysis, the recent developments in cointegration and error correction technique used by Wood (1995) will be adopted. Cointegration defines the long-run relationship among a group of time series variables. Thus variables are cointegrated if they are subjected to the same long-run influences. Behind the cointegration technique lies the idea that some non-stationary variables may drift apart in the short-run but may eventually converge toward equilibrium in the long run. This technique allows the researcher to separate the long run equilibrium relationship generally postulated in economic theory from their short run dynamics. It is well known that much of the asymptotic results that economic researchers rely on to form judgement about the estimation of economic relations from time series data assume that the variables are stationary.
However, it is equally well known that time series data are frequently not stationary. Series are stationary when they have a constant mean, constant variance and constant covariance, all of which are independent of time. This is usually established by unit root analysis.

Nonetheless, even if a set of variables is non-stationary, there may exist a linear combination of that set that is stationary. Such a set would then be cointegrated. There is cointegration when, although a set of variables might vary with time, they move together over time and require the same order of differencing to achieve stationarity. For the two variable case, there is cointegration when the ordinary least squares (OLS) estimator yields an estimate of the slope coefficient that is a consistent estimator of the long run relationship between levels in the two variables, with no need to resort to either lagging or differencing. In the multivariate case, the residual from the regression in the levels of the variables should be stationary. Such a regression equation would then form a cointegrating equation and valid inferences about the long run could be drawn from its estimation (Worrell and Scantlebury-Maynard, pp. 233). However the short run dynamics would have to be determined otherwise, as would be discussed later in this chapter.

The method of ordinary least squares is used to estimate all equations. The process of estimation follows a similar path as outlined in Wood (ibid.). We estimate three
equations: one for unit roots using the Dickey-Fuller test, one for the cointegration model using ordinary least squares (OLS), and another for the error correction model to get the dynamic equation for the study period. The importance of using an error correction model relationship with this theoretical model pivots on the perception that it captures both short- and long-run dynamics. The Engle-Granger representation theorem establishes that if a set of variables is cointegrated, it will have an error mechanism that will ensure an adjustment process in which the errors in the long-run relationship do not grow over time. Simply put, the short-run dynamic relationship will converge with the long-run relationship.

We will start by testing for unit roots using the Augmented Dickey-Fuller (ADF) test. After verifying stationarity by testing for unit roots, we will then regress the levels of the series using annual data for the period 1967-1995. After testing the levels of the variables for stationarity as indicated by the ADF statistics, and also for cointegration, we will then explore the dynamics of the savings model through an error correction model.
4.1.1.2 Rapid Assessment Method

To ascertain the factors influencing informal savings behaviour and the scope and role of the informal sector in mobilising savings, a rapid assessment study was carried out. This approach also helps to establish the linkages between the formal and informal financial sectors. It involves simple techniques based on observations and interviews. The rapid assessment appraisal is adopted to give a better picture of the institutional issues mostly ignored in several studies.

The exercise involved discussions with osusu group members about their savings behaviour, and guiding them in giving their own responses about their savings pattern and the motives and also their interaction with the formal financial sector. The general purpose of this is to understand the impact of institutional issues in mobilising domestic private savings and ultimately to recommend ways of instituting some linkage between these institutions. This will assist to underscore the qualitative variables that influence private savings behaviour in Sierra Leone.
4.1.2 Data Specification and Scope of the Study

Both secondary and primary data are used for this study. This study uses annual data for the period 1967 to 1995 obtained mainly from World Bank and IMF tables. This constitutes the secondary data used to examine the factors that determine private savings in the formal sector. The analysis was constrained by the unavailability of data beyond this period for key variables. Other secondary data were obtained from tables of various years and various publications of the Bank of Sierra Leone bulletins and Central Statistics Office of Sierra Leone Yearbooks.

Primary data used to capture the qualitative factors that affect savings in the financial sector, but which are largely ignored in many studies are obtained through the rapid assessment appraisal. This took the form of discussions with target members of the informal financial sector.

The real per capita income (R PY)\(^{10}\) that is reported here is \((\text{population/GNP})\) based on constant 1987 prices.

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\(^{10}\) The per capita income is included among the explanatory variables based on Keynes' absolute income hypothesis and also in line with Mwega (1990, 1995).
Deducting foreign savings from gross domestic investment and deflating it by the consumer price index, we obtained the real private savings variable. Real foreign savings (RFS) are the negative of the trade balance and deflated by the consumer price index. The real government savings (RGS) variable is obtained by deducting government expenditure from government revenue, and like the other, deflated by the consumer price index. The real rate of interest (RRR) is the nominal deposit rate adjusted for inflation (nominal deposit rate minus expected inflation). The percentage change in the consumer price index is used as a proxy for expected inflation.

The dependency ratio (DER) is calculated as the population aged (0-14 + 65+)/ (15-64). This ratio shows the number of dependants per one active person. The population aged 0 - 14 and 65+ is defined as the dependent population while that of 15 - 64 is the active population. The financial intermediation ratio (FIR) is defined as broadest money (M3)/GNP.

The per capita income, foreign savings and financial intermediation ratio are derived from the Word Bank tables. The DER variable is from The Courier No. 44, March-April 1994, while the GS and nominal deposit rate are from International Financial Statistics (IFS) tables. The RRR and DER are in percentages and all the others are in millions of Leones.
The inclusion of the per capita income variable hardly needs any explanation. On a priori basis, following Keynes' absolute hypothesis, we expect a positive relationship between income and savings.

The inclusion of the real interest rate is based on the financial repression paradigm, which postulate a positive relation to it. The financial intermediation ratio is included to see whether in the case of Sierra Leone, the availability of a wide array of financial assets will facilitate savings. The effect of financial intermediation on savings is expected to be positive.

The coefficient of the RFS is expected to be negative in line with the thesis that it "crowds out" domestic savings by allowing residents to consume more at any given rate of capital accumulation (de Melo and Tybout, 1986, pp.569); or that foreign savings and national savings are substitutable resources (Griffin and Enos, 1970). Government saving is included as an explanatory variable to test whether the hypothesis of Ricardian Equivalence holds in the case of Sierra Leone.

This study aims at highlighting the determinants of domestic private savings for the period 1967-1995 and examines modalities of domestic private savings in the

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See chapter 3 for the definition of Ricardian equivalence.
country. Since a substantial amount of household savings, which constitute the bulk of private savings in developing countries, are mostly mobilised in the informal financial sector, the informal financial sector is included to complete the analysis. Thus the study takes into account both formal and the informal financial sectors. Because of the security situation in the country during the research period, the sample for the rapid assessment survey was drawn from the Sierra Leone community that was in temporary exile in Guinea.

4.2 Section B: Empirical Analysis

In this section, we analyse the data collected for the purpose of the study. First, an econometric analysis is made using the OLS method to regress the already specified relationships on the various explanatory variables. The results are then interpreted to verify the extent to which they corroborate with economic theory. The method adopted demands estimates for the long-run equilibrium relation and the short-run dynamics of the savings function. All estimates are derived using the computer programme Econometric Views (EViews) Version 2.0. The results obtained from both the econometric analysis and the rapid assessment survey are then interpreted.
4.2.1 Cointegration Analysis

The basic idea behind the cointegration analysis, as noted earlier, is that although macro variables may tend to move up or down over time, groups of variables may tend to drift together. If there is some tendency for some linear relationships to hold among variables over long periods of time, then those variables are said to be cointegrated and the study of cointegration helps us to discover that relationship. Cointegrating relationship determines whether there exist a long-run theoretical relationship between the dependent variable and the explanatory variables. The cointegration test is residual-based. Series are cointegrated if the error or residuals from the OLS regression are stationary. As a starting point in discovering this, we determine whether the variables in question are stationary or non-stationary.

The 'stationarity' of each series was tested using the Augmented Dickey-Fuller (ADF) test. This test is based on the following equation

\[ \Delta Y_t = \alpha + \rho Y_{t-1} + \sum_{j=1}^{m} \Delta Y_{t-j} + U_t \]

Where \( Y_t \) denotes the value of the variable \( Y \) in the current period, \( Y_{t-1} \) is the past value of \( Y \), \( Y_{t-j} \) is the past value of \( Y \) in the jth period, \( t \) is a time trend and \( \alpha \) is a constant. The ADF test employs the t-statistic on the coefficient of the lagged explanatory variable to determine stationarity. The null hypothesis of non-
stationarity is rejected if the computed t-statistic is greater in absolute value than the reported critical values. Otherwise, one does not reject the null hypothesis. In other words a small t-value implies that non-stationarity exists and a large t-value implies that there is stationarity. The ADF test results are given in the table below.

Table 4.1 Testing for Unit Roots: Augmented Dickey-Fuller (ADF) Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLRPS</td>
<td>-4.0317 (-3.8067)</td>
</tr>
<tr>
<td>DLRFS</td>
<td>-4.14256 (-3.9228)</td>
</tr>
<tr>
<td>DLFIR</td>
<td>-4.208 (-3.734)</td>
</tr>
<tr>
<td>LDER</td>
<td>-4.898 (-3.696)</td>
</tr>
<tr>
<td>DRRR</td>
<td>-5.564 (-3.720)</td>
</tr>
<tr>
<td>DLRPY</td>
<td>-5.03287 (-3.7343)</td>
</tr>
<tr>
<td>DRGS</td>
<td>-4.0750 (-3.708)</td>
</tr>
</tbody>
</table>

Note: The McKinnon critical values are in brackets

D indicates first difference, and L indicates natural logs.

The results in table 4.1 indicate that all the series, with the exception of the age-dependency variable, are integrated of order one, which is a fairly common finding in econometric time series. The age-dependency (DER) is an I(0) variable (the level of this variable is stationary). The presence of an I(0) variable does not pose any problems for cointegration theory since, as Johansen (1985)
demonstrated, it is not necessary that all the variables in a multivariate regression have the same order of integrability to achieve cointegration.\(^{12}\)

Now that we have discovered that the original series are non-stationary, we regress the levels of the variables (equation 2a) to test for cointegration using the ADF test. If the residuals are stationary as judged by the ADF statistic, we accept that the series are cointegrated. The levels regression equation for private savings is as follows:

\[(2) \quad RPS = f (RGS, RFS, RRR, DER, RFIR, RPY)\]

\[\begin{array}{cccccc}
(\text{-}) & (\text{-}) & (\text{+}) & (\text{-}) & (\text{+}) & (\text{+})
\end{array}\]

where

RPS = real private savings,
RGS = government savings,
RFS = foreign savings,
FIR = financial intermediation ratio,
RRR = the real rate of interest and
DER = the age-dependency ratio.

\(^{12}\) Leon (1987), examining the demand for money function in Jamaica, and Wood (1995) have also found that in the multivariate context cointegrability is attainable although the original series are of different orders of integrability.

\(^{13}\) Note that the tests for cointegration are based on the same procedure developed for analysing the order of integration of individual series (the Dicky-Fuller and the Sargan Bhargava Durbin Watson tests); see Adam (1992). The study used the Augmented Dicky-Fuller test only since critical values for Sargan Bhargava Durbin Watson test were not available from the EViews software and therefore cannot be reported.
RPY = real per capita income

The \textit{apriori} relationships are indicated below each exogenous variable.

The estimating form of equation (2) can be written as follows:

\begin{equation}
LRPS = a_1 + a_2 RPY + a_3 RGS + a_4 LRFS + a_5 RRR + a_6 LDER + a_7 FIR + U_t
\end{equation}

where, \( L \) = natural logarithm, and all others are defined as in equation (2).

The results of this regression equation are reported in table 4.2 below.
Table 4.2 Levels Regression for Private Savings: 1969-1993

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-50.1759</td>
</tr>
<tr>
<td></td>
<td>(-1.4802)</td>
</tr>
<tr>
<td>LRFS</td>
<td>-0.154</td>
</tr>
<tr>
<td></td>
<td>(-1.520)</td>
</tr>
<tr>
<td>RGS</td>
<td>0.0003</td>
</tr>
<tr>
<td></td>
<td>(2.8988)</td>
</tr>
<tr>
<td>LDER</td>
<td>9.98166</td>
</tr>
<tr>
<td></td>
<td>(1.5174)</td>
</tr>
<tr>
<td>RRR</td>
<td>-0.0026</td>
</tr>
<tr>
<td></td>
<td>(-0.322)</td>
</tr>
<tr>
<td>LRPY</td>
<td>1.596</td>
</tr>
<tr>
<td></td>
<td>(2.8987)</td>
</tr>
<tr>
<td>LFIR(^{14})</td>
<td>-0.279</td>
</tr>
<tr>
<td></td>
<td>-0.324</td>
</tr>
<tr>
<td>ADF(t)</td>
<td>-5.79375</td>
</tr>
<tr>
<td></td>
<td>(-4.0113)**</td>
</tr>
<tr>
<td>R(^2)</td>
<td>0.74</td>
</tr>
<tr>
<td>Adjusted R(^2)</td>
<td>0.64</td>
</tr>
</tbody>
</table>

***This is the Mckinnon critical value,\(^{15}\) and the other figures in parenthesis are t-statistics.

The results obtained from estimating equation (2a) show that the residuals are stationary as indicated by the ADF statistic and that the R\(^2\) and adjusted R\(^2\) are fairly high.

\(^{14}\) The coefficient of the financial intermediation ratio is negative and insignificant, it was therefore, dropped from the analysis.

\(^{15}\) This is the test on the residuals of the regression equation. Since the residuals from the linear combination of the non-stationary series are themselves stationary, we accept that the series are cointegrated. The same procedure and interpretation was adopted by Worrell and Scantlebury-Maynard (1997) in their study of money and inflation in Trinidad and Tobago.
The levels regression was run mainly to establish whether there is an equilibrium relationship between the variables specified in the private savings model. Now that we have established that, equation 2a could be proposed as a long-run economic relationship explaining private savings behaviour in Sierra Leone.

Having identified that the variables in equation (2a) are cointegrated, we now explore the dynamics of the savings process. Engle and Granger (1991) have shown that if variables are cointegrated they will have an error correction mechanism that will ensure an adjustment process in which the errors in the long-run relationship do not grow over time. In other words, the short-run dynamic relationship will converge with the long-run relationship. Thus, we estimate the dynamic short run representation of the relationship and test for the adequacy of the resulting equation. The dynamic private savings function is specified thus:

\[(3) \quad DLPS = f(DLRPY, DLRGS, DLFS, DRRR, ECT(-1), LDER)\]

Rewriting this in estimation form gives the following equation:

\[(3a) \quad DLPS = a_0 + a_1DRGS + a_2DLFS + a_3DRRR + a_4ECT(-1) + a_5LDER + a_6DLRPY + Ut_1\]

where ECT(-1) is the lag of the error correction term or the lag of the residuals of the cointegration regression, D indicates first differences while all the other terms
are as defined in equation (2a) above. The estimates of this model are presented in Table 4.3.

Table 4.3: Difference Regression for Private Savings: 1969-1992

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>2.9090</td>
<td>(0.2525)</td>
</tr>
<tr>
<td>D(LRFS)</td>
<td>-0.1358</td>
<td>(-2.0596)**</td>
</tr>
<tr>
<td>D(LRPY)</td>
<td>1.0887</td>
<td>(1.6025)**</td>
</tr>
<tr>
<td>D(RRR)</td>
<td>0.0022</td>
<td>(0.4158)</td>
</tr>
<tr>
<td>(LDER)</td>
<td>-0.6405</td>
<td>(-0.2476)</td>
</tr>
<tr>
<td>D(RGS)</td>
<td>0.00020</td>
<td>(2.2609)**</td>
</tr>
<tr>
<td>ECT(-1)</td>
<td>-1.5644</td>
<td>(-4.8173)*</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>0.66</td>
<td></td>
</tr>
</tbody>
</table>

Note: the t-statistics are in parenthesis. The levels of significance are denoted by * for 1%, ** for the 5% and *** for the 13% levels. 

D indicates first difference.

The dynamic or difference regression for private savings indicates that most of the variables have the \textit{a priori} signs. The per capita income and real rate of interest affect private savings as predicted by theory, but the real interest rate variable is insignificant. This result thus lends partial support to the Mckinnon and Shaw
financial liberalisation hypothesis. This is not unusual in a country like Sierra Leone where large segments of the population have little access to financial institutions. In such circumstances it is unlikely that the real interest rate in the organised financial institutions can have a very significant impact on financial savings. The elasticity of real per capita income, which is 1.089, indicates that private savings is fairly income-elastic as a one percent rise in real income will lead to 1.089 percent point increase in real private savings.

The coefficient of the age-dependency ratio has the postulated sign but not significant. This does not necessarily mean that the variable does not play a role in determining private savings, but given the information available it does not explain the savings dynamics in Sierra Leone.

The coefficient of government savings is positive and statistically significant. This result is contrary to the so-called Ricardian equivalence hypothesis, which postulates an inverse relationship between government savings and private savings. Thus, the result suggests that the so-called Ricardian Equivalence does not hold in Sierra Leone. This finding corroborates that of Mwega (1995) who had similar results in his study of LDCs.

The coefficient of the real foreign savings (RFS) is negative and significant at the 5-percentage level. This result corroborates those of the financial liberalisation
hypothesis that foreign savings may "crowd-out" domestic savings by allowing residents to consume more at any given level of capital formation, or that foreign savings and national savings are substitutable resources. This result may be due to the fact that there has been tremendous disinvestment in Sierra Leone since the 1980s. This implies that consumption was pervasive and hence foreign savings instead of financing investment was financing consumption. The goodness of fit as measured by the adjusted $R^2$ is at acceptable levels.

The lagged residuals from the levels regression, $ECT(-1)$, which represents the equilibrium error term, is statistically significant, supporting the previous results that the variables are cointegrated. The coefficient of the $ECT(-1)$, indicates the speed of adjustment to the long run. The negative coefficient of the error correction term indicates that when private savings deviates from its equilibrium level, there will be a response mechanism to correct the misalignment.

We then performed diagnostics tests for the dynamic equation. The residuals satisfied all standard diagnostic tests\textsuperscript{16} as shown in table 4 below.

\textsuperscript{16} These tests are asymptotic and in this case are only used as a guide to specification tests.
Table 4.4 Diagnostics Tests

<table>
<thead>
<tr>
<th></th>
<th>F-statistics</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breusch-Godfrey (LMSC)</td>
<td>0.60</td>
<td>0.46</td>
</tr>
<tr>
<td>Normality</td>
<td>1.151**</td>
<td>0.56</td>
</tr>
<tr>
<td>ARCH</td>
<td>0.149</td>
<td>0.71</td>
</tr>
<tr>
<td>White Heteroskedasticity</td>
<td>0.76</td>
<td>0.67</td>
</tr>
<tr>
<td>Ramsey RESET</td>
<td>0.33</td>
<td>0.59</td>
</tr>
<tr>
<td>Chow Forecast *</td>
<td>0.29</td>
<td>0.87</td>
</tr>
</tbody>
</table>

*Forecast is from 1988 to 1992

** is the Jack-Bera statistic.

The B-G LM serial correlation test of the residuals indicated that there is no serial correlation. Also there is no heteroskedasticity as judged by the White and ARCH tests respectively. The errors are normally distributed and there is no indication of model mis-specification or structural instability as indicated by the Ramsey and Chow Reset tests respectively.

4.2.2 Rapid Assessment Appraisal

This section examines the institutional characteristics of the informal financial sector\(^{17}\) and its role in savings mobilisation in Sierra Leone. The aim is to highlight the qualitative determinants of informal savings, the *osusu*’s role in savings mobilisation and to identify its linkage with formal financial institutions.

\(^{17}\) For the purpose of this study, the informal financial institutions refer to *osusu* groups.
The rapid assessment appraisal is chosen over other methods because it can explain the informal financial sector's behaviour without using large-scale costly survey techniques. Given the resource constraint and the conditions under which such exercise was carried out, the study could not have adopted a better method.

As guidelines, the rapid appraisal was interested in informal savings behaviour. With the osusu representing the informal financial sector, the study was interested in the composition of osusu members (name, sex and occupation), the motives for forming osusu groups and their savings pattern, their usage of the formal or informal financial sector (approximated by the banking system) and the manner in which their funds are handled and kept. The survey guided them in giving their own responses to the above issues.

With these in mind, a sample of 3018 osusu group members was interviewed in February 1998. This helped us to obtain general information about their operations in the country and to determine their role and any linkages they may have with the formal financial sector.

\(^{18}\) This figure is not representative of the entire country but it gives an insight into how these organisations operate in the country. The study was conducted in Conakry, Guinea, among the refugee population because of the political crisis at the time of the survey during which there was fighting between Ecomog troops and a rebel military regime which had taken over control of the country. It was therefore not possible to get as representative a sample as would have been the case had the study been conducted in Sierra Leone.
4.2.2.1 Rotating Savings and Credit Associations (ROSCAs) in Sierra Leone

The *osusu*, which is the local version of ROSCAs\(^{19}\) in Sierra Leone, is a form of a local banking club. It is formed when a group of people agrees to contribute equal amounts at a given time or for a given period of time and to give such amounts collected to its members by rotation.

Each member is bound by the agreement to pay the commission specified to the collector on receipt of his/her share. Every stratum of society practises the *osusu* in Sierra Leone. Its sphere of influence spreads from the urban to the rural areas and from the financial to the civil service and farming sectors. It is even found among employees of the banking sector. The *osusu* membership is based on intimate knowledge of each and every participant. Factors such as the same workplace, occupation or professional, tribal and same neighbourhood are often taken into consideration when deciding the membership, as these are factors that ensure that each participant has an intimate knowledge of fellow participants.

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\(^{19}\) ROSCA is the technical name in the development literature. Despite the name rotating savings and credit associations, as already mentioned elsewhere, the credit aspect is very dormant in Sierra Leone. ROSCAs in this study, therefore, refer only to *osusu* groupings.
4.2.2.2 General Information about Osusu Group Members

A number of osusu collectors operating in both urban and rural areas of Sierra Leone were interviewed. A total of 30 osusu group members, [among them, 10 osusu collectors commonly known as master osusu (MO)], were interviewed. The composition of those interviewed is given in the table below.

Table 4.5: Composition of Interviewees by Category

<table>
<thead>
<tr>
<th>Category</th>
<th>Number in each Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>13</td>
<td>43</td>
</tr>
<tr>
<td>Female</td>
<td>17</td>
<td>57</td>
</tr>
<tr>
<td>Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Osusu collectors</td>
<td>10</td>
<td>33</td>
</tr>
<tr>
<td>Osusu members</td>
<td>20</td>
<td>67</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traders</td>
<td>16</td>
<td>53</td>
</tr>
<tr>
<td>Taxi drivers</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>Fishermen</td>
<td>3</td>
<td>10.5</td>
</tr>
<tr>
<td>Photographers</td>
<td>3</td>
<td>10.5</td>
</tr>
<tr>
<td>Public Servants</td>
<td>4</td>
<td>13</td>
</tr>
</tbody>
</table>

Source: Rapid Assessment Survey (RAS) 1998

The majority of osusu members interviewed are traders. Of those interviewed, 57 percent are women. This contrasts sharply with Aryeetey (1992), who found that of the 151 respondents in his study of Ghana only 16 were female. This result is not surprising in Sierra Leone as it reflects the status of women in the country.
Women are the most underprivileged group in Sierra Leone. They are mostly illiterate with no jobs. Thus they are even afraid to enter the doors of commercial banks. It is this deprived class in society that make up the petty traders. Thus one can understand why we have the preponderance of this group among those we interviewed.

Each of the ten collectors' membership averaged about 100. Out of the ten osusu collectors interviewed, six are female. One female osusu collector interviewed said that she found herself involved in the business out of her belief that women are better placed to provide such a service to other women.

Six of the ten osusu collectors interviewed said they have been in the business for more than 20 years. One even reported that she built her house out of the commissions paid to her. Eight of the collectors reported that osusu collection was their only occupation. One female collector interviewed is a retired public servant.

Only 16.7 percent of those we spoke to have bank accounts. This result contrasts with those of Soyibo (1996) which indicated that only 18 percent of the total sample of informal lenders in Nigeria did not have bank accounts. Those interviewed advanced several reasons for not using the banking system. These are presented in the table below.
Table 4.6: Reasons for not Saving with Commercial Banks

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage of members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low incomes</td>
<td>31.3</td>
</tr>
<tr>
<td>Paper work involved</td>
<td>20.3</td>
</tr>
<tr>
<td>Banks too far from residence</td>
<td>20</td>
</tr>
<tr>
<td>Delayed repayment of deposits</td>
<td>13.4</td>
</tr>
<tr>
<td>Lack of secrecy</td>
<td>10</td>
</tr>
<tr>
<td>Others</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: RAS 1998

The level of income was more important than all other reasons given. The low level of income has prevented many households from saving with the banks. This is especially so when the banks usually require very huge amounts for opening an account. Bureaucratic procedures/cumbersome paperwork involved and access to banks emerged as being almost equally important in determining the use of bank facilities by those interviewed. The lack of secrecy also seems to be playing an important role in mobilising savings from especially the rural people. The fear of delayed payment may have emanated from their experience with commercial banks in the country, particularly during the period 1987/1988 monetary crisis which resulted from general illiquidity in the system.

Given that 83.3 percent of those we spoke to do not have bank accounts but are rather participating in osusu groups, we then explored the reasons that motivate
them to participate in such organisations. Numerous reasons were given as can be seen from the table below.

**Table 4.7: Motives for Saving with Osusu Groups**

<table>
<thead>
<tr>
<th>Motives</th>
<th>Percentage of members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting basic needs (consumption)</td>
<td>36.7</td>
</tr>
<tr>
<td>Emergencies (illness)</td>
<td>23.3</td>
</tr>
<tr>
<td>Purchase of consumer durables</td>
<td></td>
</tr>
<tr>
<td>And agricultural inputs</td>
<td>20</td>
</tr>
<tr>
<td>Payment of school fees and</td>
<td></td>
</tr>
<tr>
<td>Related expenditure</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: RAS 1998

Since incomes are inadequate and credit facilities from the banking system are not easily accessible, the *osusu* provides an alternative to meeting basic needs such as the procurement of food and other consumption items. Most people became involved in these organisations in order to obtain enough money to purchase bulky items such as furniture, planting materials, fertilisers and merchandise, and payment of school fees and other school expenditure.

The study also showed that in rural areas, *osusu* groups have helped members who suffer from misfortunes such as bereavement, accident and illness by quickly swapping turns in the payment cycle or by contributing a purse for the member. It must be pointed here that due to the closeness of the rural communities and
members acquaintance with each other, it is not easy for an individual to fake a misfortune or engage in any rent-seeking behaviour.

Thus individuals often come together to form osusu groups for several reasons as already shown. There are several forms of such groupings currently being practised in Sierra Leone.

4.2.2.3 Forms of Osusu in Sierra Leone

There are two types of osusu operating in the country. These are the Rotating Fund (RF) osusu and the Fixed Fund (FF) osusu. These two are significantly different in terms of their operations and the services offered to their members. In the fixed osusu type the master osusu acts as a sort of banker for his members. In the rotating osusu, members receive their collections in turns and membership hardly exceeds 12. The fixed osusu could run for years while the rotating osusu that is mostly conducted on short-term basis could be disbanded or reconstituted after one cycle. It could always be reconstituted if the members thought it fit.
a) The Fixed Fund Osusu

This is mostly popular among traders, in particular women. There is no exact figure on the composition of membership but from people interviewed it is clear that about four out of every five members are women. Each osusu member contributes a fixed amount of money at the beginning of the cycle.

Membership in the FF form of osusu is heterogeneous. Participants vary from petty trader to photographers, taxi drivers and public servants. Not all members know each other because of the widespread membership and area of coverage by the collector. An individual can become a member at any time even after the osusu commences operations. Basically the fixed fund osusu requires each member to contribute an agreed sum of money daily, weekly, or monthly.

The mode of contribution depends on the individual member's income flow. Petty traders, especially market women usually contribute on a daily basis as it enables them to save the day's earnings. Depositing this amount in an osusu prevents it from being used on less important matters. The transactions cost involved in saving funds in this manner are low and close to zero compared to what it would have been if the individual had to travel to a bank to save.
This form does not require a thorough screening of prospective members since at the end of the period the members receive what they have contributed less a day's contribution that is paid to the collector as a form of commission for his/her services. It is rather the osusu collector that is thoroughly screened by prospective members who entrust in him the safe keeping of their savings. The collector therefore has to be a man of good standing in society to the extent that should he abscond with members' funds, there will be a family member to shoulder the responsibility of such a liability. The collector in this form does not make contributions and thus does not receive payments but rather gets a commission for his services and the interest accruing from the account he operates for the safe keeping of funds collected.

The collector keeps a register that bears the names and addresses of members. Records are kept on each transaction in duplicate. Transaction details are recorded on both the card and the register in the presence of the member. The cards are the sole property of the members while the collector keeps the register. Members present such cards to the collector at the end of the month and the total amount specified on the card is returned to the member minus a day's collection.
Contributions to the fixed type of *osusu* varies from Le100.00 (the equivalent of US $0.13)\textsuperscript{20} to Le5,000 (US $6.41) per month. The commission paid by every member is the total income of the collector. Thus, the collector’s income depends on the number of members in the *osusu* group and the magnitude of the periodic contributions.

If, for instance, the collector has 80 people each contributing, say, an average of Le500 (US $0.64) per day, then at the end of each period, the collector gets Le40,000 (US $51.3), which is above the average earnings of many public servants. There is, hence, some competition among *osusu* collectors to attract as many members as possible.

There are no defaulters in this case since any member receives only what he/she has contributed less the commission. This form is by far the most common since members have more confidence in it. This form was observed to have some linkage with the banking system as the collectors operate bank accounts for safe keeping until such a time when the funds are paid back to members. However, those interviewed could not tell us the quantum of funds saved with banks. What is clear is that the interest accruing from such savings goes to the collectors alone.

\textsuperscript{20} At the rate of Le 780 to US $ 1.00 on June 13, 1997, West Africa Magazine 23-29 June 1997.
b) The Rotating Fund Osusu

This form of osusu is basically a cycle. The order of rotation, the duration, the number and character of members are all agreed upon before the osusu commences. The order of contributing to members is decided by ballot or mutual agreement at the start of the osusu. In subsequent cycles, it is the integrity and cooperation of the members that determine the order of contribution. Positions can be swapped by agreement between members. This shows the flexibility of these organisations.

Membership of this type of osusu is relatively homogeneous as members may be co-workers, or living in the same neighbourhood or in the same occupation or profession. Members are thus familiar with each other's circumstances, background and integrity. Records of contribution and payment are kept. Membership varies between 10 and 12. The period can in no way exceed 12 months since it is difficult to find a member who is willing to wait for more than a year for his/her payments. But where the collector has become well known and trustworthy, he/she can have as many people as possible by grouping them in numbers of 10 or 12. It should be noted that the funds collected by one group could not be used to make payments to members of another group.
The members contribute a fixed sum of money on a specific date - daily, weekly or monthly. At the end of the specified period, the total amount contributed by the members is immediately handed over to the member whose turn it is to receive payment as specified on the agreement. This procedure is repeated until every member has had his/her turn. It is up to members to disband or reconstitute the osusu at the end of the cycle. No new member is admitted after the osusu has commenced.

The collector here is also a member of the group. He contributes and receives payment in addition to the commission paid to him/her for the services rendered. Here the collector has to be financially strong to step in, in the case of default. The amount contributed ranges between Le1000 (the equivalent of US$ 1.28) and Le50000 (the equivalent of US$ 64.1). The essence of the commission paid to collectors is to assist in the event where members default after receiving payment, while the cycle is still in progress. Here contributions to members are often made on a daily, weekly or monthly basis.

With that operated on a daily basis, members make contributions daily and the total sum collected is handed over daily to a member whose turn it is and who in turn pays a day's contribution to the collector.
On the weekly basis, contributions are made daily for five or more days in the week. The total amount collected within these days is given to a member at the end of the week who in turn gives a day’s contribution to the collector. This can carry on by renewal. Here also the commission in most cases is equivalent to a day’s contribution.

Monthly contributions are common among office workers. Contributions are made monthly on a specific date in the month (mostly on pay-day). The contributions so collected are immediately handed over to the member specified on the agreement. Membership varies between 10 and 12. In instances where the collector has become well known and trusted, he/she can have as many people as possible by grouping them in numbers of 10 or 12 with payments made according to its grouping. No one group’s money can be used to make payment to another member in a different group. The collectors are also members of the club but they, in most cases, receive their payments last since they have to guarantee that all members get their collections as stipulated in the agreement.

Even though mutual trust offsets the risk that early recipients will drop out, the osusu collector has to be a person of good standing in society to ensure that where early recipients do drop out, he/she can step in to make good that liability. The members, therefore, have to be thoroughly screened so as to minimise the risk of early recipient absconding. This screening also helps in minimising adverse
selection since uncreditworthy and dishonest members are prevented from becoming members.

However, the screening process is not foolproof. The risk of default is still there. Apart from the last member in the cycle, any other person could disrupt its smooth operation by absconding after receiving payment. To avert such risk, the participants in the RF osusu are usually required to have intimate knowledge of each other as co-workers, neighbours, belonging to the same religious group or secret society, or occupation, as has already been mentioned. Such cordial and friendly relationships with each other are the basis for successful transactions.

Furthermore, a person's worth in the eyes of others depends to a large extent upon his/her performance under their shared ties. Also in offices, it is tacitly accepted that the personnel department may be informed of the osusu's existence. This makes it possible for any defaulting member to forfeit the equivalent of a day's contribution, which is deducted from his/her salary and handed over to the collector.
4.2.2.4 Savings Behaviour within the Osusu System

The osusu collectors normally have two options when deciding what to do with deposits mobilised from members - either deposit them with a bank or invest in consumer goods which are given out to members on credit. These consumer goods include mainly food items, clothing and household utensils. These items are given to members and payment is spread out over a period of one month. Members pay daily sums of money, which makes it possible for payments to be completed by the end of the month. The collectors say that they are not in a position to give cash credit because of the varying and almost simultaneous needs of members which, means that giving credit to one member will deprive a lot more who are in need of basic items.

The first option operates in a situation where hardly any returns accrue to the asset. This is due to the fact that osusu collectors cannot presently attach prime importance to the direct rate of return on the asset itself in view of the short period over which they can hold the deposit. It is also an indication of the underdeveloped financial sector, which is shown by the lack of very short-term financial instrument, when you consider that the collectors usually have to return the daily savings of members to them after a week or month. The second option is
aimed primarily at helping members meet their basic necessities without much difficulty. With very low incomes, members look forward to such arrangements.

Although, out of the 10 osusu collectors we spoke to, 4 operate bank accounts, the banks are merely used for safe keeping. Those that use the banks are mainly those that operate the fixed fund osusu, which seem to be closer to the operations of the banking system. This is not new as Aryeetey (1997) observed a similar situation in the case of some Sub-Saharan African countries. Very few of the people interviewed had bank accounts. Those that deposit them will do so only for safe keeping and for a short period of time. This finding corroborates that of Chipeta and Mkandawire (1992) for the case of Malawi.

The rotating osusu has no need for bank accounts, as they gave out whatever they collected immediately after collection. The use of bank facilities is generally more widespread among urban operators than among their rural counterparts, in view of the skewed distribution of bank facilities in Sierra Leone. All the headquarters of commercial banks in the country are located in Freetown, the capital, with only a few branches in the major towns.

The study shows that informal saving is a function of a variety of factors. This is indicated by the responses we obtained from those interviewed about why they prefer osusu to the banking system. The responses are given below.
These reasons show in general the factors that matter in mobilising informal savings in Sierra Leone. While the appropriateness of these organisations is the most important factor that induce people to participate in their operations, an almost equal number participate in them because they are easily accessible, quite unlike the banks. The flexibility with which they carry out their business has encouraged many people to participate in them. The members have confidence in them since they have intimate knowledge of those they deal with and are confident that they can always get their savings on request without any difficulties.

From the above analysis the study concludes that informal savings behaviour in Sierra Leone is significantly influenced by several factors. These include:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Percentage of members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriateness</td>
<td>26.7</td>
</tr>
<tr>
<td>Accessibility</td>
<td>23.3</td>
</tr>
<tr>
<td>Flexibility</td>
<td>20</td>
</tr>
<tr>
<td>Confidence</td>
<td>13.3</td>
</tr>
<tr>
<td>Safety</td>
<td>10</td>
</tr>
<tr>
<td>Credit facilities</td>
<td>6.7</td>
</tr>
</tbody>
</table>

Source: RAS 1998
a) Cash Income

Cash incomes of households (both in urban and rural households) undoubtedly influence informal savings through their effects on capacity and willingness to save. 31.3 percent of those interviewed said that they do not save because their incomes are so low that they can barely live on them, let alone save.

b) Access to Institutions

Access to institutions emerged as a factor influencing savings behaviour in the informal sector in Sierra Leone. This is not surprising because it is usual for customers to walk to the bank to obtain loans but more difficult to walk long distances to deposit small sums of money. Informal savings mobilisation requires an institutional network (the existence of institutions responsible for the mobilisation of savings) which provides easy access to potential savers. The significance of this is shown by the widespread use of osusu groups by households both in urban and rural societies because such arrangements are easily accessible.

Facilities themselves influence the degree of willingness to save. The absence of institutions collecting deposits especially in the rural sector may simply discourage any desire to earn more or encourage consumption and perhaps
wasteful expenditure. The institutional network for collecting savings in the rural sectors consist of rural banks which were established in the 1980s. These banks are located in the provincial towns. However access to these institutions is limited to those rural people who are in close proximity. There were only six rural banks in the entire country as at March 1997.

Institutional access has an economic dimension as well - the ease with which a rural household member could deposit his or her savings and withdraw them. The survey revealed that one of the reasons why people interviewed do not use commercial banks is delayed repayment of deposits. In most cases people may turn to informal arrangements where they can easily get access to their savings. Minimum deposit requirements, restrictions on withdrawal amounts and the number of withdrawals per given unit of time, and more importantly, the transport costs involved in reaching the institutions, are important explicit expenditure components in transactions costs. In addition, there are implicit costs as well, such as the income forgone due to time spent on the transactions.

c) Appropriateness of Savings Instruments and Procedures

The appropriateness of savings instruments (the means in which people save) offered by institutions determines the willingness to save with institutions. If the instruments are appropriate from the point of view of the potential users, they
tend to utilise them, given the capacity to do so. In addition, one can argue that capacity itself may be influenced to some extent by the compatibility of instruments. Appropriateness has two dimensions - economic compatibility and cultural compatibility.

Economic compatibility has to do with the safety, confidence and attractiveness that one attaches to an instrument. In Sierra Leone, safety of savings and the confidence in institutions appear to be dominant factors in financial savings with institutions. Lack of confidence and perceived safety tends to dampen financial savings among many households. The recent political instability in Sierra Leone has weakened the confidence of households to use the banking system. Depositors could not get access to their funds for over nine months, as the banks remained closed through the period of political instability.

Cultural compatibility is equally important. In the informal sector of society, people are used to saving informally in particular forms and ways for a long period. These forms and ways have become an integral part of their cultures. People had been used to saving their money in cash boxes, under their beds, and for those a little well off in real assets such as buildings and herds of cattle.

Acceptance of instruments offered by formal institutions depends largely on the extent to which they fit into these cultural norms and values. When people are
used to saving secretly, facilities provided by formal institutions use of which could be seen by any person in the vicinity, may be inappropriate. In fact this appears to be one of the problems with financial savings instruments in Sierra Leone. A rural farmer we spoke to told us that he cannot use a passbook as an instrument for transactions as secretly as he can use a 'cash box' for saving in his household.

Of similar importance are the procedures adopted by collection agencies for institutionalising savings. Lengthy form filling, non-use of local languages, and other formalities are seen to scare away households especially in the rural settings, from saving with formal institutions. 20 percent of those interviewed said that for them flexibility is why they prefer informal ways of savings to the banking system.

The interviews revealed a dislike by households for formal procedures adopted by the banks. Of those interviewed, 20.3 percent said that the paper work involved in the banks is keeping them from using the banks for savings purposes. These, they claim, have often made the potential customer think that they are 'alien'- who do not fit into the formal sector approximated by the banks.
d) Degree of Linkage with Credit

The extent to which credit facilities are linked to savings has an important bearing on informal savings. 13 percent of the interviewees said they operate bank accounts since that is the only way through which they can obtain credit from the banks. When deposits are used to establish the credit worthiness of potential borrowers, households may have a greater tendency to save with such lenders. This was found to be an important determinant of savings in several parts of Sierra Leone. The rural banks had persuaded potential borrowers to save with them with a view to obtaining a loan in the future.

4.3 Summary of Findings

The results of the above analysis can be summarised as follows:

a) Econometric Results

i) The coefficient of the foreign savings variable is negative and statistically significant but the size of the coefficient does not fully corroborate the hypothesis that foreign savings may crowd out domestic savings.

ii) The coefficient of the real rate of interest is positive but insignificant thus, lending only partial support to the Mckinnon and Shaw financial repression hypothesis.
iii) The coefficient of the per capita income variable is positive and significant confirming the positive effect of income on the savings rate.

iv) The coefficient of the age dependency ratio in the dynamics equation is negative but not significant.

v) The government savings coefficient is positive and statistically significant, which shows that the Ricardian equivalence hypothesis does not hold in the case of Sierra Leone.

vi) Finally, the coefficient of the lagged error correction term shows that its impact is significant indicating that when private savings deviates from its equilibrium level, there will be a response mechanism to correct the misalignment.

b) Rapid Assessment Survey

i) The informal sector has the potential to mobilise the resources of a larger proportion of the Sierra Leone population (rural and urban households), who do not use the banking system because the informal financial sector has certain advantages over the formal sector. In the former case, the average scale of operations and the high cost of rendering financial services are small, procedures are flexible, and there is in general freedom of entry and exit. Information gathering is kept to the minimum and, instead, trust and intimate knowledge of participants is important. The
informal financial sector appears to have better access to information about the credit worthiness of a participant than the formal sector.

ii) The bulk of Sierra Leone's population, including the majority of urban dwellers, makes little use of the few formal financial intermediaries. These institutions seem largely inappropriate to Sierra Leone's realities due to cultural practices that have been in existence for a long time.

iii) Low incomes, accessibility, complex bureaucratic procedures of giving service, elaborate paper work with high collateral requirements, and delays, are among some of the factors that militate against effective utilisation of the existing banking facilities.

iv) In Sierra Leone, default in the osusu is low and does not appear to be common. This may be due to the need to establish credibility in the community and the prospects of becoming a member of another osusu or running for public office in future.

v) We observed weak linkages between the two sectors. The study revealed that though some informal deposit mobilisers operate bank accounts, the banks are mainly used for safe keeping. Very few of the people interviewed had bank accounts. The rotating osusu has no need for bank accounts as they gave out whatever they collected immediately after collection.
Vi) Factors such as income, consumption, access to institutions, appropriateness of savings instrument and procedures and degree of linkage with credit facilities are very significant in explaining the informal savings behaviour.

Having identified the determinants of domestic private savings in Sierra Leone, we proceed in the next chapter to make some policy recommendations that could be useful in adopting strategies aimed at raising the level of private savings in the country. The summary and conclusions of the thesis follows first.
CHAPTER FIVE

CONCLUSIONS AND POLICY RECOMMENDATIONS

5.1 Conclusions

In this thesis we studied the determinants of private domestic savings in Sierra Leone. The study is motivated by the need to enhance the mobilisation of domestic resources given the declining trends in external capital inflows, declining export receipts and mounting external debt leading to severe constraint on resources needed for development purposes.

The study, in addition to a review of some of the existing literature, adopted two analytical procedures. First, using the techniques of cointegration and error correction model, we tested for:

i) the stationarity of the variables used;
ii) the long run equilibrium relationship of the variables used and the short-run
dynamics of the savings behaviour in Sierra Leone, through which we are able to
establish the determinants of private domestic savings in the country.

Furthermore, a rapid assessment survey was also carried out to determine the
role of the informal financial sector in savings mobilisation and the linkages that
exist between the formal and informal financial sectors of Sierra Leone.

Our major findings on determinants of savings can be summarised as below:

i) The per capita income variable has a positive impact on private savings in
Sierra Leone.

ii) Foreign savings may crowd out domestic savings, as they tend to be
substitutable resources in the case of Sierra Leone.

iii) Public savings have a positive effect on private savings

iv) The informal sector can play an important role in terms of mobilising
savings from the broad mass of people who, in the absence of such
institutions, will probably not be involved in any savings activity. Thus the
informal sector helps to develop the banking habits in people who see the
banks as remote and catering only for the non-poor

v) The rapid appraisal seems to suggest weak linkages between the formal
and informal financial sector in Sierra Leone. The resources to be mobilised
in the informal financial sector are enormous and could have far-reaching
impact on the reduction of the country's staggering debt, alleviating poverty, generating employment and helping the urban and rural poor become a more productive segment of the population.

Viii) From the little experience of our rapid assessment appraisal, it appears that if savings are to be effectively mobilised in Sierra Leone, we need to understand more about the behaviour of informal savings systems. This will help us remove some of the constraints that there are so that we can develop modern but adaptable institutions that can help raise and sustain the level of savings in the country.

Private savings, particularly from the household sector, are low. Consequently, the policy thrust needs to be centred on the maximisation of private sector savings, through encouragement of savings from households. This can be done through the following mechanisms: (i) increasing the productive base of the country to ensure real income growth and employment, (ii) providing, especially the rural people, with access to financial institutions and accelerating the integration of the formal and informal financial institutions, and (iii) reducing the government budget deficit.

The thesis has attempted to throw light on the efficiency and dynamism of Sierra Leone's hidden economy, the informal financial sector. Policy makers should
create the enabling environment towards the realisation rather than stifling of the energies and creativity of people participating in these indigenous and culture-appropriate financial institutions.

The thesis has made an analytical contribution to the understanding of factors that determine private domestic savings in Sierra Leone. It does not claim to be exhaustive but it does clearly set out the primary issues and policy options pertaining to the mobilisation of savings in Sierra Leone.

5.2: Policy Recommendations

The empirical analysis has identified some significant determinants of private domestic savings in Sierra Leone. The analysis of the rapid assessment survey has also revealed some significant determinants especially of rural savings in the economy. There is a tendency that if these factors are not adequately addressed in the decision making process, domestic resources for capital formation will continue to be inadequate. Thus there will be an over reliance on external resources with all its ramifications. In order to avert this situation, the study presents the following policy recommendations for consideration.
5.2.1 Increasing the Productive Base of the Country

From our analysis per capita income was a significant variable in the model, yet the income of Sierra Leoneans remain very low. This may partly explain the reason why private savings in Sierra Leone remains weak. In order for private savings to be enhanced, the focus of development policy in the country should be to increase the productive base of the economy in order to promote real income growth and employment.

Small-scale enterprises are important sources of employment and income generation in Sub-Saharan Africa. The study recommends the development of small-scale industries. This falls in line with the Lagos Plan of Action, which argues that as part of their industrial strategies, countries should aim at creating a "network of small and medium-scale industries as well as actively promoting and encouraging the informal sector". This, coupled with improvements in training of manpower, management capacity and infrastructure including transport, power and water, among others, would help in creating employment, generating income growth, thereby improving the rate of savings in the country.
Poverty reduction should also be a priority of the government. However, the prospects for poverty reduction in Sierra Leone hinge on the security situation in the country. No effective poverty reduction campaign can be pursued if peace and security are not restored. Moreover, political instability and upheaval has left infrastructure in ruins and caused increasing numbers of people to take refuge in neighbouring countries. In the coming years as Sierra Leone grapples with economic and social rehabilitation, it also has to aggressively promote policies that will ensure significant growth rates.

5.2.2 Access to Institutions

Sierra Leone being a less developed country, there is a greater need for the institutional mechanism to collect small savings of the broad mass of households operating in the informal sector. Informal financial arrangements are predominant in Sierra Leone. Despite the popularity of informal financial arrangements at providing financial services to small businesses that would otherwise lack such services, they do not meet all the needs of the rural sector. For example, such arrangements do not allow for the collection of savings from more than a small group of individuals well known to each other and they do not move funds over long distances.
The use of rural branches of banks to mobilise private domestic savings has received a boost in some countries where they are directly linked to the activities of rural financial institutions. There is therefore a need to link the activities of rural financial markets/institutions to the national grid, as it will help overcome some of these shortcomings. This is possible through the extension of more bank branches to rural areas.

In this regard the activities of the osusu comes to mind readily. A large proportion of the population is involved in these osusu organisations. Through the osusu, many rural dwellers will be in a position to acquire the initial amount necessary to open a bank account in the local branch. The viability of such branches should not pose a problem. Where the osusu groups are well developed, they can channel funds collected from their customers to the banks. This will encourage customers to accelerate the movement of their bank accounts since it opens up an avenue to bank credit.

Many of the bank branches that were in existence in the 1970s have been closed down because either the banks' management deemed such branches unprofitable or due to the civil war that started in 1991. These branches could be re-opened in those places where it is already safe to do, and new ones could be opened in emerging growth centres in the country. It is not also uncommon to find banks developing apathy toward the expansion of branches to rural areas because of the
apparent unprofitability of these branches. Coupled with poor conditions of the infrastructural facilities in these areas, a lot of persuasion and may be regulation by the monetary authorities is often required to make the process go on.

It is also important for banks to consider running mobile savings units. This has the potential of increasing savings. However, the programme should be structured in a manner that would ensure that the benefits derived from additional savings mobilisation would more than compensate the additional costs involved.

5.2.3 Appropriateness of Savings Instruments

The study has revealed that the forms in which people keep their savings is influenced more by social considerations than by economic gains such as offers of lucrative interest rates. Safe custody, liquidity and enhanced social prestige may be very crucial in a programme of transition from traditional forms of savings to bank deposits. Rural households and even many of their urban counterparts are wont to avoid financial assets because of inconveniences such as distance, shoddy services, long hours of waiting etc. that are characteristics of formal financial institutions. Instead they will rather keep wealth in real assets.
Institutions should make a wider array of instruments available for potential users to choose from, according to their requirements. In so doing much of the funds mobilised by *osusu*, collectors for instance could find their way into the banking system. Creation of very short-term instruments for mobilising savings especially of informal financial operators will enhance the mobilisation of private savings. This is one area in which the banks are required to show ingenuity and resourcefulness so as to be able to create deposit instruments appropriate to the potential informal saver.

5.2.4 Interlinking the Formal and Informal Financial Sectors

In terms of creating linkages between the formal and informal financial sectors, the authorities can create an environment for the formal financial institutions to reach out and develop financial arrangements with self-help groups and individuals. This has been adopted in countries like Indonesia where several small banks have been engaged in domestic resource mobilisation at the doorsteps of rural and low income people (Siebel and Paruhsip, 1992).

A similar arrangement is also found in India where the Syndicate Bank operates a 'pigmy deposit' scheme. In this case non-employees of the Bank are hired as agents to collect deposits at the homes of small savers on a periodic basis (Conteh,
1994). Access to credit is used as reward for the maintenance of scheduled deposits over a period of time.

In the case of Sierra Leone there is a potential that this sort of arrangements can be very successful given that there are already in existence some osusu collectors who are involved in collecting contributions at the homes of members. The banks could appoint such collectors as agents to collect deposits at the homes of small savers. What is needed is to assure these savers of access to credit as an incentive for the maintenance of deposits over a period of time. Even though the agents have to be paid commission for their services, it will be a lot less than what will be paid to regular bank staff to perform the same services. This thus reduces the unit cost of deposits.

Another area will be to give osusu collectors recourse to a commercial bank line of credit in order for them to expand credit to their clients. The resulting increase in business would increase the savings that they can mobilise for deposit into commercial banks. The banks could also provide a deposit instrument adapted for savings and credit societies.

In addition there is need to link informal entities like osusu groups to the central bank as was done for example in the registration of susu collectors by the central bank of Ghana. In this direction the Bank of Sierra Leone can create a unit dealing
exclusively with the activities of ROSCAs. Deposit collectors can also be encouraged to form an osusu collectors' association, which will be registered and will operate an account with, say, the National Development Bank. This association can serve as an intermediary between the formal and informal financial sectors.

The survey has shown that the modus operandi of the formal financial sector does not augur well for the mobilisation of resources of the broad mass of people. At the moment, a broad spectrum of the rural population in Sierra Leone regards the banks as catering only for the wellbeing of the rich people. Farmers in Sierra Leone perceive banks as remote, intimidating and not fully trustworthy, and by and large they do not go to them.

While the financial incentives could be introduced to attract bank employees in order to prolong their services in the rural areas, they should however coax, cajole and woo the rural population with an assurance of courteous, prompt and efficient service. There is particularly an urgent need to systematically publicise (educate) the services rendered by financial institutions to the rural population. In particular, adequate education campaigns need to be embarked upon on the role of financial institutions in the development process. This is an effective way of spreading the banking habit among a broad spectrum of rural societies for whom a bank still means something for rich people.
Bank managers should try to re-establish banking confidence in the populace by improving the payment of deposits once demands fall in line with banking regulations. To achieve this appropriate liquidity and cash management measures should be practised. It is also vital for customers to be informed about the different savings programme available at the banks.

The informal financial markets for their part will require a high level of organisation, which will entail the introduction of paper work, and administrative techniques characteristic of formal financial markets. These changes require research to establish the *modus operandi* that will suit the socio-cultural context within which the institution will operate. Example within a ROSCA, considerable amount of trust is exercised. Members carefully choose each other and the success or failure of the association depends on a variety of rules and regulations; and sanctions and reciprocity secure the conduct of members. Social controls also depend on numerous social relationships, which hold members together.

A major ingredient for successfully interlinking informal financial institutions and formal financial institutions is the preservation of the secrecy associated with the *osusu*. Thomas (1995) notes that ROSCA savings may be preserved by elaborate rules that prevent a husband for instance from knowing when his wife
receives money lest she be subjected to unwelcome persuasions or pressure to meet his needs.

5.2.5 Reduction of Government Budget Deficit

The econometric analysis indicates that government savings impact positively on private savings, yet the government has been a net dis-saver for the past two decades. Government consumption expenditure exceeds government revenue every year. There is, therefore, need to increase government revenue while at the same time curtailing government expenditure.

In this regard, the study suggests that all items of expenditure be included in the budget estimates as way of checking extrabudgetary expenditure. Off-budget items are very tempting to government and could be a source of difficulties since they have to be met in most cases by printing money or raising taxes. Raising taxes however, may have significant negative effects on private savings.

Instead of raising direct taxes that impinges on the incomes of households, the study recommends an improvement in the collection of sales taxes and raising the tax rate on such items as alcoholic beverages and tobacco so as to increase the revenue base thereby reducing the deficit. Public expenditure cuts are the most
effective way in which government can save. Public expenditure cuts are therefore recommended.
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Annex I

Data used in estimating the Private Savings Function

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Key: ... = indicate data not available. For the treatment of missing data see EViews manual pp. 84 and 165.

Source: computed by author from IFS and World Bank tables.