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EFFECTIVENESS OF THE BALANCE OF PAYMENTS ADJUSTMENT POLICIES: THE CASE OF UGANDA

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DEDICATION

This paper is lovingly dedicated to my dad, The late John Z. Nsubuga, and my Family.

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ABBREVIATIONS

BoU	= Bank of Uganda
BoP	= Balance of Payments
ERP	=Economic Reform Program
GDP	= Gross Domestic Product
GoU	= Government of Uganda
MABP	= Monetary Approach to the Balance of Payments
IMF	= International Monetary Fund
ISS	= Institute of Social Studies
ECD	= Economics of Development
FDI	= Foreign Direct Investment
SSA	= Sub Saharan Africa
CPI	= Consumer Price Index
LDCs	= Less Developed Countries
SAPs	= Structural Adjustment Programs
NPV	= Net Present Value
HIPC	= Heavily Indebted Poor Countries
PAF	= Poverty Action Fund
RMP	= Reserve Money Program
TBs	= Treasury Bills
PEPOs	= Repurchase Agreements
GATT	= General Agreement on Trade and Tariffs
WTO	= World Trade Organisation

CHAPTER ONE

INTRODUCTION

1.1 Introduction and indication of the research problem

Uganda is an open economy which trades both goods and services, it is open to inflows and outflows of financial and fixed capital investment, with large dependence on imports of both investment and consumption goods. Primary commodities are considered to be the main source of foreign exchange for the country. The country went through a period of political and economic instability as a consequence of political upheavals and economic mismanagement that plagued the country in the 1970s and early 1980s. Over that period, annual real GDP decelerated significantly, inflation was running in double and triple digits while the government deficit became increasingly unmanageable due to increased expenditure on wars and general lack of accountability and misappropriation of funds. In 1986, when a new political regime assumed power, a vigorous Economic Reform Program (ERP) was launched with a view of restoring stability in most of the sectors of the economy and achieving a sustainable Balance of Payments (BoP) position.

Since the launching of the ERP in 1987, the government of Uganda has implemented a wide range of policies aimed at eliminating the structural and financial bottlenecks that constrained progress of the economy. The country has implemented full liberalisation of both the current and capital accounts in order to facilitate the smooth flow of goods and services and capital between Uganda and the rest of the world. In addition, reforms encompassed a number of discrete devaluations of the national currency between 1987 and 1989 during the fixed exchange rate regime with a view of making the country's exports more competitive at the world market. A few years later, full liberalisation of the exchange rate regime was also implemented in July 1990 by allowing foreign exchange bureaus to engage in foreign currency transactions at freely market determined rates. The aim was to further facilitate trade, and improve the incentive structure and business climate. To this end, the capital inflows have expanded largely in form of Foreign Direct Investment (FDI) and official aid, thus strengthening the capital account balance. However, while exports have declined partly due to changes in the international commodity market, imports have continued to expand on account of rising petroleum prices and the increasing demand for both investment and consumption goods. In addition, although government has

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substantially cut down its expenditure in order to restore balance, it has incurred foreign liabilities to promote growth and development of the economy.

Uganda's reform process has been on course since the beginning of its implementation, to the extent that the annual inflation rate has been reduced from about 240 percent by early 1986 to single digit levels of about 5 per cent annually in the recent periods. At the same time, the GDP has been growing at an average annual rate of 6 per cent and the country's gross external reserves have recovered from extremely low levels in the mid 1980s to about US$ 772.8 million, equivalent to 6.1 months of import in 2000/01[1]. As Uganda continues to make progress in its stabilisation program as evidenced by the strong macroeconomic performance coupled with the full liberalisation of trade and other key markets, export diversification and reduction of government expenditure, the current account deficit has continued to widen. The deficit deteriorated from US$ -112.2 million in 1987 to US$ 538.8 million in 1999/00, equivalent to −14.9 percent as a ratio to the country's GDP, (see Figure 1.1 for the trend since 1980). However, the overall balance registered surpluses in some periods due to sizeable transfers from abroad in form of BoP support, project aid and other transfers (Table 3.2). Uganda's BoP continues to be highly financed by donor assistance and other multilateral sources. This is an area of major concern to both government and its development partners in terms of the long-term sustainability.

1.2   The Research Problem

The above figures demonstrate a poor and deteriorating current account balance for Uganda. It appears that the liberalisation of trade and the key markets, the diversification of exports and other adjustment policies have been over-shadowed by the persistent current account deficit. The major concern here is whether Uganda will be able to reverse this large current account deficit, which is already one of the highest in the world. Moreover, the large current account deficit is adding to Uganda's net stock of external liabilities with the International Monetary Fund (IMF) and other creditors, projected to reach 53 per cent of the GDP during 2001/02 Fiscal Year (IMF, 1999), is one of the highest in Sub-Saharan Africa (SSA). Furthermore,

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[1] Bank of Uganda, Annual Report 2000/01

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the recent macroeconomic crises in a number of developing countries have heightened global concern about large current account deficits and have accentuated the need to understand the factors underlying large current account deficits. The key issue at hand is whether the Ugandan government's strategy of maintaining macroeconomic stability through appropriate tight fiscal and monetary policies, and implementation of a program of substantial economic liberalisation of the key markets can help to curb the widening current account deficit. As already noted, the strategy has paid off dividends by generating high growth and subduing inflation at low single digit levels. The government plans to continue with and deepen the structural reforms with a view to sustain medium-term economic growth. In the light of the government's objectives of maintaining macroeconomic stability and a vibrant and diversified private sector, more attention needs also to be focused at adjustment policies that can eliminate the external sector imbalances.

On another front, there are some economists who argue that large current account deficits are not something for policy makers to be concerned about. They argue that a large current account deficit is simply a reflection of investments that are undertaken in the concerned economy. This view is shared by renowned economists such as Max Corden, Robischek, Milton Friedman, and Sachs among others. This argument has also been associated with the former Chancellor of the Exchequer, Nigel Lawson and has become to be known as the *Lawson's Doctrine.*

1.3   Objectives, research questions and hypothesis

Against the above background, this study is to investigate and assess the effectiveness of measures such as ceilings placed on domestic credit, and liberalisation of key markets in determining Uganda's BoP position. Essentially, the objectives of this study are outlined as follows:

(a) To examine the empirical relationship between domestic credit and the BoP in the case of Uganda

(b) To assess the importance of other macroeconomic variables such as GDP, domestic and foreign prices on Uganda's BoP

(c) To examine the impact of the liberalisation of the capital account, trade and the exchange rate regime on the BoP

The basic questions that are addressed are the following:

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i. Is there a link between domestic credit and the BoP in the case of Uganda?

ii. Has the liberalisation of the exchange rate, trade, and the capital account had any impact on Uganda's BoP?

iii. Is there a link between GDP, domestic and foreign prices and developments in Uganda's BoP?

Specifically, the study will investigate whether there is a strong link between net domestic credit, GDP, domestic and foreign prices and the BoP in the case of Uganda. The country has achieved strong economic growth and macroeconomic stability over the last fifteen years, owing largely to the implementation of structural adjustments and stabilisation policies since the launching of the ERP in May 1987. The program was designed to eliminate distortions in the macroeconomic management by streamlining the exchange and payment system and implementation of appropriate fiscal and monetary arrangements. This study will also examine the impact of the liberalisation of the exchange rate, trade, and capital account that were designed to improve the flow of goods and services and to attract capital into the country on the BoP. I will investigate the net effect of all these variables on the BoP.

My working **hypothesis** is that domestic credit and liberalisation of trade, exchange rate regime, and capital account do not have any impact on the behaviour of Uganda's BoP. The study will be guided by the Monetary Approach to the BoP adjustment, which forms the basis of the IMF Monetary Model (Appendix II) that was introduced in the 1950s and serves as the performance criteria for the release of IMF financial assistance. Indeed, Uganda like many other Sub-Saharan countries receives substantial assistance from the IMF. This study is expected to strengthen the ongoing macroeconomic adjustment and structural reforms and attempts to improve on the understanding of what needs to be done to improve the current account deficit. The Government of Uganda is committed to achieve a favourable BoP position and other macroeconomic targets.

1.4   Research Methodology

The research methodology will entail the use of descriptive charts, and tables to show the relationships between the various economic variables. I will also formulate multiple linear regression models to estimate both long-run and short-run relationships between domestic credit and other macroeconomic variables on the

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current account balance and the overall balance of Uganda's BoP. The study will analyse annual data from 1980 to 2001. My basic methodology will involve the estimation of regression equations of the current account balance as a function of variables such as net domestic credit, foreign and domestic prices, and gross domestic output. I will also investigate the effects of policy changes such as liberalisation of trade, exchange rates and capital account on the current account balance by including a set of dummy variables to capture such policy changes. An attempt will also be made to examine the impact of the same variables on the overall balance.

1.5   Sources of data and limitations of the study

My study will entirely be based on secondary data from publications such as the Bank of Uganda Quarterly/Annual reports (various), Republic of Uganda Background to the Budget (various) and the Key Economic Indicators (various) from the Ministry of Finance, Planning and Economic Development, Kampala – Uganda. Other sources will include among others, the International Financial Statistics Yearbooks, Government of Uganda Statistical Abstracts. I will also make use of the World Bank, World Development Indicators. For my analysis, I will need the following data sets; Current account balance, the overall balance of the BoP, ratio of current account deficit to GDP, index of foreign prices, net domestic credit, money supply, gross international reserves, domestic output, real growth rates, domestic interest rates, domestic price index, private sector credit, government credit, investment and capital inflows.

As already noted, I will use secondary data from diverse sources. However, such data is in most cases not homogeneous, owing to the use of different base periods and assumptions and this may constrain thorough analysis. Therefore, an effort will be made to remedy such problems somewhat when encountered. Also, apart from the fact that data may be from many sources, it may not be available for some periods. This is mainly due to the upheavals that besieged Uganda throughout the mid 1980s during which data may have been destroyed or not compiled at all. Furthermore, there is virtually no work so far done specifically on the effectiveness of the monetary model in explaining the BoP imbalances in the case of Uganda, as such comparisons with earlier studies may be constrained.

1.6   The structure of the Paper

The rest of the paper is organised as follows; in the second chapter, I will look at some conceptual aspects of the BoP and the theoretical framework within which the study is to be done. I will present an overview on the origins of the BoP adjustment theory and an exposition of the adjustment polices from the neoclassical, keynesians and monetarist point of view. I will review the theoretical underpinnings of the various BoP adjustment policies, particularly in the developing countries. Special emphasis will be given to the monetary approach, which will form the basis of my analysis since the conduct of monetary policy in Uganda is based on the conventional IMF monetary model. A conclusion and analytical framework will be presented at the end of the chapter.

In chapter three, I will give an overview of Uganda's economy and the overall economic outlook between 1970 – 2001 in the first part. The reform efforts that have been undertaken by the government will also be examined in this section of the paper. Then, I will review the BoP situation in the context of the overall macroeconomic adjustments and structural reform. A discussion on monetary policy and exchange rate management in Uganda and the various monetary and financial instruments used will be presented as well. An attempt will also be made to identify the causes of the widening current account deficit and how it is being addressed.

The fourth chapter will provide the empirical analysis to examine the relationships between the BoP and domestic credit, GDP, domestic and foreign prices and policy changes over time. This will be done to test the effectiveness of domestic credit control in eliminating BoP imbalances in the case of Uganda. The analysis will be based on the theoretical and analytical framework developed in chapter 2. The analysis will be preceded by a discussion of the expected results and their interpretation based on previous studies. I will then analyse the results of my investigation in light of these expectations and discuss their implication for the BoP adjustment process in Uganda. The chapter will end with a conclusion. The last chapter will present a summary of the findings of the study and draw lessons and policy conclusions from the study where possible.

Figure 1.1: The Current Account Balance as a Percentage of GDP
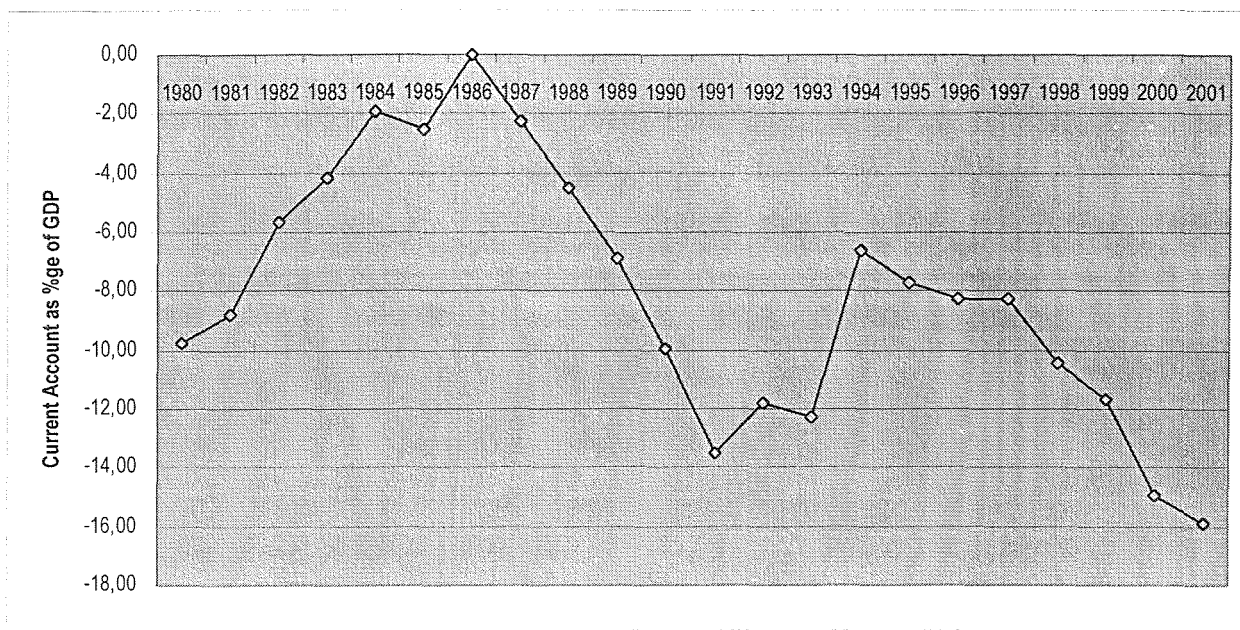
Source: World Bank Development Indicators (CD-ROM), Bank of Uganda

CHAPTER TWO
CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

2.1   Introduction

The purpose of this chapter is three-fold: firstly, to spell out the basic concepts pertaining to the BoP; secondly, to give a review of the evolution of the BoP adjustment theory to help in understanding how the theory has evolved over time. Thirdly, to present the various approaches to the BoP adjustment. I shall particularly give more emphasis to the monetary approach, which has been the basis of the macroeconomic reform process in Uganda since the mid-1980s. The chapter will end with a conclusion and an analytical framework showing some theoretical linkages between domestic credit and the BoP. In the next section, a review of some basic BoP concepts is presented. The evolution of the BoP adjustment theory is discussed in section 2.3, while in section 2.4, the three approaches to the BoP imbalances are presented. An overview of some previous studies on the MABP will also be done in this section. The chapter will end with a summary of the theoretical framework and an analytical framework.

2.2   Some definitions

This section highlights the BoP concepts that will be frequently used in the study. To begin with, the BoP is defined as a summary statement in which, all the transactions of residents of a nation with the rest of the world are recorded during a particular period of time, usually a calendar or fiscal year. An international transaction refers to the exchange of a good, service, or an asset (for which payment is usually required) between the residents of one nation and the rest of the world. The main purpose of the BoP is to inform the government of the country's international position and to help it in its formulation of monetary, fiscal, and trade policies. The BoP information is also useful to banks, firms and individuals directly or indirectly involved in international trade and finance. The BoP comprises of two main sub-accounts;

(i)   the current account, which deals with trade in goods and services, and transfers,

(ii)   the capital account, which records transactions in assets and liabilities.

The sum of the balances on the two accounts, after allowing for errors and omissions, is equal to the overall balance.

2.2.1 Current Account

The current account of the BoP records all international flows of goods and services, as well as transfer payments. This account comprises of both visible and invisible items. The visible flows constitute trade in goods, whereas, invisible flows include services such as insurance, transportation, banking, tourism and many others. Invisible trade also includes payments for overseas embassies and military bases, interest, profit and dividends from overseas investments. The difference between visible exports and imports is known as the trade balance or visible balance, while the difference between invisible exports and imports is called the invisible balance. In most developing countries, the trade balance is the most important. Thus, the sum of the trade balance, balance on invisible items and transfer payments gives the current account balance. In practice, it is usually common to consider one account of the BoP as an indicator of the performance of the country's BoP. Most studies have traditionally focused on the current account or trade balance as an indicator in this respect. Notably, the trade balance is by far the largest component of Uganda's current account. In fact, fluctuations in the trade account are the primary cause of the movements on the current account. A deficit on the current account of a nation means that more goods and services have been imported into the nation than have been sold abroad, while a surplus on the same account means more goods and services have been exported than imported.

A current account deficit is also defined as the difference between national savings and investments. Therefore, a deficit can emerge from either a fall in savings or an increase in investments. In this regard, the sustainability of a given current account deficit will be affected by its source. For example, a deficit that is accompanied by high investment rates is considered to be less problematic compared to one associated with a fall in savings (Blejer, 1999:24). This is because high investments lead to increased productivity and growth in export earnings that will be available to finance the external debts. However, high investment rates could widen the current account deficit in the short-term through increased demand for imported inputs, but if the investments turn out to be profitable, no major problems will be created in the long-run. A related issue is the relationship between the rate of economic growth and the current account balance. Large current account deficits may be more sustainable if

economic growth is high. High GDP growth tends to lead to higher investments and increased net capital inflows as expected profitability increases.

2.2.2 Capital Account

The capital account records purchases and sales of assets, such as stocks, bonds, and land, other than the official reserve assets. A capital account can also be divided into two separate parts: (1) the transactions of the private sector and (2) official reserves transactions, which correspond to the central banks activities. The capital account measures the change in the net stock of all non reserve financial assets. Financial reserves are excluded because they do not reflect changes in the market forces, but rather changes in government policy (Salvatore, 1998:406). The outflows of money from one country to buy stocks and shares abroad and inflows of resources into the country as foreigners buy factories and shares is recorded as net investment. Therefore, the sum of all items from net investment and other net transactions in financial assets represents the net inflows on the capital account. If a country runs a deficit in its current account, or spends more abroad than it receives from sales to the rest of the world, the deficit needs to be financed by selling assets or foreign borrowing. The sale of assets or borrowing implies that the country is running a surplus on the capital account. Thus, a current account is of necessity financed by capital inflows, such that; current account deficit plus the net capital inflows equals zero. A current account deficit can also be financed by running down the official international reserves of the concerned country. However, this alternative has limitations since countries are obliged to hold a certain level of reserves with the Fund. Therefore, in the long run, governments could address BoP imbalances by reducing import demand or expansion of exports.

Generally, persistent BoP deficits are not desirable and are an indication of macroeconomic problems in the concerned economy. For example, a deficit indicates that a country's import bill and its long-term commitments to the rest of the world (private or public or both) have exceeded its capacity of meeting those obligations through foreign exchange earnings from the national exports and other inflows. Such a situation puts the country into a fundamental disequilibrium, which necessitates seeking for foreign borrowing (Hallwood and MacDonald, 1994:20). However, inflows of foreign loans constitute a claim on the country's foreign reserves and if the

deficit persists, all the country's foreign reserves may be depleted, which could lead to loss of confidence, as the country is declared unable to repay its foreign debts. Therefore, the BoP imbalances need to be corrected in order to restore equilibrium in the external sector and to achieve internal macroeconomic stability.

2.3 The Balance of Payments Adjustment Theory

This section is concerned with the evolution of the BoP adjustment theory. It is useful to examine how this theory has evolved over time to broaden our understanding of the various adjustment policies. The BoP adjustment theory has undergone extensive revision over the years. In the early periods of the development path of international economics, very little attention was paid to the problem of external disequilibria. Indeed, Dell and Lawrence (1980) observe that the whole range of policies that are now summed up under the heading of "adjustment process" is fairly new.

Under the gold standard, it was generally believed that the trade and payments balances of countries would tend to move towards equilibrium automatically without the guidance any person or institution (Dell and Lawrence, 1980:93). This view originated from the specie-flow analysis associated with the work of Hume in 1752[2]. It was believed that there was a direct link between money supply, price level and external balance. A country with a BoP deficit would lose its gold reserves, resulting into a fall in the monetary base and money supply. Consequently, the fall in money supply would bring about a fall in the domestic price relative to the foreign price. The change in the relative price would restrain domestic demand for imports and stimulate foreign demand for that country's exports, and consequently lead to an improvement of its BoP. However, the system did not prevent large instabilities in the prices of exports and imports and the attendant haphazard shifts in the distribution of income among countries because it was based on unverified assumptions. For example, in the real world there exists trade restrictions imposed by tariffs and other trade controls. Such weaknesses made Hume's mechanism less applicable to the BoP adjustment problem.

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[2] Hume, D, "Of the Balance of Trade" in international Finance, edited by Cooper R.N, Penguin Modern Economics, p. 107-134.

After World War I, when the problems of resource allocation occupied the centre of the stage of the economic debate, Bickerdike (1920) initiated the concept of external adjustment by the Elasticity Approach. His concept was developed further in order to analyse the effects of a devaluation on the trade balance of a devaluing country by Alexander (1952, 1959) and later became synthesised with the Absorption Approach. The elasticity approach largely focuses on the price elasticities of demand and supply of imports and exports and the Marshall-Lerner condition[3]. It assumes a system of fixed exchange rates where a devaluation or revaluation may be used to rectify the BoP disequilibrium. However, under the floating exchange rate regime, equilibrium is expected to be restored automatically without government intervention.

The elasticity approach was also widely criticised, mainly for its restrictive assumptions such as the partial equilibrium analysis of the labour market and wage determination (Alexander, 1952:264). The approach proved extremely unsatisfactory in the post-war situation of general inflationary pressure and motivated the introduction of the income-absorption approach. This approach was largely developed on the basis of research in the IMF under the guidance of Bernstein (Rhomberg and Heler (ed.), 1977:2-5). This approach underscores the relationship between the level of national income and the external sector disequilibrium, and views the balance on the current account as the difference between national income and national expenditure (absorption). However, the absorption approach was also criticised for considering only the current account balance, and for ignoring the effects of the changes in the exchange rates and prices. In the 1950s, attempts were made to integrate the income-absorption approach with the elasticity approach as well as to remedy the inadequacies of the elasticity approach, particularly, its partial equilibrium nature (see, *inter alia*, Harberger, 1950, Laursen and Matzler, 1950, Alexander, 1952, Johnson, 1956).

After a period of domination by the Keynesians and the intense debates on the insufficiency of aggregate demand, unemployment and macroeconomic stabilisation during the post-war era, concern began to be shifted to inflation. The controversy

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[3] The Marshall-Lerner condition states that if the sum of the price elasticity of demand for exports and the demand for imports is greater than one, then a change in the exchange rate will lead to an improvement in a country's BoP (Salvatore, 1998:518).

between the Keynesians and Monetarists strongly influenced the evolution of macroeconomic theory. In the 1950s, members of the University of Chicago led by Professor Milton Friedman spearheaded a renewal of academic interest in monetary problems, which became widely known as the "Chicago school of thought" and later became accepted as "Monetarism"(Choonaratana, 1989:28). In the process, the Keynesian analytical tools were supplemented, and in some instances replaced by the instruments of monetary analysis. Consequently, Polak, of the IMF laid some fundamental concepts in 1957 for the approach, which was later called the Monetary Approach. This approach is given its most articulate exposition in a collection of papers edited by Frenkel and Johnson (1976). Although, there is still controversy about the role of monetarism in solving problems of inflation and unemployment, the monetary approach is considered very important in the analysis of the BoP problem. Its strength lies precisely where the other approaches falter and it is relatively easy to apply. A detailed discussion of this approach is presented in section 2.5 of this chapter.

2.4 The Balance of Payments Adjustment Policies

The BoP deficit can be adjusted in a number of ways. One method could be restriction imports by imposing tariffs on them. However, tariffs and other trade barriers cannot be used freely to adjust the trade balance partly because international organisations such as the IMF, WTO and agreements like the GATT do not support the use of such measures. Tariffs are becoming less important today as the world moves to freer trade between nations. In the literature, there are three conventional approaches to the BoP problem. The first two of these approaches are essentially Keynesian, one is the "Elasticity Approach" or "Devaluation", it is also referred to as Expenditure Switching". The second approach is the "Income-Absorption Approach" or "Expenditure Cutting". The third approach is the "Monetary Approach". All these approaches are discussed in the next part of this chapter.

2.4.1 The Elasticity Approach

The elasticity approach basically emerged as a short-run oriented tool of analysis to the BoP problem during the inter-war period and still survives in one form or another to the present day. It considers how the responsiveness of imports and exports to changes in the exchange rate determines the extent to which devaluation can improve

the current account balance from the short to long-run. The approach derives its name from the fact that the improvement in a nation's trade balance largely depends on the price elasticity of demand for its imports and exports. It assumes a fixed exchange rate system where devaluation is expected to lower the price of a country's exports abroad and raise the price of imports in the domestic market resulting into a shift to home produced goods. This shift is called expenditure switching. As already noted, for this approach to be successful, the Marshall-Lerner condition must be satisfied. However, if the change in the relative price of exports and imports leads to very minimal expenditure switching, for example in situations where there are no domestic substitutes for imported goods as the case is in most LDCs, devaluation may worsen the deficit. Under the floating exchange rate regime however, BoP equilibrium is attained without intervention in the exchange rate movements.

The elasticity approach, therefore, considers the responsiveness of imports and exports to changes in the national currency. For example, if the import demand is highly elastic, a devaluation or depreciation of a country's currency is expected to cause a substantial decline in imports. However, in reality, devaluation may take time to work since exports have inelastic supply, especially in the LDCs due to the nature of exports from these countries and external factors such as unfavourable terms of trade. Indeed, one might expect very little to happen to the volume of exports and imports demanded initially as consumers take time to shift from consumption of imported to domestically produced goods. Moreover, there is limited scope for switching from imports to domestic substitutes in most in LDCs. Foreign consumers may also take time to adjust from domestic goods to foreign exports. If this is the case, the BoP may actually worsen soon after devaluation, before improving at a later stage. Therefore, the elasticity approach poses two problems for economic analysis; the conditions required to switch expenditure in the desired direction, and the source of the additional output required to meet the increased demand for import substitutes. However, a rise in the prices of import substitutes and exports will induce domestic producers to shift production from nontradables to tradables, and a shift in the labour market as well.

With the passage of time, the quantity of exports rises and the quantity of imports falls, so that the initial deterioration in a country's trade balance begins to reverse.

"Economists have called this tendency of a country's trade balance to first deteriorate before improving as a result of a devaluation of a country's currency, the J-curve effect" (Salvatore, 1998:521). The explanation is that when a country's trade balance is plotted on the vertical axis, the response of the trade balance to a devaluation looks like letter *J*. This is demonstrated in Figure 2.1 below:

Figure 2.1: The J-Curve
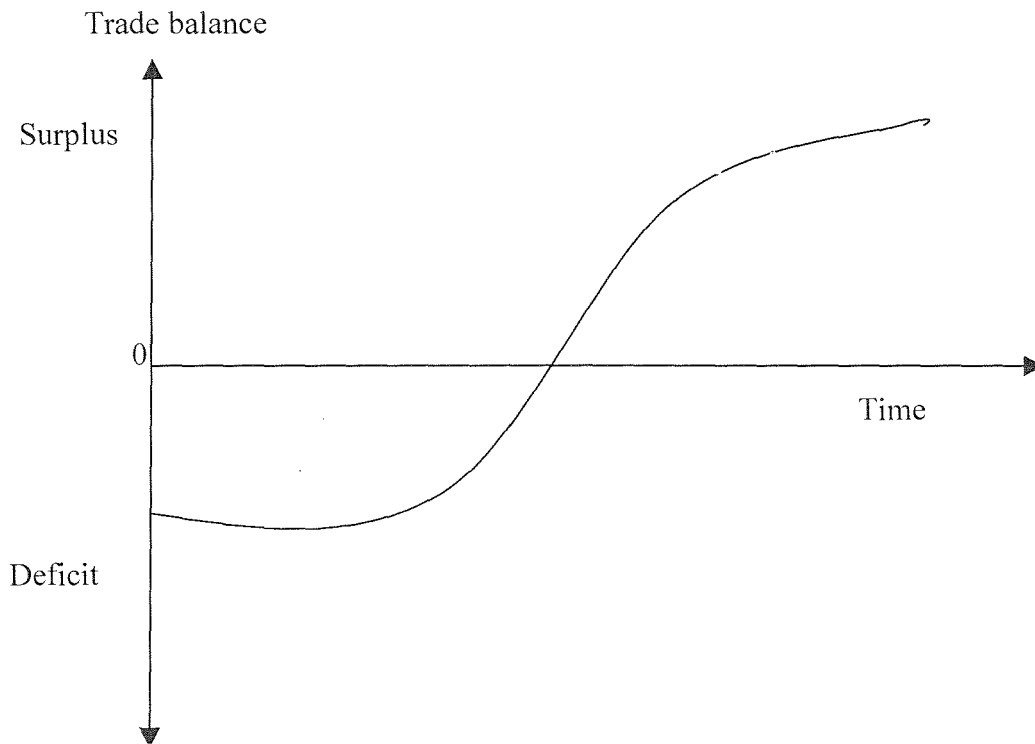
The diagram above demonstrates that from the origin and a given trade balance, a devaluation of the domestic currency will first result in a deterioration of the trade balance before an improvement is attained. Hence, even if the Marshall-Lerner condition is met, the current account may worsen in the short-run before improving in the longer term, as noted in the outgoing discussion. However, it should be noted that the J-curve effect is (an often, but not always) observed phenomenon. Uganda also faces slow demand response to her exports (mainly primary products) on the international market and unfavourable terms of trade. Moreover, there is limited scope for switching from imported to domestically produced products due to production constraints and a high propensity to import. Thus, the elasticity approach may not be effective in eliminating imbalances in Uganda's BoP. Indeed, the policy was implemented in the early stages of the ERP without remarkable success.

2.4.2 The Absorption Approach

This approach is based on the Keynesian school of thinking and holds the view that the BoP is linked to changes in real domestic income (Choonaratana, 1989:29). Johnson also explains the essence of this approach as "a relation between the aggregate receipts and expenditures of the economy, rather than as a relation between the country's credits and debits on international account"(Johnson, 1976:47). Its formal development is credited to Alexander (1952) who named it Absorption Approach, though many others contributed[4]. He began with the identity that production or income (Y) is equal to consumption (C) plus domestic investment (I) plus the trade balance (X-M), all in real in terms as an extension of the Keynesian Income/Output model. That is;

$$Y = C + I + (X\text{-}M) \qquad (2.1)$$

But then letting A equal domestic absorption, (C+I) and B equal the trade balance, (X-M) in equation (2.1) yields;

$$Y = A + B, \qquad (2.2)$$

By subtracting A from both sides of (2.2), we get;

$$Y - A = B \qquad (2.3)$$

That is, domestic production/income minus absorption equals the trade balance. The formulation also suggests that policies for correcting a trade imbalance can be broadly classified into two categories; those aimed at increasing production (output-increasing), and those which aim at reducing expenditure/absorption (expenditure-reducing). However, if a nation is at full employment, production or real income (Y) cannot rise and devaluation can only be effective if domestic absorption (A) falls, either automatically or as a result of contractionary fiscal and monetary policies (Salvatore, 1998:559). In other words, a current account deficit is reduced through the implementation of policies that reduce aggregate demand. However, LDCs normally have unemployed resources available, the additional output required to meet the increased demand could be provided by the re-absorption of these resources into employment. Under such circumstances, expenditure switching could increase employment and income. In this regard, the elasticity and absorption approaches are important and can be considered simultaneously.

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[4] Meade (1951), J. Tinbergen (1952), Harberger (1950) and others.

A devaluation of the exchange rate can affect the foreign balance (B), in two ways. Firstly; it can lead to a change in income (Y), which in turn induces a change in absorption (A). To this end, a change in the foreign balance will be composed of changes in both income and absorption. Secondly, a devaluation may change absorption for any given level of real income. Thus, while the elasticity approach stresses the demand side and implicitly assumes that the economy adjusts to satisfy the additional demand for exports and imports substitutes, the absorption approach stresses the supply side and implicitly assumes adequate demand for the country's exports and import substitutes.

2.5   The Monetary Approach to the Balance of Payments (MABP)

2.5.1   Development of the Monetary Approach

The MABP has "a long, solid, and academically overwhelmingly reputable history" (Frenkel and Johnson (1976:29). It is one of the approaches that were developed in the 1950s and the early 1970s with a view of understanding the sequences of economic events that lead countries into BoP problems and the policy measures that could prevent or correct such distortions. These changes reflected the dissatisfaction with the macroeconomic managemenet, which was still dominated by the Keynesian thinking and its explanation of the economic problems. Many advocates of the MABP associate its roots to David Hume (1752), see Frenkel and Johnson, 1976:147-148. However, its modern form is linked to economists from the Research Department of the IMF, University of Chicago, and the London School of Economics. The list includes Mundell, Johnson, Polak, Frenkel, Mussa, and Dornbusch among others. Some of the key factors that contributed to renewed interest in the area of BoP adjustments were the policy challenges that were encountered by policy makers. Rhomberg and Heller, (1977:6) note that the initial impetus towards research in this area came from the IMF staff's work on problems of LDCs, which at the time lacked the detailed national accounts data required to analyse the BoP problem using the absorption and elasticity approaches. However, since monetary and payments statistics were available in most countries, there was a need to develop a framework that could utilise this database. In addition, there was a need to develop a quantitative framework that would be manageable during staff missions during the period before

wide access to computers. Therefore, the monetary approach was particularly considered appropriate in this respect.

2.5.2 The Theoretical Framework of the Monetary Approach

The task of this section is to examine the theoretical framework of the MABP. It attempts to explore the theoretical propositions and assumptions on which the approach is based. The modern theoretical foundation of the monetary approach is traced back to the work of Mundell (1968, 1971) at the University of Chicago, Johnson, and other economists who have been working along similar lines. The MABP views the BoP as an essentially monetary phenomenon (Frenkel and Johnson, 1976:21). "Payments adjustment is viewed in terms of monetary adjustment instead of relative price and income changes", (Buzakuk, 1988:52). In other words, the MABP stresses the importance of monetary variables in explaining the changes in the BoP. The term "balance of payments" as a starting point is implicitly defined by MABP theorists as a set of items that are "below the line" in the overall balance of payments. These items in principle constitute the "money account". Essentially, the MABP is a supply and demand analysis of the money market in an open economy (Taylor, 1990:32). Thus, any excess demand or supply of money is exactly reflected in the movements in BoP. Accordingly, surpluses in the trade account and the capital account respectively reflect excess flows of goods and securities, while a surplus in the money account represents an excess domestic flow of demand for money. Consequently, when analysing the rate of increase or decrease in a country's foreign reserves, the MABP focuses on the determinants of the excess domestic flow demand or supply of money, where supply is believed to be composed of international reserves and domestic credit. Taylor (1990) observes that a BoP surplus emerges, if the domestic component of the monetary base is not adjusted in a situation where the demand for money exceeds its actual stock. In this case, money will be sucked into through the external account as individuals attempt to increase their money balances.

In the simplest empirical formulation of the MABP, most expositions assume a small open economy, in which a stable demand for money balances is determined by the price level, real income, and interest rate, while the supply of money equals the money multiplier times high powered money (reserves plus domestic credit). In short,

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Money demand, $M_d = L(p, y, r)$ (2.4)

Money supply, $M_s = m(R + D)$ (2.5),

so that in equilibrium, $(M_d = M_s)$; $L(p, y, r) = m(R + D)$ (2.6)

Where, p – price level, y – real income, r – interest rate, m – multiplier, R – reserves and D – domestic credit, (see Taylor, 1990:33). This formulation is based on the flow equilibrium condition for the money market (Johnson, 1972). The basic message of the MABP as Taylor observed is that, the domestic credit level should be high enough to satisfy the demand for the domestic money stock, to avoid payments disequilibria. Similarly, the MABP considers a deficit in the BoP as a consequence of an excess in the domestic money stock over what is required in the economy. A variation in the supply of money relative to its demand is associated with payments problems. Therefore, in the event of a monetary disturbance, the MABP states that the international reserves component will carry the burden of equating the demand for and supply of money. However, it should be noted that authorities can influence the domestic composition of the money stock, particularly under the fixed exchange rate regime. Under the flexible exchange rate system, attention is shifted from the BoP (which is always zero), to changes in the exchange rate, which moves up and down to absorb the consequences of policy and other changes, which would affect the BoP under a fixed exchange rate system (Mussa, 1976:189). On the other hand, under a managed float system as in the case of Uganda, monetary authorities can intervene in the foreign exchange market to moderate the movements in the exchange rate. Thus, under a managed float, the adjustment in official reserves is usually proportional to the degree of intervention in the foreign exchange market to influence the level and movement of exchange rate not, the BoP deficit.

2.5.2.1   The Adjustment Mechanism

In an open economy, the BoP plays an important role in determining changes in the stock of domestic money and it is viewed as part of the adjustment mechanism that works to restore equilibrium in the money market (Buzakuk, 1988:57). According to the MABP, the adjustment works in such a way that when an economy is initially in equilibrium, and runs a current account deficit, it would mean that the country has

excess demand for goods and services or national investment exceeds national savings. Normally, external resources or increased domestic savings can finance this gap. On the other hand, a deficit in the capital account is an indication of an excess demand in the country's bond markets, which could be satisfied by importing more securities into the country than what is being sold to the outside world. While according to Walras' law[5], if country runs a deficit on the overall balance, it must have an excess supply in the money market. The MABP views the BoP disequilibrim as a mechanism by which an excess supply of (demand for) money is removed from the domestic market. For instance, increases in the level of domestic credit result into growth in the money supply and distort the monetary equilibrium. In order to restore equilibrium in the money market, the public needs to dispose off the excess quantity of money over time by buying foreign goods. The direct effect of such an action is a BoP deficit and running down the country's foreign reserves. The loss of reserves reduces the quantity of money and eliminates the excess supply over time. Therefore, when an exogenous shock occurs, particularly under a fixed exchange rate regime, the adjustment process begins and keeps working until the excess supply of (demand for) money disappears and equilibrium is restored. At that point, the flow demand for goods and bonds match their flow supplies and the economy achieves equilibrium and payments balance (Buzakuk, 1988:59). Therefore, the monetary authorities need to monitor domestic credit creation to prevent a surge in money supply in the economy.

It should however be noted that the nature of adjustment greatly depends on the type of exchange rate regime in a particular country. In a fixed exchange rate system, adjustment is through changes in the BoP, whereas in a flexible exchange rate system, equilibrium in the money market is restored through movements in the exchange rate. In the case of a managed float, the authorities usually intervene in the market using official reserves and the change in reserves is proportional to the degree of intervention in the foreign exchange market. Further expositions can be found in the work edited by Frenkel and Johnson, 1976, and Mundell, 1968.

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[5] States that for a system to be in equilibrium, all excess demand in the economy must sum up to zero, i.e in a three-market economy, if two markets have excess demands, then the third market must have an excess supply (Buzakuk, 1988:58).

2.6   Conclusion

This chapter has reviewed some BoP concepts pertinent to this study. It has also presented an overview of the evolution of the BoP adjustment theory to broaden our understanding of the various adjustment policies and to justify the choice of the MABP in this study. The chapter has also examined the theoretical frameworks of the three conventional approaches to the BoP analysis. It has been noted that expansion of domestic credit beyond what the economy can accommodate results into BoP imbalances. The link between domestic credit creation and the BoP will be investigated further for the case of Uganda in the analysis chapter. An analytical framework to show the possible linkages between domestic credit and the BoP and other macroeconomic variables is designed in Figure 2.2 below. However, the model specifications will be dealt with in Chapter Four.

Figure 2.2: The Analytical Framework showing some of the possible linkages between domestic credit and the BoP:
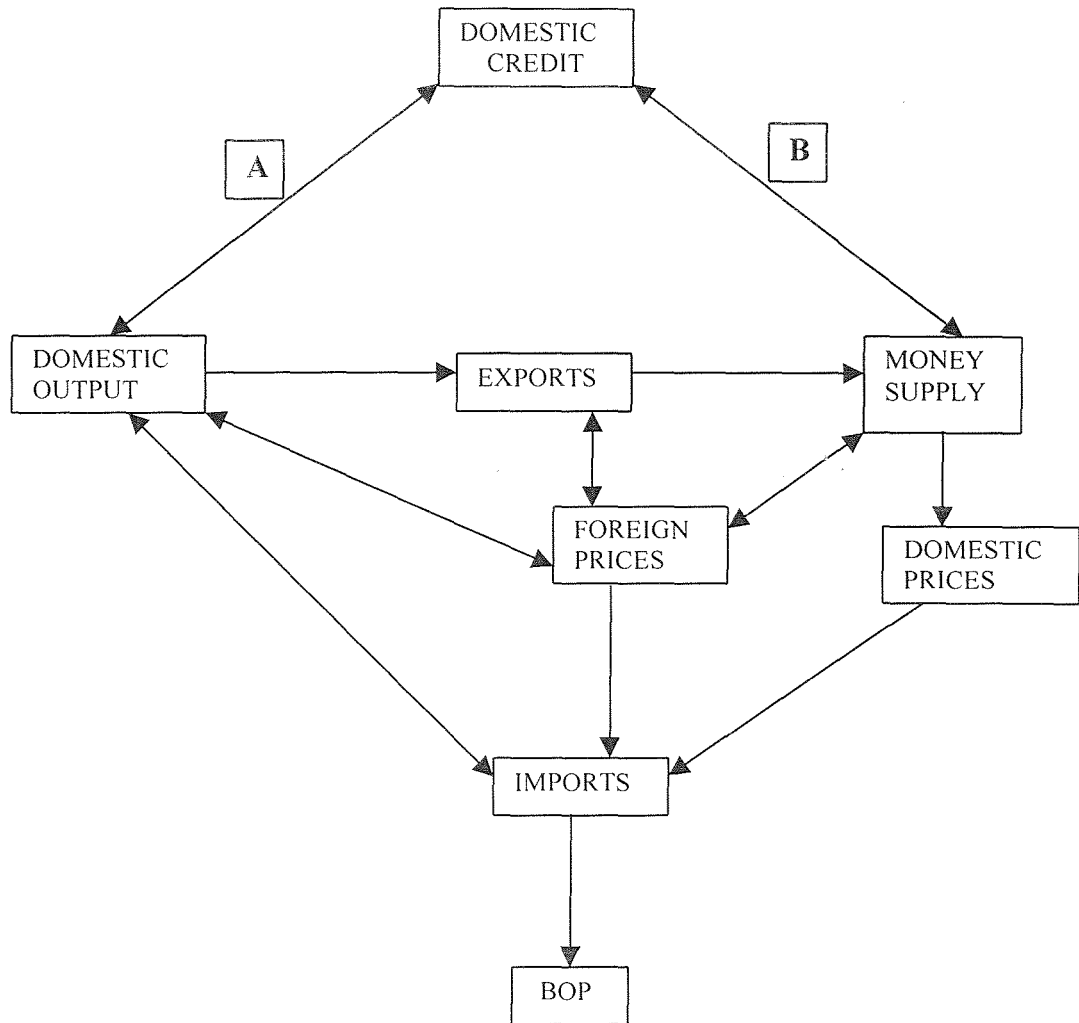
There are two possible links. Link A suggests that domestic credit expansion boosts production and increases domestic output. Higher production creates demand for more inputs including imported materials. As the volume of imports expands, the BoP tends to experience imbalances on the current account. Therefore, if other things are constant, high economic growth tends to give rise to a deficit in the BoP.

In link B, if domestic credit expands faster than what the economy can absorb, it leads to autonomous increases in money supply – reflected in an excess demand for goods and services. The excess demand in turn pushes domestic prices upwards. Consequently, the increase in money supply generates higher spending in the economy and worsens the external balance. Also, if the income elasticity of import

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demand is high, it tends to create excess demand for foreign exchange and depreciation of the exchange rate. However, a rise in the exchange rate (depreciation) may be positive for the BoP as it improves the competitiveness of the country's exports. The opposite is true for an appreciation.

In summary, growth in domestic output is expected to lead to a deterioration of the BoP (mainly the trade balance), since it increases demand for goods and services, particularly imports. Also, excessive credit expansion leads to payments imbalances as the residents dispose of the extra money by spending it on goods and services. On the other hand, as the economy grows, the demand for money increases, and if there is no autonomous increase in money supply, a BoP surplus will be observed as the additional money is fed into the economy. This analysis will help in the interpretation of the empirical results in Chapter Four.
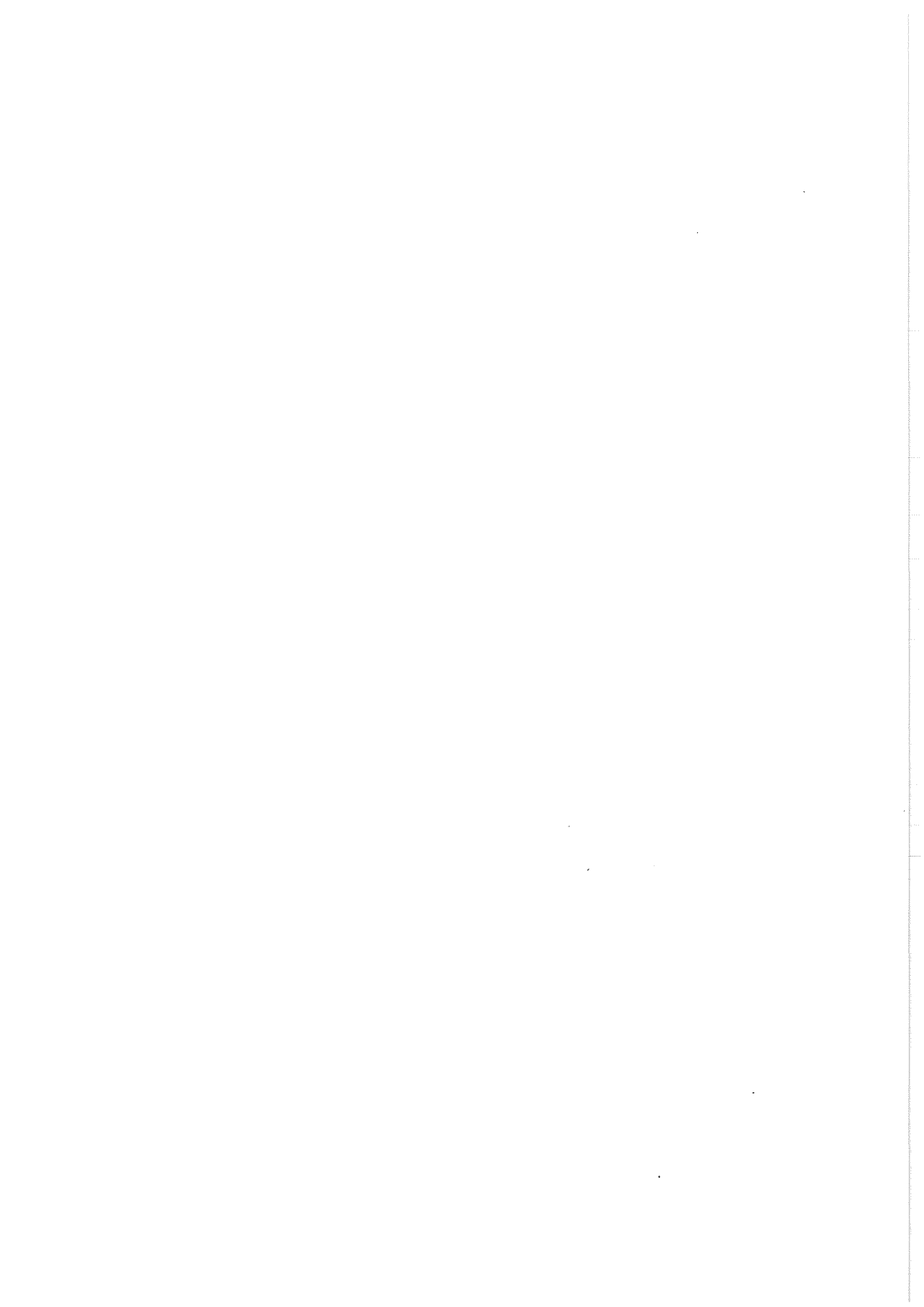
CHAPTER THREE

UGANDA'S ECONOMY: ITS BALANCE OF PAYMENTS AND THE MACROECONMIC ADJUSTMENT PROCESS

3.1 Introduction

In this chapter I will give the background of Uganda's economy and the overall macroeconomic adjustment process between 1980 – 2001. An attempt will also be made to provide the key macroeconomic performance indicators overtime. In section 3.3, an exposition of the country's BoP situation and the external sector polices will be presented while section 3.4 discusses the monetary policy management in Uganda and the macroeconomic adjustment process and institutional reforms. In the same section, I will review the various monetary and financial instruments used by the monetary authorities and their impact on the growth and development of the economy. The chapter will end with some conclusions.

3.2 An Overview of Uganda's Economy

3.2.1 General overview

Uganda's economy has four distinct and well-linked macroeconomic sectors, namely, the monetary, the real, the external, and the fiscal sectors. The economy is predominantly agricultural, with agriculture accounting for more than 42 per cent of the GDP, over 80 per cent of the total exports and over 70 per cent of the entire population is directly or indirectly employed in this sector[6]. Construction and infrastructure are also principal sectors. The country has great potential and is endowed with significant natural resources, including ample fertile soils, regular rainfall and a fair amount of mineral resources. The main exports include coffee, cotton, tea, tobacco, hides and skins, fruits, cut flowers, and fish among others. Coffee is the major foreign exchange earner, accounting for more than 65 per cent of the total export proceeds. Agriculture continues to be the mainstay of the economy despite the deteriorating terms of trade, and provides inputs for a number of manufacturing and processing industries. Uganda depends on foreign markets for machinery, industrial inputs and some consumer goods. It also depends on external support to finance a considerable portion of her expenditure especially in the education sector and infrastructure.

Uganda's macroeconomic history is characterised by numerous eras of divergent economic conditions. In the period immediately following independence from the British in 1962, Uganda had began to exploit and harness her potential and the economy was among the most promising ones in the SSA. The relatively good macroeconomic policies supported by a fair infrastructure led to economic growth and highly vibrant export sector. In the period 1962 – 1970, real GDP grew by approximately 4.8 per cent per annum, while domestic investment grew at 7.5 per cent partly financed by moderate savings estimated at 13 per cent of GDP (World Bank Indicators). All these factors facilitated the implementation of the government investment programmes without excessive pressure on domestic price level and the external balance. With the government's fiscal discipline, the overall budgetary position was sound; revenue increased faster than recurrent expenditure. Also, there was general stability in the financial sector, which encouraged savings mobilisation. The country also maintained a favourable exchange rate that greatly promoted the competitiveness of her exports on the international market. Thus, the government could manage the external debt and at the same time maintain the basic infrastructure such as roads, hospitals, schools and power generation in good condition and provide reasonable social services to the citizens.

Following Idi Amin's ascension into power in 1971 and the subsequent declaration of the economic war in 1972 coupled with the political and social turmoil that prevailed from that period through the early 1980s, all the economic progress that had been registered in the post independence period were overturned. This marked the beginning of both internal and external imbalances that became unsustainable at the close of the 1970s (Atingi-Ego and Sebudde, 2000:1). The economy was plunged into a crisis characterised by decline and distortion in all sectors, particularly social services (health and education), physical infrastructure (roads, railways and telecommunications) and agriculture. The industrial sector suffered severe destruction due to general lack of spare parts and maintenance as insecurity engulfed most parts of the country. Consequently, the economic activities declined significantly, real GDP decelerated at an annual average of 1.6 per cent, while per capita income declined at

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[6] The Republic of Uganda Statistical Abstract, 1999.

an annual rate 4.4 per cent. In addition, the government faced huge budget deficits and resorted to borrowing from the central bank, which led to hyper-inflation and an unsustainable BoP position. High inflation led to negative real interest rates and discouraged domestic savings and investment.

3.2.2 The Macroeconomic Trends and Outlook; 1980 – 2001

The turning point of Uganda's economy came in the 1980s following the overthrow of Amin in 1979. After a period of stagnation in the 1970s, a new government that assumed power in 1980 made some attempts to restore prudent macroeconomic management supported by financial assistance from the IMF and the World Bank. After a series of negotiations, a stand-by arrangement was signed by the Ugandan authorities and the IMF and World Bank to re-establish economic stability. The government was entrusted with the responsibility of meeting a number of benchmarks regarding the budget deficit, net domestic bank credit and growth in broad money (Kasekende and Atingi-Ego, 1999:412). The authorities also aimed at reducing bank credit to government while increasing exceptional domestic non-bank financing of exports and essential imports. The attempts to stabilise the economy were, however, short lived because fiscal management was rather loose resulting into the violation of the targets and benchmarks that were agreed upon in 1981 with the IMF. This culminated into the cancellation of the stand-by arrangement in early 1984, reversing all benefits that had been delivered. Between 1985-1986, controls in all the key markets became the order of the day. With the tightening of the foreign exchange constraints and further worsening budget deficit, annual inflation rose from about 15 per cent to over 200 per cent by end-1985 (see Table 3.1). Real interest rates became highly negative and financial intermediation became increasingly difficult as high inflation began to erode the capital base of most commercial banks.

In May 1987, a new government that assumed power in 1986 after waging a long guerrilla struggle launched an ERP with the support of the IMF, World Bank and other donor agencies. Efforts were largely directed at reducing excess liquidity, inflation, stabilising the economy, kick-starting production and achieving a sustainable BoP position. The launching of the ERP was also followed by a consultative meeting in 1989 for all stakeholders in the country, which unanimously decided that the country needed to overhaul the economic structure to overcome most

of the internal and external imbalances. Based on the recommendations of the consultative forum and with financing from the IMF, World Bank, and other bilateral agencies, SAPs were implemented. These programmes were largely aimed at promoting market efficiency by limiting the role of the state and encouraging the private sector in economic activities. This involved liberalisation of the trade and exchange rate arrangements, and the financial sector, while the stabilisation policies focused on containing excess demand in the economy by controlling money supply.

Uganda has up to date continued to implement a successful program of macroeconomic adjustment and structural reform begun fifteen years ago. The government's strategy of application of appropriate fiscal and monetary policies and of substantial economic liberalisation has maintained high growth, low inflation, a steadily improving external position and a vibrant private sector. Substantial progress and reforms have been registered and the macroeconomic environment is relatively stable. During fiscal years 1986-1994, Uganda's average annual GDP growth was about 6 per cent and 8 per cent in 1995 and 1996. In 1997, GDP growth decelerated to five per cent and remained relatively low through 1998. The lower growth rates in 1997/98 could be attributed to poor performance in the agriculture sector due to the El-Nino rains, which adversely affected food and coffee production, transportation and total exports. Also, a deceleration in the FDI mainly from the expatriate Asians investing in repatriated property is believed to have contributed to the decline as well. Similarly, the lower growth rates in 1999/00 and 2000/01 are largely attributed to the poor terms of trade and dwindling coffee earnings. On the whole, strong growth has occurred across the economy, with substantial growth in manufacturing, mining, transport, communications and construction sectors. The result of this strong economic growth is that the Ugandan economy has almost doubled in size in the past fifteen years. Some selected Macroeconomic Indicators are displayed in the Table 3.1 below:

Table 3.1: Selected Macroeconomic Indicators; 1985/86 – 2000/01

Fiscal Year	Gross National Savings (% of GDP)	Gross Domestic Investment (% of GDP)	GDP Growth Rate (%)	Inflation (Annual %)	Exports to GDP ratio (%)	Imports to GDP ratio (%)	Curr. Acct to GDP ratio (%)
1985/86	9.2	8.4	0.7	240.0	1.89	2.67	0.24
1986/87	9.9	9.7	4.1	163.03	4.22	8.65	-2.24
1987/88	11.0	10.8	7.7	118.88	7.55	20.23	-4.53
1988/89	1.4	11.1	6.7	81.07	7.51	20.01	-6.87
1989/90	2.7	12.6	5.9	57.61	5.98	20.78	-9.97
1990/91	2.5	15.0	5.2	32.14	7.61	20.78	-13.53
1991/92	0.3	15.8	3.1	41.63	6.66	22.77	-11.82
1992/93	0.5	15.2	8.4	30.0	5.69	18.35	-12.30
1993/94	2.8	14.7	5.4	5.8	7.1	16.57	-6.63
1994/95	8.9	15.3	10.6	6.8	11.23	21.21	-7.72
1995/96	8.6	17.5	7.8	7.5	10.7	22.59	-8.27
1996/97	10.8	17.3	4.5	7.7	12.01	22.97	-8.27
1997/98	11.8	17.1	5.4	5.8	7.42	24.20	-10.42
1998/99	13.6	19.0	7.7	0.2	9.34	24.58	-11.64
1999/00	10.2	21.0	4.5	5.8	7.57	26.33	-14.91
2000/01	12.2	20.1	5.0	4.6	7.74	27.62	-15.90

Source: Bank of Uganda, Background to the Budget (various), World Bank Indicators, and IMF.

Inflation, which ran at 240 per cent in 1985/86 and 42 per cent in mid-1992, was about 7.7 per cent during 1996/97 and under five per cent for 1998/99. Temporary shortages of food caused a sharp rise in prices in late 1997 and early 1998. Nevertheless, it was contained at moderate single digit levels over the period 1998-2001. The exchange rate remained fairly stable after the liberalization of the foreign exchange transactions. However, the Uganda shilling was under pressure in 1999/00 due shortages of foreign currency and speculation, but the BoU was able to intervene in the Interbank Foreign Exchange Market (IFEM) to smoothen out wide fluctuations in the exchange rates. The fiscal deficit (excluding grants) was reduced from 11.6 per cent of GDP in 1985/86 to about 6.5 per cent in 2000/01 due to stronger revenue and rationalisation of expenditures. The improvement in the fiscal position enabled the monetary authorities to gain control over the monetary aggregates. To this end, the annual rate of growth in money supply fell from about 153.4 per cent in 1987 to 13.5 per cent in 1999 (World Bank indicators). In line with these developments, the international reserves have registered a steady increase since the beginning of the program to over 6 months of imports of goods and services in 2000/01. However, the current account deficit has not improved significantly and still remains at 15.9 per cent of the GDP, when grants are excluded. Nonetheless, the vibrant capital and official transfers have more than financed the larger current account deficit and generated overall BoP surpluses for some years.

Gross Domestic Investment as a percentage of GDP is estimated at 20.1 in 2000/01 compared to 9.7 in 1986/87. The increase in private sector investment is largely contributed by FDI, which grew from US$ 43 million in 1992/93 to US$ 247 million in 1999/00. Similarly, private transfers rose from US$ 107.9 million in 1987/88 to US$ 549.1 million in 2000/01 while the official inflows have also steadily increased from US$ 275.5 million to US$ 421.2 million. Gross National Savings as a percentage of GDP have also increased over time and were estimated at 17.3 in 1999/00 (IMF, 1999). The GoU has also worked with donor countries and multilateral creditors to reschedule and cancel substantial portions of the country's external debt. Thus, under the HIPC Initiative, multilateral creditors have agreed to provide Uganda with a debt relief of US$ 1,003 million in NPV terms, approximately 40 per cent of the total debt stock. This will be delivered over a 20-year period. As a result of these developments, the NPV of debt/exports has declined from 294 per cent in 1995/96 to 240 per cent, although higher than the earlier projection of 207 per cent[7]. At the same time, the government continued to pursue debt negotiations in the Paris Club. Similar efforts are being extended to other Non-Paris Club bilateral and commercial creditors to further reduce the country's debt burden to sustainable levels. At the advent of the HIPC debt relief, the government established a Poverty Action Fund to ensure that the resources realised from the debt relief are spent on poverty reduction. To this end, the headcount poverty has dropped to 35 per cent, from 44 per cent in 1997/98 and 56 per cent in 1992/93[8] despite an increase in the disparity in the poverty incidence, particularly in the northern part of the country and among female headed households.

3.3   Uganda's Balance of Payments

In this section, I will analyse Uganda's external sector and examine the economic conditions that determine the developments on the BoP by pointing out some of its strengths and weaknesses. A review of the external sector policies that have been pursued by the GoU will also be discussed here.

Uganda is an agricultural country with leading traditional exports including coffee, cotton, tea and tobacco. However, some non-traditional exports such as fish and its products, beans, simsim, vanilla and flowers have become increasingly important in

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[7] Background to the Budget 2000/01
[8] The 1999/2000 Household Expenditure Survey conducted by the Uganda Bureau of Statistics.

the recent period. This is largely attributed to the government's efforts to diversify the country's export base following a decline in the prices of coffee at the international market. On the import side, all types of petroleum products, machinery, vehicles and accessories and processed foodstuffs are the country's major imports. The history of Uganda from the mid 1970s and the early 1980s is characterised by severe and permanent BoP deficits due to the poor economic conditions that prevailed at the time combined with a small export base. Total exports of goods and services mainly constituted of coffee, which accounted for more than of 50 per cent of the total share. With a fall in coffee receipts and the deterioration of the terms of trade, foreign exchange earnings were extremely affected and could not cover the country's foreign obligations. The overall balance was consistently in deficit, while the current account balance continued to widen from US$ 82.67 million in 1980 to US$ 451.97 million in 2000/01 (Table 3.2). As a result, the country resorted to loans, aid and grants from foreign sources to cover the BoP deficits.

Table 3.2: Uganda's Balance of Payments[9]: 1980 - 2001
(US$ millions)

Year	Trade Balance	Services & Income Balance	Transfer Balance	Capital & Financial Account	Current Account	Overall Balance
1980	1.80	-120.87	36.40	-67.00	-82.67	-214.28
1981	-55.50	-68.50	125.20	-96.31	1.20	-126.79
1982	9.50	-186.70	107.30	14.80	-69.90	-79.83
1983	-60.4	-115.4	103.5	27.7	-72.3	-36.3
1984	65.7	-44.0	85.4	-88.3	107.1	-58.5
1985	114.9	-98.9	61.0	-27.4	77.0	66.9
1986	-31.4	-126.6	209.6	-3.9	51.6	92.0
1987	-264.7	-113.5	266.0	121.2	-112.2	28.1
1988	391.9	-125.4	322.4	45.7	-194.9	-7.1
1989	-462.3	-108.8	311.6	317.5	-259.5	16.5
1990	-439.8	-116.5	293.0	177.5	-263.3	-85.8
1991	-300.6	-197.5	324.4	34.9	-173.7	-138.8
1992	-362.3	-196.1	424.4	6.1	-134.1	-128.0
1993	-401.6	-130.1	365.6	248.1	-166.1	80.0
1994	-449.86	-248.69	497.43	317.46	-201.12	116.3
1995	-622.5	-328.84	645.82	351.26	-305.51	45.7
1996	-656.73	-336.09	733.01	239.76	-259.81	-20.1
1997	-798.26	-282.8	730.03	433.94	-351.04	82.9
1998	-1017.86	-276.79	964.32	405.17	-330.33	74.8
1999	-895.59	-307.00	786.57	400.93	-416.02	-15.1
2000	-1137.51	-286.22	945.6	482.38	-478.13	4.2
2001	-1091.87	-330.4	970.3	392.63	-451.97	-59.3

Source: *IMF International Financial Statistics, CD-ROM and Bank of Uganda*

The balance on the current account largely determines Uganda's external position. The goods and services and income accounts have been in deficit most of the years, while the current transfers have been expanding on account of the private transfers and aid. The country's exports have declined due to their limited competitiveness on the world market, deterioration in terms of trade and fluctuations of the prices. For instance, the average realised price of Uganda's coffee on the world market fell from US$1.4/kg in 1996/97 to a low of US$0.64/kg in February 2001. The wilt disease which attacked the coffee crop and the long drought substantially reduced coffee exports from about 4.4 million bags in 1996/97 to just 2.84 million 60-kg bags in 2000/01[10]. Similarly, the growth in non-traditional exports has stagnated considerably in 1999/00 due to the European Union ban on fish products from Uganda and shocks to the tourism industry. The GoU put in place adequate safeguards and measures to guard against the use of poison by fishermen, which triggered off the ban by the European Union – Uganda's largest fish export market. However, negotiations to

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[9] See Appendix III for additional information
[10] Figures are from the Background to the Budget and Bank of Uganda Annual Report 2000/01.

have the ban lifted have been successful and Uganda has resumed fish exports to the EU. On the other hand, imports have been increasing to meet the investment and consumption needs. Imports of goods and non-factor services have grown from 18.5 per cent of GDP in 1992/93 to an estimated 27.6 per cent in 2000/01. The growth in imports could partly be attributed to the increasing oil prices and growing investments in the country. The economic development efforts and the implementation of socio-economic programs are also major contributors to the large increases in the import volumes. For instance, the building of social infrastructures such as roads, and rehabilitation of schools, hospitals and industries have considerably contributed to the rise of the marginal propensity to import among other factors. However, the falling export earnings amidst rapid increases of imports present a fragile situation that requires urgent rectification.

3.3.1 External Sector Policies

The government's external sector policies aimed at achieving a sustainable long-term BoP. External sector policies mainly focus on promoting exports through the diversification of the export base by encouraging non-traditional exports. The duty drawback system for exports will also be made more effective and export documentation will be streamlined. The government continues to be committed to the trade liberalisation program and the remaining import tariffs on beer, soft drinks, automobile batteries, and cigarettes will be slowly phased out. In addition, intra regional trade barriers are being dismantled and co-operation enhanced, notably, in the areas of payments settlement, transportation and communication through active participation in Cross-Border Initiatives such as the East African Community (EAC), and the Common Market for Eastern and Southern Africa (COMESA). The GoU also continues to operate a market determined foreign exchange system and implementation of monetary and fiscal policies consistent with stability in the foreign exchange and domestic money markets. In this respect, the BoU maintains its policy of intervening in the foreign exchange market to smoothen out wide fluctuations in the exchange rate, mindful of its inflation and international reserves targets. The next section therefore examines the conduct of monetary policy in Uganda.

3.4 Monetary Policy Management in Uganda

The Constitution of the Republic of Uganda of 1994 and BoU Statute of 1993 grant full autonomy and authority to the BoU to formulate and implement monetary policy with a primary objective of maintaining low and stable inflation. Monetary policy management in Uganda is set within the context of the macroeconomic policy objectives of achieving desired economic growth targets and maintenance of macroeconomic stability. In the light of those objectives, monetary policy is designed to provide adequate liquidity in the economy, including the provision of adequate private sector credit to sustain the desired economic growth target. The objective of stabilising the shilling also has an external dimension of ensuring stability in the foreign exchange market to maintain international competitiveness. In this respect, monetary policy management in Uganda plays two important roles: i) maintaining monetary stability by keeping inflation at low single digit levels and ii) promoting economic growth by ensuring adequate supply of liquidity to facilitate the growth objective. When the BoU assumed the primary responsibility of formulation and implementation of monetary policy in Uganda, it shifted from direct controls that were used by the Ministry of Finance to indirect monetary controls (Katarikawe and Sebudde, 1999:2). The Bank adopted the Reserve Money Programme (RMP) to guide the conduct of monetary policy. The RMP is based on the conventional financial programming model and provides a flexible framework for assessing the liquidity conditions in the country that are consistent with the targeted inflation levels. Under the RMP, monetary policy decisions are taken by monitoring developments in base money and other key macroeconomic indicators to ensure that liquidity expansion is consistent with the programme targets.

3.4.1 The Monetary Policy Process

At the operational level, growth of base money is carefully projected to be in line with the desired path of the final targets (inflation, interest rates, exchange rate and broader monetary aggregates) in order to support non-inflationary growth of the economy. The annual growth target is converted into monthly targets that reflect seasonality in the money demand from which the desired levels for daily movements are also computed. The Research Department of the BoU then monitors the latest developments in these final indicators, and on the basis of the monthly RMP advises the Monetary and Credit Policy Committee (MCPC) on the appropriate interventions

needed (Musinguzi et al, 2000:6). The Department also advises the MCPC about the supply outlook of base money in relation to the government and BoP cash flow profiles. The gap between the actual out-turn and the desired levels of base money forms the basis of monetary policy stance: ease if base money is below desired, tighten if base money is above desired or leave monetary policy unchanged if base money is consistent with desired levels. In the current framework, there is no set rule on the span of deviations that would trigger a policy stance. However, the BoU has tended to take immediate action whenever base money has persistently exceeded desired levels and relaxed under reverse situations (Katarikawe and Sebudde, 1999:3). The government is also committed to ensure exchange rate competitiveness. The current exchange rate policy pursued by the BoU, is to let the exchange rate to be fully market determined, and only intervene in the IFEM to stabilise both exchange rate and conditions in the market.

3.4.2 Monetary Policy Instruments

The BoU has a limited range of instruments which it uses to conduct monetary policy, these include: open market operations involving foreign exchange deals, Treasury Bills (TBs), Repurchase Agreements (REPOs) for regulation of liquidity. The BoU also introduced its own stock of securities (BoU Bills) in November 1996 to supplement the other securities in liquidity management. It should however be noted that the BoU bill is purely for monetary policy purposes. The BoU will progressively reduce its reliance on primary issuance of government securities for liquidity management, and begin executing open market operations using its own stock of treasuries (IMF, 1999). Other instruments include reserve requirements on demand, time, and savings deposits to influence the monetary base and the liquid assets ratio to ensure desired liquidity in the financial sector. There is also a bank rate to regulate commercial bank's borrowing from the central bank, and a rediscount rate that is used to regulate liquidity by varying the policy margin above the 4-week average yield on the 91-day TBs to permit alternative policy stances. The foreign exchange deals in form of spot transactions are also used to stabilise conditions in the external sector in the framework of market determined exchange rate system.

Co-ordination with the Ministry of Finance ensures that both monetary and fiscal policies are consistent. The policy of monetary restraint facilitated by increased fiscal

savings with the banking system has tremendously helped in the control of inflation. In addition, the trend of money supply that used to be driven by expansion in net government borrowing from the banking system has been reversed. The BoP has been strengthened to the extent that the gross foreign reserve have increased to US$772.8 million, equivalent to about 6 months of import cover compared to less than one month in 1986/87. However, the growing current account deficit is clearly unsustainable and reflects a high level of dependence on external financing to meet the country's external requirements. Although the issue of sustainability of the current account deficit is beyond the scope of this study, an attempt is made to assess the impact of policy changes on BoP.

3.4.3 The Challenges of Monetary Policy Management

One of the challenges of monetary policy management in Uganda recently has been the management of the liquidity impacts of recent bank closures and restructuring. In 1998/99, the BoU seized and closed three commercial banks for insolvency. However, the GoU promised to compensate all depositors of those banks. Compensation of the depositors took the form of direct cash payments to the customers, transfer of accounts to other commercial banks, and issuance of promissory notes to individuals and to banks which took over the deposit liabilities of two of the closed banks (Greenland Bank and Cooperative Bank). The maturity profiles of the promissory notes were phased over 1999/2000 and 2000/2001 to ensure that liquidity expansion remains within manageable levels. The BoU raised the net issuance of TBs and BoU bills to offset liquidity injection emanating from the maturing promissory notes. Consequently, "the outstanding stock of TBs and BoU bills increased from Ushs 214 billion and 14.9 billion as at end-June 1999 to an estimated Ushs 340 billion and Ushs 41.3 billion as at end-March 2000, respectively[11]". Similar challenges include the management of excess liquidity of commercial banks and reacting to flows arising from the functioning of a fully liberalised capital account. Other challenges include the maintenance of a stable national currency, which has continued to weaken in relation to the US dollar, and the impact of the terms of trade shock. Indeed, the deterioration of the terms of trade could also be partly responsible for the widening current account deficit. Also, donor import support inflows are very difficult to

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[11] Background to the Budget 2000/01

forecast and more often, there are divergences between monthly projections and actual out-turn of import support inflows.

3.5   Conclusion

This chapter has given an overview of Uganda's economy between 1970-2001. The country witnessed a period of economic stagnation during the 1970s and the early 1980s. However, since May 1987 a series of economic reforms have been implemented and their impact has been reviewed. The developments in Uganda's BoP and the policies that have been proposed to improve the current situation have also been examined. Furthermore, an exposition of the monetary policy and exchange rate management in Uganda has been given to help in understanding the link between the various sectors of the economy and the macroeconomic objectives. In addition, the challenges faced by monetary policy management have been analysed to assess what needs to be addressed. The next chapter provides the empirical analysis of the study.
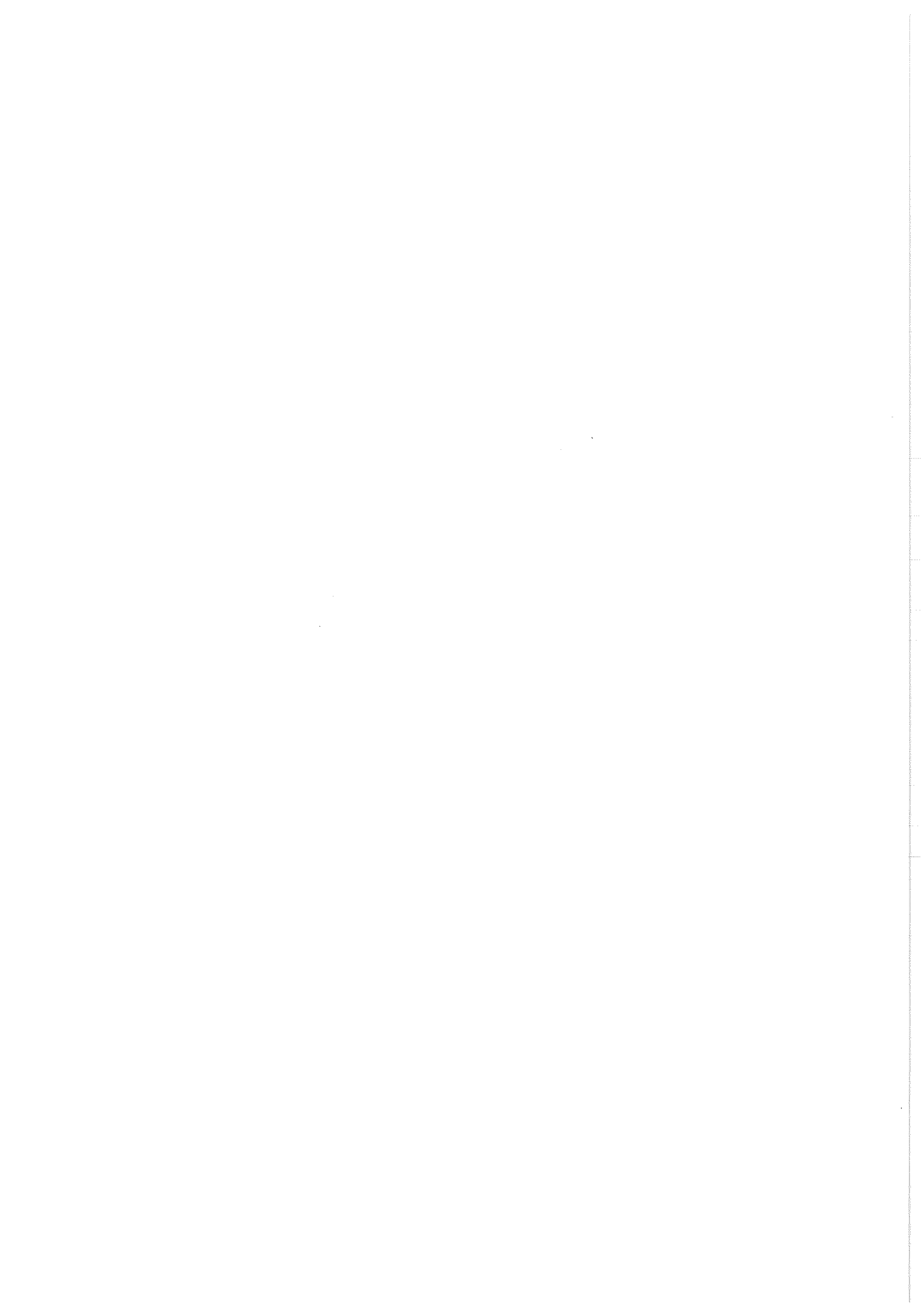
CHAPTER FOUR
EMPIRICAL ANALYSIS

4.1   Introduction

This chapter seeks to provide an empirical analysis of Uganda's economy during the period 1980 – 2001. The emphasis is placed on the developments in the country's BoP in an attempt to test the theoretical proposition that the BoP is a monetary phenomenon. This proposition derives from what Johnson (1976:147) described as a new approach to the theory of BoP adjustment. This approach was chosen in this study owing to the fact that the conduct of monetary policy in Uganda is guided by the conventional IMF financial programming model (Appendix II) under the RMP, which was explained in chapter three of this paper. The IMF financial programming exercise has been the centrepiece of analysis since the 1950s and sets policy actions (conditionality) that countries with BoP problems must take to access IMF assistance. The standard IMF conditionality involves setting a ceiling on domestic credit expansion in order to achieve a sustainable BoP position and a floor on central bank's holding of net foreign assets to bring about a satisfactory level of foreign reserves (Polak, 1997:17). In the light of that, the BoU adopted the RMP as a framework to guide the conduct of monetary policy.

4.2   A review of some earlier studies

The monetary nature of the BoP adjustment has been a subject of extensive investigation. A survey of empirical tests of the MABP and exchange rates is well presented by Magee (1976). Also, section 2 of Frenkel and Johnson (1976) volume contains a number of empirical studies on this subject. Some of the empirical tests cited here include; a model for Australia by Richard Zecher, Sweden by Hans Genberg (1975), Japan by Dona Bean and Spain by Manuel Guitian. Other empirical studies are presented in the IMF volume of 1977. The classical formulation of the monetary approach, Johnson, (1972), and Mundell (1968) is based on the flow equilibrium condition for the money market, where money supply is equal to money demand as indicated earlier in equation 2.6. The main proposition of the MABP is that whenever the flow equilibrium condition is disturbed, the change in foreign reserves will accommodate the changes to restore equilibrium in the money markets. This formulation presupposes a fixed exchange rate system. However, in a freely floating

exchange system, the changes will be reflected in the movements in the exchange rate.

After separating international reserves from high powered money, the simplest empirical formulation of the monetary equation can be written as:

$$r = a_0 + a_1 \Delta \log y + a_2 \Delta \log P + a_3 \Delta \log i + a_4 \Delta \log h + a_5 \Delta \log d + e$$

(4.1)

$$r \equiv \frac{R}{(R+D)} \Delta \log R = \frac{\Delta R}{R+D}$$

$$d \equiv \frac{D}{(R+D)} \Delta \log D = \frac{\Delta D}{R+D}$$

where, R - reserves, D – domestic credit, y – real income, i = interest rate, h = money multiplier and P = price level. The elasticities a_1, a_2 and a_3 are treated as identical to those in domestic demand for money[12]. Money multiplier is assumed to be constant while the real income is assumed exogenous by the long-run full employment assumption. Similarly, prices and interest rates are also assumed to be exogenous in the small country analysis, implying that the demand for money is exogenous for the small open economy. As such, the monetary authorities do not have control over any real variables or nominal variables in the economy except, domestic credit. Therefore, if all those assumptions hold, an increase in domestic credit leads, ceteris paribus, to an equivalent decline in international reserves. Indeed, a number of empirical studies have found a robust negative relationship between domestic credit and foreign reserves (Magee, 1976).

The above long-run relationship was subjected to empirical tests applied to short-run data and yielded good sample period estimates for the changes in quarterly reserves as a percentage of high powered money for Sweden, Australia and Japan. In all the three cases, the real income elasticity of demand for nominal money was positive and significant, the price elasticity was significant and statistically equal to 1 and the interest rate elasticity was negative and significant for Japan and Australia.

Blejer (1979), tested the robustness of the monetary approach to analyse the experience of five large European countries; France, Germany, Italy, Sweden and

United Kingdom when he was establishing the nature of the causality between domestic credit and foreign exchange reserves for the period 1960 - 1976. He used the procedure suggested by Sim (1972) to test causal patterns in a bivariate system. The results from his test were consistent with the adjustment process postulated by the monetary approach. In all the five cases investigated, there was evidence of a causality relationship from domestic credit creation to changes in foreign exchange reserves. Indeed, even after introducing a dummy variable for the post-1972 period and subdividing the sample into periods, 1960 - 1972 and 1973 – 1976 in order to take care of the possibility of a shift in the relationships after the adoption of more flexible exchange rates, there was no change in the general pattern of the results.

Manuel Guitian (1976) carried out an empirical study of the Spanish economy during the period 1955 – 1971 to investigate the economy's external developments in an attempt to test the theoretical propositions of the MABP. His empirical analysis investigated the relationship between the BoP and rate of domestic credit expansion. He also examined the importance of other variables such as the exchange rate, domestic prices and gross national product, in determining the BoP outcomes. The tests carried out in his study were intended to determine two simple sets of relationships. That is, the effects of domestic credit expansion on the balance on the current account and on the overall balance of payments. The second one was to investigate the connection between those two external accounts and the following variables: gross domestic product, domestic and foreign prices and the rate of domestic credit expansion. The relationships estimated for the first test were of the general form:

$$B_{CA} = F_{1j} [\Delta D_j]; j = 1, 2, \ldots, 10, \qquad (4.2)$$

$$\Delta B_{CA} = F_{2j} [\Delta^2 D_j]; j = 1, 2, \ldots, 10. \qquad (4.3)$$

$$B = F_{3j} [\Delta D_j]; j = 1, 2, \ldots, 10, \qquad (4.4)$$

$$\Delta B = F_{4j} [\Delta^2 D_j]; j = 1, 2, \ldots, 10 \qquad (4.5),$$

The first two are relationships for the current account and the others are for the overall balance, where B_{CA} and B stand for the balance on the current account and the overall balance, respectively. The ΔD_j's are the different concepts of domestic credit expansion. He considered ten such definitions[13]. The results showed that the two BoP

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[12] This formulation is adopted from Magee (1976:164).
[13] See Guitian (1976) for the definitional treatment

concepts were accurately explained by six out of the ten domestic credit variables with R^2 ranging from 0.556 to 0.932 for the balance of payments and 0.65 to 0.898 for the current account.

His second set of estimates were specified as follows:

$$B_{CA} = H_{1j} [Y, p, ep_f, \Delta D_j]; j = 1, 2, \ldots\ldots, 10, \qquad (4.6)$$

$$B = H_{1j} [Y, p, ep_f, \Delta D_j]; j = 1, 2, \ldots\ldots, 10, \qquad (4.7),$$

where, Y is gross domestic product, p is Spain's cost of living index and ep_f an index of foreign prices. The results from the above relationships were very similar to his first set of regressions particularly for the domestic credit variables, however, the contribution of the other variables was quite difficult to assess as their respective *t*-values were consistently not significant. His tests also confirmed that domestic credit was the major determinant of the changes in the balance of payments.

4.3 The Ugandan Case: 1980 - 2001

The central objective of this study is to investigate the relationship between domestic credit on the developments in the BoP. The study also investigates the impact of other macroeconomic variables such as GDP, domestic and foreign prices and the rate of domestic credit expansion. An attempt is made to assess the impact of the liberalisation of the capital account and the exchange rate and trade regimes on the developments on Uganda's BoP. The analysis uses annual data from 1980 – 2001 from the World Bank Development Indicators 2002, Bank of Uganda Annual Reports, Background to the budget and other sources. We will investigate both the long-run and short-run relationships of these variables using OLS estimation.

4.3.1 Model Specification and Empirical Analysis

This study attempts to follow Guitian (1976) to specify the relationships between the current account balance and the other macroeconomic variables mentioned earlier. Mussa (1976:190) also observed that although money plays a vital role, the monetary approach also takes explicit account of the real variables such as levels of income on the behaviour of the BoP. In my model specification, I shall use a single definition of domestic credit. The regression equations are then specified to take the following form:

$$CAB_t = \alpha_1 + \alpha_2 NDC_t + u_t \qquad (4.8)$$

$$CAB_t = \beta_1 + \beta_2 GDPfc_t + \beta_3 CPI_t + \beta_4 REER_t + \beta_5 NDC_t + v_t \qquad (4.9)$$

$$CAB_t = \gamma_1 + \gamma_2 DTRD + \gamma_3 DEXR + \gamma_4 DCAP + \gamma_5 NDC_t + \varepsilon_t \qquad (4.10)$$

Where:

CAB = current account balance

NDC = net domestic credit (includes net claims on central government, claims on parastatals, claims on local government and claims on the private sector),

GDPfc = gross domestic product at 1995 constant prices

CPI = consumer price index as a proxy for domestic prices

REER = real effective exchange rate index as proxy for foreign prices

DTRD = dummy for trade liberalisation, 1 after liberalisation and 0 before

DEXR = dummy for exchange rate liberalisation

DCAP = dummy for trade liberalisation,

and, u, v, and ε are the random error terms

The nature of the relationships indicates that the analysis has been conducted in terms of the flow market for money. As Guitian (1976:344) observed, this approach is theoretically legitimate given the interdependence of the flow markets in the economy imposed by Walras' Law. In the first estimations, the balance on the current account is explicitly considered because if we assume no capital movements, any analysis made from the stand point of the flow market for money is equivalent to an analysis made in terms of the markets for goods and services only. Therefore, in this situation, the relevant BoP concept is the current account balance. However, if we consider capital movements, our analysis will use the overall balance as we shall see later on.

Due to the presence of non-stationarity in time series data, it is most likely that regressions based on such data may be spurious. It is therefore absolutely necessary to test for the stationarity of the time series before conducting regression analysis. Analysis of the time series properties of all the variables in our estimations will be done using the Dickey-Fuller (DF) Unit Root Test (Dickey and Fuller, 1981). Engle and Granger (1987) also observe that even if two variables are I(1), it is possible that their regression equation will be I(0). The linear combination cancels out the stochastic trends in the two series to generate stationary series. Such series are said to be cointegrated if they have a long-term relationship between them. Therefore, for the long-run relationships, we shall apply the **Augmented Engle-Granger (AEG) Test**.

To begin with, the unit root analysis for the time series properties is presented in the Table 4.1 below:

Table 4.1: Dickey – Fuller (DF) Tests for Time Series Properties

Variable (X)	DF (X), Test Statistic	DF (ΔX) Test Statistic	Remarks/ order of integration
CAB	1.984	-3.534	Stationary at 5%, I(1)
NDC	0.930	-3.843	Stationary at 5%, I(1)
GDP_{fc}	0.967	-3.610	Stationary at 5%, I(1)
CPI	0.724	-2.818	Stationary at 10%, I(1)
REER	-7.571		Stationary at 1%, I(0)
BOP	-2.916		Stationary at 10%, I(0)

Critical values: 1% critical value = -3.750, 5% critical value = -3.000, 10% critical value = -2.630
Δ is the first difference operator

4.3.2 Estimation of the long-run relationships

The next step is to estimate the long-run models above. As shown in Table 4.1 above, all the variables become stationary after the first difference, i.e. they are I(1) except REER and BOP, which are I(0). However, Mukherjee at al (1998:406) observed that when cointegration analysis is extended to models containing multiple regressors, it does not matter whether all variables are of the same order because a set of variables can be cointegrated even though their order of integration varies. From specification (4.8), (4.9), and (4.10) above, we obtain the following regressions:

$$CAB_t = -9.1174 - 1.2598\,NDC_t \qquad\qquad (4.11)$$
$$t = (-0.28) \quad (-17.45)$$
$$r^2 = 0.9384,\ DW = 1.5889$$

$$CAB_t = 717.0565 - 0.4173\,GDPfc_t + 3.0615\,CPI_t - 0.2972\,REER_t - 0.7808\ NDC_t \qquad (4.12)$$
$$t = (5.52) \quad (-5.45) \quad\quad (2.70) \quad\quad (-3.20) \quad\quad (-6.60)$$
$$R^2 = 0.9740 \quad DW = 2.1137$$

$$CAB_t = -0.9444 - 29.2376\,DTRD - 72.1791\,DEXR - 265.495\,DCAP - 0.8961\,NDC_t \qquad (4.13)$$
$$t = (-0.03) \quad (-0.38) \quad\quad (-1.01) \quad\quad (-3.06) \quad\quad (-6.88)$$
$$R^2 = 0.9631 \quad DW = 2.2958$$

A unit root test was performed on the residuals obtained from (4.11), (4.12) and (4.13) using AEG Test as presented in Table 4.2 below:

Table 4.2: Unit Root Analysis of the Residuals from the long-run estimations

Equation	DF Test Statistic	Remarks on the residuals
(4.11)	-3.539	I(0) at 5%
(4.12)	-4.505	I(0) at 1%
(4.13)	-5.067	I(0) at 1%

Critical values: 1% critical value = -3.750, 5% critical value = -3.000, 10% critical value = -2.630

Hence, the regressions are cointegrating and not are spurious and the signs of the coefficients on the explanatory variables make economic sense. All the three relationships have demonstrated that domestic credit has a long-run negative impact on the developments on the current account balance of the BoP. The results also demonstrate that gross domestic product has a negative long-run effect on the current account balance. An increase in real income is expected to lead to increased absorptive capacity and therefore, higher demand for imports as explained by link A in Figure 2.2. The trend of the growth rates and the current account balance is demonstrated by Figure 4.1 below:

Figure 4.1: The GDP growth rate and Current Account Balance as ratio to GDP

GDP growth rate & CAB/GDP ratio
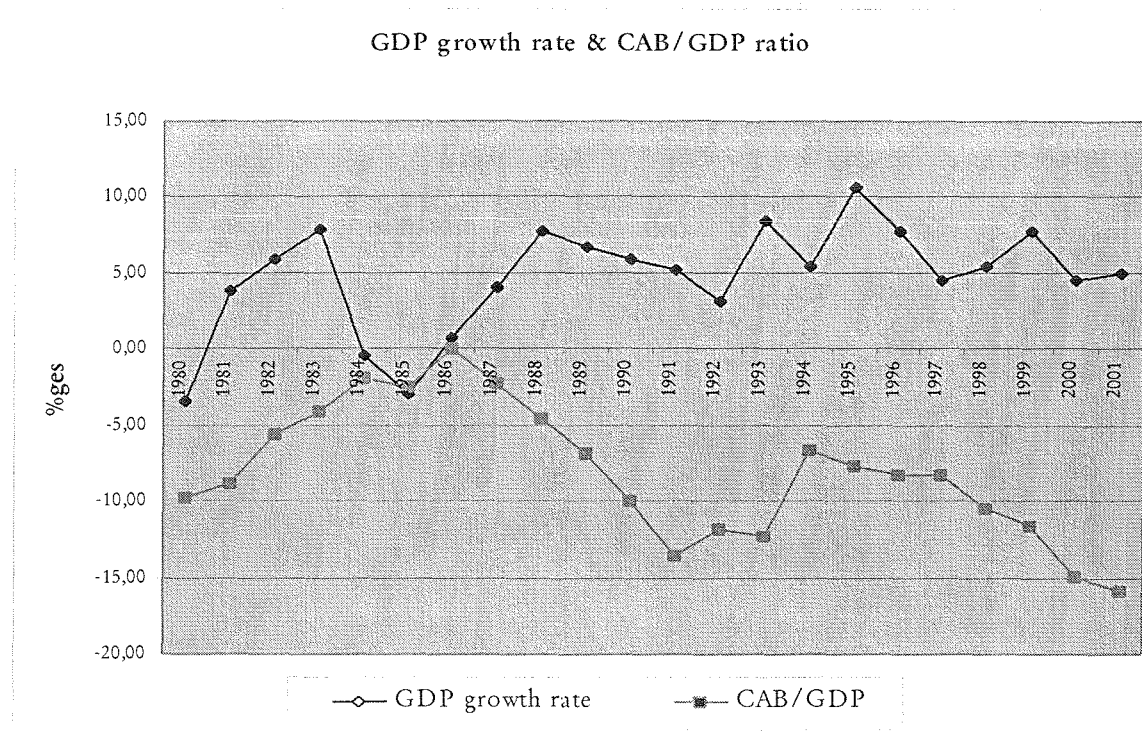
The results also show that the coefficients for domestic and foreign prices, capital account liberalisation are statistically significant and therefore important in the determination of the long-run behaviour of the current account balance. These

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variables have the expected signs. For example, a rise in the foreign prices is likely to cause a deterioration of the current account balance through higher import bills, while an increase in the domestic price level is expected to reduce the value of the outstanding stock of money and consequently improve the current account deficit. As evidenced from the positive coefficient on the CPI variable. Similarly, the negative sign on the capital account liberalisation dummy is not surprising since the liberalisation of the capital account is expected to increase foreign exchange through private transfers and aid, thus expanding the import absorption capacity of the economy in the long-run.

When capital movements are taken into consideration, the relevant concept of the BoP used in our analysis is the over-all balance. The results from those estimations are presented below:

$$BOP_t = 4.7376 - 0.0139\, NDC_t \qquad\qquad (4.14)$$
$$t = (0.26) \quad (-0.34)$$
$$r^2 = 0.0059 \quad DW = 1.3410$$

$$BOP_t = -104.3054 + 0.0489\, GDPfc_t + 0.1224\, CPI_t + 0.0665\, REER_t -0.0832\, NDC_t \quad (4.15)$$
$$t = (-0.91) \quad\quad (0.73) \quad\quad\quad (0.12) \quad\quad\quad (0.81) \quad\quad\quad (-0.80)$$
$$R^2 = 0.1236 \quad DW = 1.6295$$

$$BOP_t = 2.5437 + 169.8366\, DTRD -55.9789\, DEXR + 25.4938\, DCAP -0.1634\, NDC_t \quad (4.16)$$
$$t = (0.19) \quad\quad (5.29) \quad\quad\quad (-1.85) \quad\quad\quad (0.70) \quad\quad\quad (-2.97)$$
$$R^2 = 0.6591 \quad DW = 2.2686$$

Similarly, a unit root test was performed on the error terms obtained from (4.14), (4.15) and (4.16) using AEG Test and the results are presented in Table 4.3 below:

Table 4.3: Unit Root analysis of the Residuals from the long-run models based on overall balance:

Equation	DF Test Statistic of the residuals	Remarks on the residuals
(4.14)	-2.968	I(0) at 10%
(4.15)	-3.529	I(0) at 5%
(4.16)	-5.091	I(0) at 1%

Critical values: 1% critical value = -3.750, 5% critical value = -3.000, 10% critical value = -2.630

From the table above, it is clear that the regressions are all cointegrating. However, in the first two estimations, the contributions of the individual variables is more difficult to assess since the respective R^2 are very low and the coefficients are not statistically

significant. Although mis-specification may partly be the cause of these results, one observation is particularly pertinent, especially in the case of domestic credit. The coefficient for domestic credit is consistently negative, implying that domestic credit has a negative effect on the overall balance of the BoP as well. In the third estimation, domestic credit and the dummy for trade liberalisation are significant. The positive coefficient on the trade liberalisation dummy is rather surprising since it implies that liberalisation of trade could lead to an improvement of the BoP. It would appear from these results that in a liberalised trade environment where all the export draw-backs are streamlined, then trade becomes more efficient and enhances cross-border trade export growth. However, positive effects on the BoP would be realised if the exports grow faster than the imports after trade liberalisation.

4.3.3 Estimation of the short-run relationships

Having considered the long-run models, attention is now shifted to the estimation of the short-run relationships between these variables. Similarly, the analysis will be carried out on both the current account and the over all balance of the BoP. We shall begin with the current account balance as shown below:

Where, Δ is the first difference operator

$$\Delta CAB_t = -43.2721 - 0.4647\, \Delta NDC_t \qquad (4.17)$$
$$t = (-1.77) \quad (-2.70)$$
$$r^2 = 0.2773,\ DW = 2.3855$$

$$\Delta CAB_t = -68.1921 - 0.2353\, \Delta GDPfc_t + 4.7111\, \Delta CPI_t + 0.1806\, REER_t - 0.5103\, \Delta NDC_t \quad (4.18)$$
$$t = (-1.09) \quad (-1.19) \quad\quad (1.18) \quad\quad (0.99) \quad\quad (-2.76)$$
$$R^2 = 0.4201 \quad DW = 2.4801$$

$$\Delta CAB_t = -7.1157 + 18.0559\, DTRD - 57.1175\, DEXR - 94.6817\, DCAP - 0.2589\, \Delta NDC_t \quad (4.19)$$
$$t = (-0.21) \quad (0.21) \quad\quad (-0.78) \quad\quad (-1.17) \quad\quad (-1.20)$$
$$R^2 = 0.4284 \quad DW = 2.8501$$

The short-run estimations based on the overall balance are also presented below:

$$BOP_t = 8.3497 - 0.1372\, \Delta NDC_t \qquad (4.20)$$
$$t = (0.55) \quad (-1.28)$$
$$r^2 = 0.0799 \quad DW = 1.501$$

$$BOP_t = 53.8741 + 0.0528\, \Delta GDPfc_t - 5.1365\, \Delta CPI_t - 0.1040\, REER_t - 0.0977\, \Delta NDC_t \quad (4.21)$$
$$t = (1.63) \quad\quad (0.50) \quad\quad (-2.43) \quad\quad (-1.07) \quad\quad (-1.00)$$
$$R^2 = 0.3809 \quad DW = 1.3919$$

$$BOP_t = 0.909 + 144.9353 \, DTRD - 89.4884 \, DEXR - 36.6283 \, DCAP - 0.0427 \, \Delta NDC_t \quad (4.22)$$
$$t = (0.05) \quad (3.22) \quad (-2.35) \quad (-0.87) \quad (-0.38)$$
$$R^2 = 0.4865 \quad DW = 1.7847$$

The results from the short-run models are not very impressive owing to the low R^2 and most coefficients are insignificant irrespective of having the expected sign. However, the coefficient for domestic credit has consistently maintained the negative sign. This outcome underscores the negative relationship between domestic credit and the BoP, which provides concrete evidence regarding the nature of the relationship between these variables in the case of Uganda, which we set out to examine in the objectives of this study. The findings show that the BoP is sensitive to changes in domestic credit and contrary to the stated hypothesis, ceilings on domestic credit creation could pre-empt the emergence of a monetary disequilibrium, which in turn spills over to the commodity and financial markets and the external sector. Although, the exact nature of the adjustment largely depends on the conditions in each country, generally, a monetary expansion will lead to a combination of price increases and BoP deficits. Another important revelation is the dummy for trade liberalisation, which has a significant positive coefficient for both long-run and short-run relationships. This suggests that liberalisation of trade could have positive outcomes for the BoP. Notably also, the liberalisation of the exchange has a statistically significant negative coefficient in the short-run relationship indicating that exchange rate movements have negative consequences on the BoP.

4.4   Conclusion

This chapter has set out simple empirical tests to investigate the relationship between the BoP, domestic credit, output, domestic and foreign prices. The investigation has attempted to establish the effects of policy changes on the balance of payments by including a set of dummy variables for such changes. The tests have established that domestic credit expansion and output are major determinants of the changes in Uganda's BoP, particularly on the current account. However, the findings of this study do not support my working hypothesis that domestic credit does not have any impact on Uganda's BoP. The results also show that domestic prices are positively correlated with the current account balance in the long-run (equation 4.12), while a negative relation is observed with the overall balance as in equation 4.21. The positive

sign on the dummy variable for trade liberalisation in equations 4.16 and 4.22 suggests that trade liberalisation has positive effects on the BoP, while liberalisation of the capital account has negative consequences on the current account in the long-run as shown in equation 4.13. The negative coefficient on the dummy for exchange rate liberalisation cannot be explained given the nature of the exchange rate movements in Uganda, although we would expect a depreciation of the exchange rate to have positive effects on the BoP through increased competitiveness of the export. Probably a different analysis is required to understand the responsiveness of Uganda's exports to changes in the exchange rate.
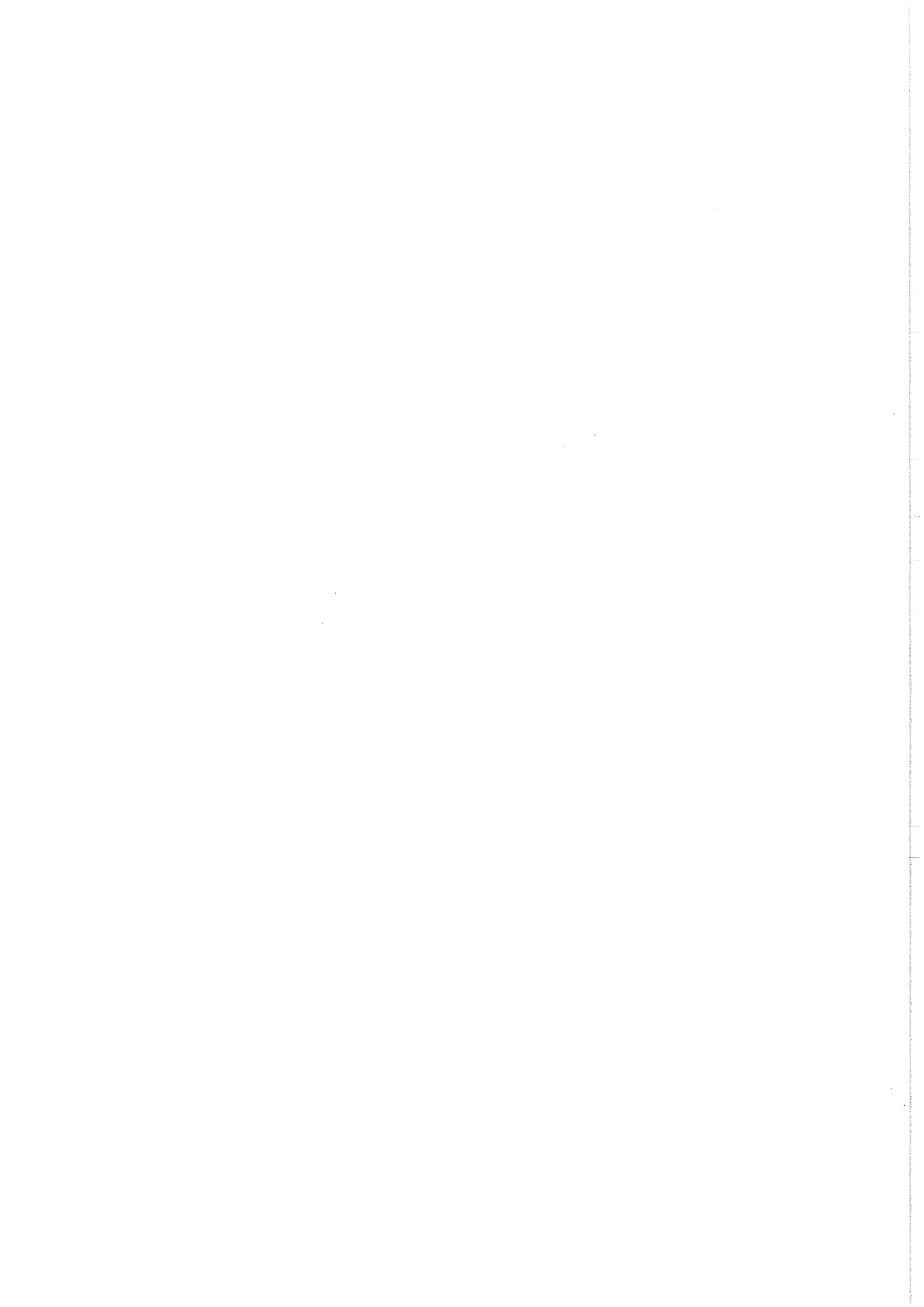
CHAPTER FIVE
CONCLUSION

5.1   Summary of the findings

The study was undertaken with a main objective of investigating the empirical relationship between domestic credit and the BoP in order to assess the effectiveness of restraining domestic credit in controlling BoP deficits. This analysis was motivated by the need to understand some of the factors that explain the large current account deficit and intended to examine the empirical validity of the theoretical proposition of the MABP in small open economy like Uganda. Trade and exchange rate systems are relatively free from excessive direct government control and the capital account was liberalised since July 1997. The study also attempted to explore the importance of GDP, domestic and foreign prices and policy changes in determining the BoP outcomes.

From the theoretical perspective, a number of views explaining the causes of external instability and how economies react in response to such situations have been reviewed in chapter two. In the review, we classify the adjustment theory into three approaches; firstly, the elasticity approach, which suggests wrong pricing as the cause of the instability. Secondly, absorption approach, which links external disequilibrium to an excess of the country's real expenditure on goods and services (absorption) over its production and the MABP, which associates the BoP problems to discrepancies between demand for and supply of money. The review reveals that all these approaches describe the same economic problem, though in different terms and emphasising different aspects.

The MABP was explicitly chosen in this study because the analysis provided by the elasticities and income absorption approaches (Keynesian approaches), was not considered suitable to investigate Uganda's BoP situation as a primary commodities exporting country. In this respect, the elasticities approach is an inadequate tool of analysis since Uganda's leading export (coffee) is highly price inelastic and moreover paid for in foreign currency. Similarly, the absorption approach, which emphasises aggregate demand management, may have limited impact in the case of Uganda, since the economic and institutional structures of the country impose limits on the country's

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absorption capacity. Therefore, as Buzakuk, 1998:177 observed, "demand management is not the major problem as far as the LDCs are concerned".

An overview of Uganda's economy from 1970 to 2001, its BoP and the macroeconomic adjustment process have also been discussed in chapter three. We have noted that Uganda's economy registered remarkable recovery after the launching of the ERP with the support of the IMF and World Bank and other international agencies. GDP has been growing strongly and inflation is controlled at single digit levels of below 5 percent annually. The country has been striving to maintain external equilibrium and competitiveness during the reform period, however it still faces persistent deficit on the current account of the BoP. Although, a large current account deficit may not be seen as a problem as long as there are resources to finance it, it is important to identify the causes of this imbalance and its implications on the country's international position. Indeed, external sector imbalances are now a major concern for all countries and have become more important in the light of the recent currency and financial crises in Mexico, Southeast Asia and Argentina. In this context and to understand the country's external position and the profound need for policy actions, it is useful to analyse the possible causes of the large current account deficit.

The study has examined both the long-run and short-run relationships on the current account balance and the overall balance. The model specifications used attempted to follow Guitian (1972) with two main modifications. First, only a single definition of domestic credit was considered and secondly, an attempt was made to estimate the impact of some policy changes by introducing a set of dummy variables. In the first empirical formulation, we dealt with the direct effect of domestic credit on both the current account and overall balance. In the second relationship, the other macroeconomic variables were introduced together with the domestic credit variable. The policy effects were examined by the third specification. The empirical estimations of all these relations were conducted using OLS estimations based on annual data.

After delving into issues surrounding Uganda's economy, the empirical backgrounds, and theoretical justification, the model specifications for analysing the possible explanations of the external imbalances are provided in chapter 4. We began with a

review of the earlier studies on the MABP, it was found that domestic credit has a strong influence on the behaviour of the BoP. In the analysis, simple models were specified to examine the short-run and long-run relationships between domestic credit and the BoP using time series data from 1980 – 2001 (see Appendix I for data definitions and sources). In general, the empirical results obtained support the proposition that expansion of domestic credit worsens the BoP position of the concerned country and thus support the monetary nature of the BoP, where an excess supply of (demand for) money implies a BoP imbalance. These results are however contrary to the stated hypothesis. However, Uganda has been receiving strong capital inflows in form aid and loans, possibly, the long-run effects on the current account partly reflect monetary authorities' actions to sterilise the effects of these inflows. The results also showed a strong negative long-run relationship between domestic output, liberalisation of capital account and the current account position as expected. The estimations based on the overall balance were rather weak and in some cases shown unexpected signs, and consistently insignificant which rendered their interpretation more difficult. The short-run estimations did not yield very robust results, however, the negative relationship between the domestic credit variable and the BoP was maintained. Notably also the dummy for trade and exchange rate liberalisation had positive and negative relationship with the BoP respectively.

5.2   Recommendations and conclusions

The study has investigate the relationship between domestic credit and the BoP, and has established that domestic credit indeed has a significant negative relationship with the BoP in the case of Uganda. In light of these results, it is not surprising that the authorities have placed ceilings on the domestic credit creation, particularly net credit to government to prevent macroeconomic instability. We also realised that economic growth has negative impact on the current account. This appears to be consistent with the high growth rates registered in Uganda since the launching of the ERP. At the same time, higher growth rate is considered to be good for current account deficit sustainability if it eventually enables the country to service its external debt. The results from the investigation suggest that trade liberalisation may have a positive impact on overall balance. Therefore, government needs to encourage export diversification to widen the export base. However, the effects of other policy changes present a mixed picture as such, policy recommendations are rather difficult to draw

in that respect. Further investigation is required to estimate the responsiveness of exports to changes in the exchange rate.

We recognise that in the case of Uganda, the current account deficit is mainly driven by the large trade deficit, which partly reflects structural problems in exports sector. However, to the extent that a current account deficit involves borrowing abroad in order to finance the deficit, it's important that the resources are used to finance investment projects that will generate future income. Therefore, authorities must ensure that the foreign resources are invested in projects that will increase the country's productive capacity to generate export receipts that are needed to service the foreign debt. A related issue that warrants urgent attention is the long-term sustainability of this large current account deficit if foreign support cannot be obtained anymore. In this regard, the government needs to explore other avenues to cover its deficit.

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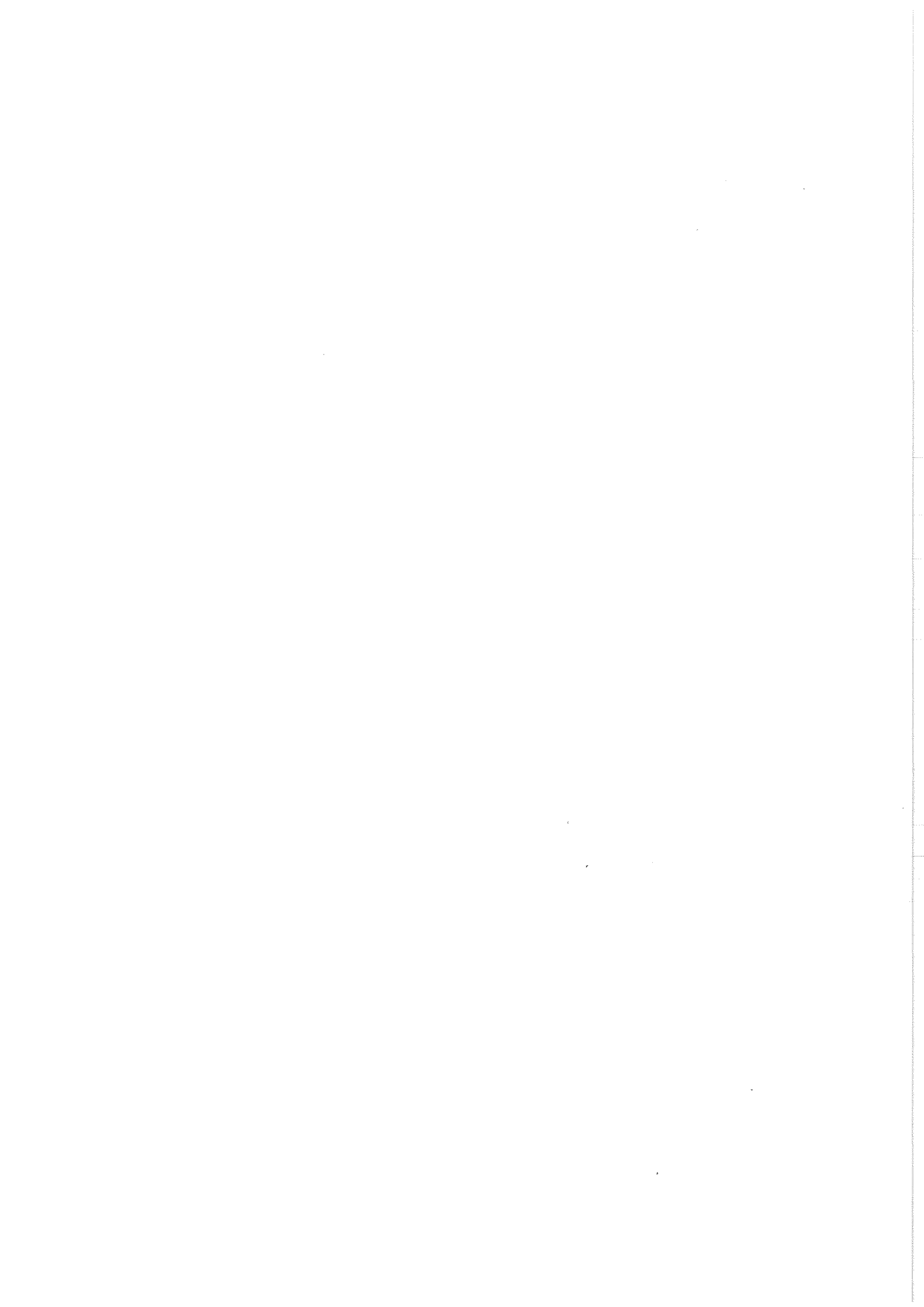
APPENDICES

Appendix I   Data Definitions and Sources

The data used in this study was obtained from the following sources:

The World Bank Database, *World Bank Development Indicators, CD-ROM*

The Bank of Uganda (BoU), *Bank of Uganda Annual Reports, (various issues)*

International Monetary Fund, *International Financial Statistics (IFS), Year Book 2001.*

Ministry of Finance, Planning and Economic Development, *Background to the Budget, (various issues)*

Statistics Department, Ministry of Finance Planning and Economic Development, *Key Economic Indicators, various issues*

The definitions and sources of the variables are as follows:

CAB = current account balance (World Bank)

CAB/GDP = current account balance as a ratio to gross domestic product (World Bank)

GDP_{fc} = gross domestic product in 1995 constant prices (BoU & World Bank)

CPI = consumer price index, 1995 = 100 (World Bank)

NDC = net domestic credit (BoU & World Bank)

BOP = overall balance of payments (BoU & World Bank)

REER = real effective exchange rate (IFS)

All data are measured in billions of Uganda shillings using the official exchange rate for conversion. The domestic credit variables for 1987 to 1991 are as end-June, from the monetary survey. The variables for 2001 are all based on end-June period.

Appendix II: The IMF Monetary Model

$$\Delta MO = k\Delta Y \qquad\qquad (i)$$

The change in a country's money supply (ΔMO) is proportional to the change in its income (ΔY) by a factor k, which is the inverse of the velocity of circulation of money (Y/MO); thus, $k = MO/Y$.

$$M = mY \qquad\qquad (ii)$$

The demand for imports (M) is a function of a country's income (Y), where m is the country's marginal propensity to import.

$$\Delta MO = \Delta R + \Delta DC \qquad\qquad (iii)$$

The change in the money supply (ΔMO) is by definition equal to the change in country's foreign reserves (ΔR) plus the change in the domestic credit of the banking system (ΔDC).

$$\Delta R = X - M + K \qquad\qquad (iv)$$

The change in foreign reserves (ΔR) is by definition equal to exports (X) minus imports (M), plus net capital inflows of the non-bank sector (K)

Adopted from Polak (1997):

Appendix III: Balance of Payments

	1993	1994	1995	1996	1997	1998	1999	2000	2001
A: Current Account Balance (A1+A2+A3)	-179.76	-217.47	-341.11	-241.16	-286.35	-253.32	-295.05	-376.42	-425.41
A1. Goods Account(Trade Balance)	-328.37	-350.53	-483.36	-391.45	-325.59	-528.50	-505.66	-499.80	-574.99
a) Total Exports (fob)	200.02	462.92	556.42	641.82	592.63	510.20	483.48	449.90	451.59
Coffee	114.59	356.91	419.00	396.09	310.36	294.97	274.35	125.39	97.63
b) Total Imports (cif)	-528.39	-813.45	-1,039.78	-1,033.27	-918.23	-1,038.70	-989.14	-949.71	-1,026.58
Government Imports	-168.19	-178.32	-215.07	-187.91	-174.20	-204.98	-188.54	-171.66	-127.40
Project imports	-154.73	-164.43	-186.23	-160.03	-152.44	-167.56	-139.59	-100.18	-101.48
Non-Project imports	-13.46	-13.89	-28.84	-27.88	-21.76	-37.42	-48.95	-71.49	-25.92
Private Sector Imports	-219.56	-405.05	-495.62	-514.58	-548.85	-593.55	-528.48	-658.89	-762.72
Oil imports	-48.38	-51.27	-61.63	-77.07	-73.54	-82.64	-97.08	-133.07	-133.33
Other Imports	-140.65	-230.07	-329.09	-330.78	-195.18	-240.16	-272.12	-119.16	-136.46
A2. Services and Income	-176.26	-342.56	-440.39	-383.86	-284.44	-310.98	-355.13	-375.65	-441.30
Services Account (net)	-98.45	-252.50	-306.43	-283.76	-203.63	-219.96	-227.93	-263.36	-301.05
Inflows(credit)	93.61	64.21	103.94	144.61	164.62	180.43	191.24	191.73	190.66
Outflows(debit)	-192.06	-316.71	-531.53	-428.38	-368.25	-400.39	-419.17	-455.09	-491.71
Income Account (net)	-77.81	-90.06	-133.96	-100.09	-80.81	-91.02	-127.20	-112.30	-140.25
Inflows(credit)	6.37	13.80	17.71	29.72	40.50	50.72	35.18	53.09	37.26
Outflows(debit)	-69.92	-89.61	-151.67	-129.82	-121.31	-141.75	-162.38	-165.38	-177.51
A3. Current Transfers	324.87	475.62	582.65	534.15	323.69	586.16	565.74	499.04	590.89
BOP Support	53.23	33.28	57.43	40.82	51.10	146.99	101.77	203.66	121.00
Project Aid	230.85	231.30	250.05	273.45	338.25	376.00	315.75	262.95	248.30
Private transfers	40.79	211.04	275.16	219.88	-65.66	63.17	148.22	32.43	221.58
Inflows	100.54	213.64	288.88	350.71	235.60	327.57	332.38	340.00	589.51
Remittances	28.66	131.89	199.39	262.12	146.98	233.11	232.56	238.05	482.81
NGOs	67.06	74.46	79.88	83.87	88.07	92.47	97.09	101.95	100.17
Outflows	-59.75	-2.60	-13.72	-130.83	-301.26	-264.40	-184.16	-307.57	-367.93
B. Capital and Financial Account Balance (B1+B2)	259.08	323.82	355.85	210.56	369.47	328.19	279.65	348.78	499.78
B1. Capital Account	42.37	36.14	48.29	61.37	31.93	49.53	26.25	0.00	0.00
Capital Transfers	42.37	30.14	48.29	61.37	31.93	49.53	26.25	0.00	0.00
B2. Financial Account; excluding financing items	216.71	287.68	307.56	149.19	337.54	278.66	253.40	348.78	499.78
Direct Investment	54.57	88.15	124.51	90.54	110.53	132.63	140.25	160.67	144.73
Other Liabilities/other Investment	162.14	199.52	183.05	58.65	227.01	146.03	113.15	188.11	355.04
Inflows(credit)	249.22	306.53	280.63	181.62	292.34	257.98	250.95	281.89	487.30
BOP Support	109.47	143.98	84.63	2.97	88.99	19.04	44.80	78.88	242.60
Project & Other	139.75	162.55	196.00	178.65	183.35	197.35	161.90	157.68	165.53
Ouflows (debit)	-80.94	-111.73	-80.94	-109.47	-83.06	-92.80	-129.60	-121.18	-117.21
Short-term (net)	-6.14	4.72	-16.63	-13.50	17.72	-19.14	-8.19	27.40	-15.04
Inflows(credit)	37.40	194.06	214.82	149.27	95.06	89.84	80.54	108.82	80.52
Outflows (debit)	-43.53	-189.34	-231.45	-162.77	-77.33	-108.98	-88.73	-81.42	-95.56
C. Overall Balance (A+B)	79.32	106.35	14.75	-30.60	83.12	74.87	-15.40	-27.64	74.37

D. Financing Items	-79.32	-106.35	-17.75	38.60	-83.12	-74.88	15.40	27.63	-74.37
Monetary Authorities									
Use of IMF Credit(Net)	-10.09	27.10	22.55	19.28	3.39	-12.03	-15.13	-37.52	-28.95
Purchases	...	52.03	56.28	63.25	63.32	50.35	34.92	11.57	12.09
Repurchases	10.09	24.93	33.72	43.96	59.93	62.38	50.06	49.09	41.04
Change In Gross Reserves 1/	-49.34	-166.88	-140.10	-68.90	-100.80	-92.30	-40.40	-43.72	-176.98
Exceptional Financing	-15.71	19.44	22.26	20.97	3.53	28.99	65.42	98.67	104.05
Current maturities	50.64	43.79	32.61	32.98	18.60	39.49	65.42	80.17	74.75
Old Arrears	213.57	5.16	34.68	...	19.18	42.52	20.38	...	...
Arrears settlement 2/	-279.92	-28.99	-45.03	-12.01	-34.25	-53.02	-20.38	-3.35	-0.71
Other (BOU short-term borrowing net)	...	-0.53	...	...	...	...	...	...	...
Other (Deferred Debt Payment to countires not accepted HIPC terms)	...	...	...	...	...	...	...	21.85	41.14
Errors and Omissions	-4.18	14.00	77.53	67.24	10.76	0.46	5.52	10.20	27.52

Memorandum items:

Average exchange rate (UShs per US$)	1,087.41	932.51	968.94	1,046.05	1,083.01	1,240.22	1,455.59	1,644.47	1,755.66
Total Goods and Non-Factor Service exports	209.31	664.76	660.36	786.44	757.25	690.63	674.72	641.63	642.25
Nominal GDP at Factor cost (Ug.Shs billion))	3,725.22	4,922.40	5,482.31	5,956.46	6,425.00	7,076.71	7,877.87	8,538.80	9,257.90
GDP at Factor cost (US $ Million)	3,425.77	5,278.66	5,658.04	5,694.22	5,932.55	5,706.00	5,412.17	5,192.44	5,273.18
Exports as a % of GDP	5.84	11.23	9.83	11.27	9.78	8.54	...	...	...
Imports as a % of GDP	-15.42	-18.60	-18.38	-18.15	-15.15	-17.38	...	...	...
Current Account Balance (Excluding Grants)	-463.84	-618.41	-648.59	-560.06	-703.94	-810.51	-746.50	-851.86	-808.34
Current Account Balance as a percentage of GDP	-5.25	-5.90	-6.57	-4.55	-5.48	-4.63	-5.38	-8.41	-8.01
Current Account Balance (Excl. Grants) as a %age of GDP	-13.54	-11.72	-18.95	-20.70	-24.41	-26.82	-24.37	-18.59	-14.46
Total external Debt Stock (end of period)	...	3,386.90	...	...	3,618.00	3,492.00	3,580.00	3,404.78	3,654.00
Total Debt Stock (end of period) as a %age of GDP	0.00	64.16	0.00	0.00	60.99	61.20	66.15	65.57	69.29
Debt Service (maturities excl. IMF) as a %age of exports	65.08	23.68	47.09	37.73	39.99	44.18	51.74	54.57	51.57
Debt Service (maturities incl. IMF) as a %age of exports	44.33	21.12	39.22	30.76	29.83	32.65	36.25	37.96	36.12
Debt Service (maturities incl. IMF) as a %age of export of Goods and Services.	3.80	2.66	2.28	2.12	1.73	1.89	...	...	...
Total External Reserves (US $ million, end of period)	142.60	318.30	458.40	527.30	628.10	720.40	760.80	804.52	981.50
Total external reserves (end of period) in months of imports	3.24	4.63	5.29	6.12	8.21	8.95	9.34	9.92	12.10
Debt Stock to Exports ratio (%)	...	571.19	...	...	610.50	709.13	748.32	756.78	780.36
Total Aid to GDP (%)	...	12.63	...	...	...	...	...	0.00	...

Notes: 1/ (-) = increase in reserves; (+) = decrease in reserves
2/ includes settlement through exceptional financing by cash
All figures are based on calender years
Source: Bank of Uganda