SHOULD THE SOUTHERN AFRICAN CUSTOMS UNION FORM AN OPTIMUM CURRENCY AREA?

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Submitted in partial fulfilment of the requirements for the degree of
Master of Social Science (Economics)
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November 2010

DECLARATION

I Vukani Leonard Memela declare that

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The above candidate has satisfied the requirements of English language competency.

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ACKNOWLEDGEMENTS

I owe a debt of gratitude to God Almighty for enabling me to complete this dissertation. From the fullness of his grace I have received one blessing after another. I also owe a great load of gratitude to several people who made writing this thesis a satisfying task, especially Miss Vanessa Tang, the project supervisor, who provided invaluable guidance and insight on the topic and spend precious time to supervise my work. I will always be grateful to you for the role you play in keeping me going.

I also wish to extend my deepest thanks to my family, who have offered me endless and patient support throughout my academic career and this project in particular. Additional appreciation is extended to all my friends for their support and motivational factor during this effort. Thabani Mkhize and Zaphesheya Luthuli who have assisted in editing my work several time are also duly recognised.

DEDICATIONS

This dissertation is dedicated to my late loving and caring “Mum, Sister and Brother”, Lena Mathomolozi Memela, Thuthukile Edistar Memela and Sbangani Memela. Your love and support in all its form in pursuit of my dream will always be remembered. I give thanks to God for them. Thank you!

ABSTRACT

Southern Africa's viability as a monetary union has long been under discussion. The Southern African Customs Union (SACU) is the world's oldest operating customs union, and one of the most efficient and it has the potential to foster meaningful regional economic integration. A strong foundation has been laid down by the SACU member countries in terms of trade relations, financial cooperation and policy coordination. Using the optimum currency areas (OCA) theory, the study examines the readiness and compatibility of the SACU member countries to establish an optimum currency area. The OCA theory reveals that SACU members are in very good shape and already exhibit some attributes necessary for forming an optimum currency area (OCA).

The empirical evidence suggest that, from an economic perspective, it is feasible for SACU countries to move towards a fully-fledge monetary union because of the increasing macroeconomic convergence, and this means that the countries are undergoing similar shocks. The deeper trade relation that exists between SACU member states seems to have important influence on business cycle co-movements. Accordingly, the study concludes SACU has advanced its integration more than what is required in a Customs Union and that a monetary union within SACU is feasible, given the macroeconomic convergence, similar production structures and risk-hedging possibilities of member countries and because peripheral countries are able to resort to South Africa's capital market and overdraft facilities.

However, the absence of real political will among the member countries will be a major stumbling block in the formation of a monetary union. It is important to note that even the formation of the EMU was not exclusively driven by economic merits per se, but also by the real political will, which had a major influence on its realisation. Such strong political will and unity on issues around the formation of the common currency would be needed to SACU countries to override issues of national interest and, the study therefore recommends that SACU countries should draw lessons from the EMU and CFA Franc zone model as these are empowered supranational authorities that have counteracted sovereignty and other political concerns to bring about meaningful and deepening economic integration in the region.

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LIST OF ABBREVIATIONS

AFDB	African Development Bank
BLNS	Botswana, Lesotho, Namibia, Swaziland
CMA	Common Monetary Area
COMESA	Common Market for Eastern and Southern Africa
CU	Customs Union
ECOWAS	Economic Community of West African States
EMU	European Economic and Monetary Union
EU	European Union
ECA	Economic Commission of Africa
EPA	Economic Partnership Agreement
EFTA	European Free Trade Agreement
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GDP	Gross domestic product
LNS	Lesotho, Namibia, Swaziland
OCA	Optimum Currency Area
RMA	Rand Monetary Area
RTAs	Regional trade Agreements
SA-BLNS	South Africa, Botswana, Lesotho, Namibia and Swaziland
SACU	Southern African Customs Union
SADC	Southern African Development Community
SADCC	Southern African Development Cooperation Community
SARB	South African Reserve Bank

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

Globalisation has brought about enormous growth in international trade, and it has also resulted in regional initiatives globally. Regional initiatives are a common feature of the modern world's geopolitical and economic integration. Many countries are collaborating within various regional schemes in order to secure and access the world market. It is reasonable to expect most individual countries with small in scale economies to seek the cooperation of regional neighbours. As Oyejide (2000:5) argues, "such countries in the context of an appropriate regional integration scheme would bring about a sufficiently large market size to generate lower production cost that might enable the integrated region to compete better with the rest of the world."

Similarly, Akinbobola and Akinlo (2005) argue that the reality of a contemporary international system is such that no country can independently and entirely advance its economic, cultural, strategic, military and even political goals in seclusion. Manifestly, the world has come to accept this as a universal trend, as evident in the recent economic cooperation marked by the emergence of a number of key regional blocs, such as the European Union (EU), the Association of South East Asian Nations (ASEAN), the North American Free Trade Agreement (NAFTA) and the Southern African Development Community (SADC).

Many African states have identified regional economic integration as an important means for promoting economic growth and sustainable development. They see regional economic integration as a mechanism for developing multilateral trade and economic linkages, with the intention of achieving better assimilation into the global economy. Consequently, organisations aiming to chart the path toward an economic union litter the

African continent. These include the African Union (AU); the Economic Community of West African States (ECOWAS); the Southern African Development Community (SADC); the Common Market for Eastern and Southern Africa (COMESA); the East African Community (EAC); the Southern African Customs Union (SACU) and the Common Monetary Area (CMA).

Increasing globalisation and the ongoing marginalization of the African countries' economies from the global economic system has prompted the development of regional cooperative efforts in Africa. This has fuelled the likes of Owusu-Ampomah (2002) to call for African countries to intensify regional cooperation efforts and to ensure sustainable development in order to achieve global competitiveness and integration, and economic growth. Regional economic integration in Africa, as well as cooperation, can promote economic growth and sustainable development, and open up new opportunities for private sector growth.

African countries need to establish strong economic cooperation in order to protect Africa's interest and avoid further marginalisation from the global economy. Sound macroeconomic policies that spouse sustainable economic development must complement such economic cooperation. This study focuses on SACU, with a view to establishing the benefits strengthening the economic integration of countries within the Southern African bloc through establishing an optimum currency area.

1.2 Background to the study

SACU is the oldest customs union in the world and is arguably the "most successful" regional integration model in Africa at present (African Development Bank Report, 1993; Hansohm & Adongo, 2006). Formed in 1910, SACU members comprise Botswana, Lesotho, Namibia, South Africa and Swaziland (Venter & Neuland, 2007). SACU encompasses 2.74 million square kilometres on the southern tip of the African continent and a total population of 51.9 (Langton, 2008). South Africa is a key player in

the region; accounting for 87 % of the population and 93 % ($107, 53 billion) of the GDP in 2005. SACU had a combined real GDP of about $158 billion (Langton, 2008:3).

The need to develop meaningful trade and economic cooperation, market liberalisation, economic growth and development and monetary cooperation informed the establishment of SACU (Hentz, 2005:1). Subsequently to its formation, SACU signed a treaty to abolish all import duties between its members and implemented a common external tariff (CET) for all non-members of the customs union. The CET has strengthened SACU's bargaining power and thus, SACU has increasingly taken over national agreements (SACU, 2007). The 1969 agreement has remained fundamental to member states and the 2002 agreement was passed as an amendment of the original agreement.

The 2002 agreement democratises all of SACU's decision-making (i.e. over tariffs and customs union revenue). According to Hansohm and Adongo (2006), SACU has moved in a direction of espousing a "true" regional integration scheme. One of the critical provisions in this agreement is that member countries may not enter into new preferential trade agreements with third parties without the consent of other members (SACU, 2007). This stance has proved to be important for two main reasons: First, it gives preference to a multilateral framework agreement(s). Second, it implicitly enforces the members' commitment to the customs union. Members of SACU have also established a compensation formula to mitigate the negative effects that a customs union might have on the less developed members (Hentz, 2005:1).

The main objective of SACU has always been, and still is, to encourage economic trade and diversification, and development of member countries, especially of less advanced member countries, and to ensure equal sharing of benefits arising from intra-regional and international trade among the member countries (Venter & Neuland, 2007). According to Margaret (2003), SACU has demonstrated that it has the capacity to bring about meaningful regional economic integration. This assertion is supported by Erasmus

(2008:1) who also opines that, "SACU is part of a well-established regional architecture with benefits for public and private interests, consumers, agriculture, tourism, commerce, customs etc. It contributes to regional stability; with all the positive spin-offs for the region's international standing and for investment and development".

SACU has a long history of increasing intra-regional trade and economic cooperation between member states. However, it is apparent that the trade pattern in SACU tends to favour the regional superpower, South Africa. Most SACU imports are "sourced from or through South Africa... The other SACU member countries absorb about 25% of South Africa's manufactured exports and provide only 10% of the group total imports" (Oyejide, 2000:8). Maleke (2008) and Jenkins and Thomas (1997:vii) state that:

- Members of SACU have reached a highly reasonable level of macroeconomic convergence.
- Both fiscal and monetary policy stances appear to be more cautious on average among SACU members relative to other blocs, such as SADC.
- There is a greater degree of fiscal convergence among SACU members than non SACU-SADC members.
- There is a greater degree of interest convergence among SACU members than non SACU-SADC members; and
- The degree of openness to international trade is, on average, much higher among SACU member countries relative to non-SACU SADC members.

According to the African Development Bank Report (2004:i), SACU countries have reached a higher level of stability and macroeconomic convergence than the rest of the SADC countries in terms of their fiscal and monetary policies, inflation rates, interest rates as well as per capita incomes. SACU members' fiscal deficits are much lower than non-SACU SADC members', averaging 1.6 % of GDP for the period 2000-2003, whilst non-SACU SADC members average 5.6 %. In addition, all SACU members, with the exception of Lesotho, had relatively low external debt ratios of below 25 % of GDP,

while the remaining member states had debt to GDP ratios above 80 %, with Malawi being the most indebted country (ADBR, 2004:6-7). Jenkins and Thomas, (1997) and Duma (2000), note that macroeconomic convergence among SACU member countries has been fast and yet remains rather low for the rest of the SADC countries. Paramount among macroeconomic convergence within SACU is inflation rates, interest rates and real exchange rates (Maleke, 2008). The prevailing monetary cooperation that exists in this region, among other things, fuels this convergence. This creates fertile ground for more cohesive integration among the member states.

Despite SACU being the most advanced regional scheme on the African continent, it has nevertheless been constrained by a set of problems similar to those faced by any other operating regional arrangement. Members of SACU have different economic profiles, but similar challenges, for instance, the issues of poverty alleviation and income distribution, HIV/AIDS as well as high unemployment confront them all. McCarthy (2008:1) states that the inequality in economic size and levels of development among the SACU member states is extreme, and this sometimes frustrates the progress of the customs union. South Africa contributes over 90 % of the SACU GDP and completely dominates other members in terms of size and because it is industrially advanced. This economic gap between member states remains a pressing concern that has the potential to thwart the effectiveness of the customs union.

Another problem with SACU is that it does not have its own budget nor the authority to make laws that would effectively regulate and monitor areas of common interest. Members of SACU also lack a comprehensive industrial strategy aligned with the customs union's objectives. As Yang and Gupta (2005:6) argue that the common weakness of Regional Trade Agreements (RTAs) in Africa is that they detract from their core objectives because a disjuncture exists between the union's objectives and the national trade policies of member countries and their administrative capacity constraints. In many cases, this lack of policy coherence results in the impotence of the entire regional arrangement since the central body assigned to implement the agreement in

many case often lacks the real authority and resources to act on its own initiatives while there is no focal point at national level with the ability to act. The failure to comply with the terms of agreements and poor implementation of programmes has been a generally a further hurdle to ensuring the effectiveness of regional schemes in Africa, and SACU is no stranger to these issues. Recently, Botswana, Lesotho and Swaziland signed the Economic Partnership Agreement (EPA) without the obtaining the agreement of all of the customs union's members. This contravenes one of the binding agreement provisions, namely that the customs union member countries may not enter into new preferential trade agreements with third parties without the consent of all of the other members (SACU, 2007). In light of the dispute over members signing the EPA, many speculate and fear that SACU could break up. However, the breakup of SACU would be a regressive event and that would particularly adversely affect the smaller member countries. Although, it is generally recognised that the current arrangement is perceived to be biased towards South Africa, according to McCarthy (1999a); the potential acts of retribution could occur if members attempted to secede from the union.

The multiplicity and overlapping of memberships is also one of the pressing concerns in the customs union. All SACU members belong to the Southern African Development Community (SADC) and two members (Lesotho and Swaziland) belong to the Common Market for Eastern and Southern Africa (COMESA). In effect, the overlapping memberships lead to contradictions in terms of policy objectives and loyalty to various treaties. This further reduces the ability of the customs union to pursue coherent and effective integration programmes. For instance, COMESA envisages launching a common currency by 2025 whilst SADC plans to launch a regional currency in 2018. Manifestly, this is indicative of the policy complexity dual membership causes, as organizations have different, if not conflicting, interests but both operate in the same region. SACU's limitations, in terms of its capacity to implement initiatives as well as insufficient commitment by members due to overlapping memberships, present this customs union with a serious problem. These types of constraints continue to have a negative impact on trade expansion and the strengthening of regional integration.

Moreover, SACU member countries Lesotho, Namibia and Swaziland (LNS) and South Africa are members of the Common Monetary Area (CMA), which requires convergence both in terms of their monetary and financial policies. The currencies of the LNS countries are on par with the South African rand (Grandes, 2003; Khamfula & Huizinga, 2004). Thus, after Botswana decided to withdraw from the CMA arrangement, its "currency, the pula, has remained informally linked to the rand through a currency basket where, since 1990, the latter weighs around 60 to 70%, and hence, Botswana is regarded as a *de facto* member of CMA" (Aziakpono, 2008:190). Additionally, the CMA arrangement provides no restriction on both current and capital account transactions of its members (Aziakpono, 2008).

Because of their CMA membership, economic activities in the LNS countries do not significantly affect the value of their currencies. The development of their exchange rates is mainly dependent on the underlying factors affecting the South African rand's performance against other currencies. The rand is a free-floating currency and is a legal tender in Lesotho, Namibia and Swaziland (Aziakpono, 2003). The LNS countries follow policies that strongly reflect South Africa's preferences for sound finance and price stability. Because of their parity against the South African rand by currencies of other contracting parties, all of the CMA countries have the similar exchange rate against outside currencies. The small CMA members (with the exception of Swaziland) do not have the option of changing their exchange rates to attain or maintain external competitiveness (Grandes, 2003). The South African rand is playing the role of the anchor currency in the region, and, as a result, the economic activities of other SACU members are highly responsive to the South African monetary policy.

The CMA members, together with Botswana, have demonstrated evidence of convergence throughout their history: they have shared similar currency; similar inflation rates and narrowly fluctuating real bilateral exchange rates. The CMA members hold regular consultations to facilitate and ensure continued compliance with the CMA and reconcile different interests in the formulation and implementation of monetary and

foreign exchange policies of the CMA. The presence of financial integration within SACU has been found by, among others, Aziakpono (2006; 2008), Matsaseng (2008) and Nielsen et al. (2005). Schiava (2008:170) argues that financially integrated economies tend to display better correlation of business cycles. Given their integrated financial system and close economic ties, it is not surprising that members of SACU experience similar business cycles. The CMA arrangement therefore forms an essential part of SACU.

SACU has advanced its integration more than what is required in a Customs Union. Therefore, the movement towards a monetary (or currency) union is a necessary future development for the customs union members as they seek to build viable regional economic integration and, ultimately, to increase their output and incomes. This goal would be in line with the African Union's vision, namely the creation of a fully-fledged economic and political union in Africa. A currency area is a grouping of economies within which markets are sufficiently integrated and flexible to make use of a single currency (Mulhearn et al., 2001:363).

SACU has always been subject to discourse about its viability as a monetary union. With an illustrious history of operational efficiency, SACU has demonstrated that it has the capacity to bring about meaningful regional economic integration. The exchange of currencies resulting from trade has become an important factor in the functioning of modern economies. Currencies serve as a standardised value of measurement and function as an efficient means of determining payment (Chabot, 1999:5). Furthermore, having a strong currency forms an important part of a country's general economic stability and stimulates investors' confidence because there is minimal exchange rate fluctuation, which in turn serves as a magnet for attracting foreign direct investment.

Popular arguments in favour of a common currency peg for members of SACU include the following: Firstly, most SACU members are operating through a monetary union, although this type of integration is still in its infancy. The general perception is that

achieving a cohesive monetary union should be relatively easy, given the length of time these countries have been working together. Grandes (2003:23) argues that the CMA group, together with Botswana, can form an optimum currency area given the existence of common long-run trends in their bilateral real exchange rates. This argument depicts that there is a high degree of economic integration. In a similar vein, according to McCarthy (2010), Botswana could be the first candidate to join the CMA-turned-fully-fledged monetary union. Secondly, members of SACU are geographically close, have overlapping histories and have similar macroeconomic policies, which make them suitable candidates for joining a monetary union (or currency area).

Thirdly, four members of SACU also belong to the CMA and Botswana is a de facto member of the CMA; thus, these SACU members have demonstrated convergence in terms of their inflation rates, interest rates and narrow fluctuating real bilateral exchange rates (Jenkins & Thomas, 1997; Grandes, 2003; Aziakpono, 2008). Furthermore, the CMA member states and Botswana have a similar set of policy preferences. This suggests stronger economic integration among SACU members will probably not be problematic. Moreover, this affects and forces macroeconomic convergence between SACU member states. Therefore, the business cycles of SACU members would not be very dissimilar and thus prevent any member from participating in a currency area.

Lastly, the depth of financial integration, the synchronisation of the exchange rate regime and monetary policy among the SACU members shows a positive policy correlation and macroeconomic convergence, which makes SACU member states suitable to participate in a currency union. According to the African Development Bank Report (1993:239), "The conversion of SACU and Multilateral Monetary Area (MMA) into a common market arrangement with a monetary union for BLNS countries and South Africa would be the logical progression of a long history of economic cooperation to the higher level of integration."

Several scholars, among them, McCarthy (2010), Aziakpono (2008) and Matsaseng (2008), have argued that the monetary unification amongst members of SACU is a feasible option. A common currency area requires macroeconomic policy convergence. This was apparent, for example, when the European Union introduced its currency, the Euro. Since SACU members have already displayed sustained macroeconomic convergence, they should also be suitable to participate in a common currency area (Jenkins & Thomas, 1997). Maleke (2008:70) further argues that the steady/stable level of co-movement on specific macroeconomic variables, such as exchange rates, inflation, financial integration, openness, GDP growth rate and interest rates, between SACU members is indicative of the great potential that exists for a common currency in this region. Such factors have prompted economists like Aziakpono (2008), Grandes (2003; 2004) and Matsaseng (2008) to suggest that monetary unification and a common monetary policy with a common central bank are feasible for SACU.

The adoption of one currency confers both benefits and costs. The former will be mainly in the form of lower transaction costs, price stability and the elimination of currency risks, and enhanced economic efficiency, which will strengthen the region's capacity to compete globally (Salvatore, 1998). The latter can help to overcome national governments' inability to pursue independent policies (exchange rate, monetary and fiscal) to stabilise their domestic economy (Gerber, 2005:347). A monetary union minimises the likelihood of macroeconomic instability and locks in policy reforms if agencies can effectively restrain governments from excessive intervention in the market. Maleke (2008:71) argues that the SACU member countries have made substantial progress towards establishing a single currency area and it is therefore prudent to sustain preparatory efforts.

The principal benefits of establishing a common currency area is that it often cultivates sound market-oriented policies that promote best market practices in corporates and governments. Furthermore, the formation of an optimum currency area will instil discipline among SACU members and help them to formulate policies to deal with the

potential problems and challenges that increased interdependence in the global financial market creates. More importantly, a currency union will consolidate integration in other areas of the economy to further address market inefficiencies, and consolidate goods and financial markets. Thus, the currency union could inspire more confidence in the international capital market than an individual country could do single-handedly (Maleke, 2008).

Moreover, it gives regional industries an opportunity to learn how to cope with competition in a wider regional market before fully entering the more fiercely competitive world market place. Grandes (2003; 2004) presents some detailed analysis of the costs and benefits that could be accrue to SACU member countries if they were to establish a fully-fledged monetary union. This provides a strong basis upon which to determine whether SACU members have the necessary attributes to form a common currency (or monetary) area.

Admittedly, the process of establishing monetary integration will be difficult, but not impossible, and it will require effective management. It is, indeed, a very challenging task to establish a currency area. Europe spent several decades experimenting with regional monetary cooperation before adopting a single currency. The task may be even more challenging for SACU and its members, but the European experience could serve as a useful benchmark for SACU. SACU is in an advantageous position because the CMA arrangement has already laid the necessary foundation for a common currency. It is important to note that countries are more likely to satisfy the criteria for entering into a currency area scheme ex post than ex ante (Frankel & Rose, 1997:22).

Regardless of economic conditions, one must be remember that the adoption of a common currency is also a political process that requires political will from member countries to sacrifice domestic policy needs for the sake of the currency union's needs. It is important that the governments provide leadership on this process. If member states' government do not provide political support and commitment, the process of achieving a

common currency will not succeed. The success of such initiatives requires leaders who will think beyond the short-term gains and consider the long-term benefits of regional cooperation. This is especially pertinent in the Southern African region, where poverty and under-development are widespread.

In light of this background, this dissertation has sought to examine the viability of SACU and its members adopting the common currency area given the prevailing conditions in this customs union. The theoretical framework of Optimum Currency Areas (OCAs) that has been popularised by the early works of Robert Mundell (1961), Ronald McKinnon (1963) and Peter Kenen (1969), among others, has provided guidance in this endeavour. This theoretical framework offers the appropriate lens for scholars to interrogate the conditions amenable to establishing a common currency area.

1.3 Problem statement and objectives

This study seeks to examine the following hypothesis: Given the longstanding relationship between SACU members, their integration can be further entrenched if OCA criteria can be satisfied and these member countries seem to have the economic attributes necessary to adopt a common currency. The objectives of this study are:

(i). To investigate the feasibility of a fully operational economic union within SACU and to determine whether a common currency area can be established with members of SACU; and
(ii). To review relevant literature on optimum currency areas which addresses two key issues, namely the characteristics necessary for countries aspiring to establish a monetary (economic) union, and the major benefits and costs of monetary integration.

Furthermore, the study aims to review the empirical evidence related to optimum currency areas and to draw some lessons from the global experience of monetary integration, making specific reference to the European Monetary Union (EMU) and the CFA Franc zone, as such examination could assist SACU in establishing a currency

union. In addition, the study reviews the history and organisational structure of SACU as well as the CMA arrangement and discusses its implications for SACU. Moreover, the study presents empirical evidence of macroeconomic interdependence among SACU countries, of gross domestic product (GDP), GDP growth rates, consumer price index (CPI), interest rates exports and imports. Such interdependence is instrumental for any prospect of deeper economic integration.

1.4 Method of research

The research method used in this study is predominantly literature based as its key focus is to use the theory of optimum currency areas (OCA) to benchmark whether the Southern African Customs Union (SACU) should form an OCA or not. Resources such as books, academic journals and internet sources have been the researcher's primary source of information.

According to the theory of optimum currency areas, the greater the linkages between countries, the more viable it is for them to adopt the same currency and a common monetary policy. One such linkage is the degree of economic integration between the potential member countries of a currency area. Frankel and Rose (1998) assert that a group of countries are more likely to constitute a suitable monetary union if these countries' business cycles are highly correlated. Bitros and Korres (2002) argue that "the degree of convergence between economies in question can be identified by examining the degree of co-movement across the relevant time series." Convergence can be determined by ascertaining the relationship between trends' movement in the set variables. The degree of convergence or non-convergence over the long term can be examined by analysing the significant correlation coefficient.

In investigating the feasibility of a common currency in SACU, the study examines key macroeconomic indicators such as gross domestic product (GDP), GDP growth rates, consumer price index (CPI), interest rates, exports and imports in real terms. The

empirical method employed in this study takes the form of quantitative analysis. The researcher used the most common correlation coefficient - the Pearson product-moment correlation coefficient (r) - to test for a correlation of macroeconomic variable of the five countries (SACU). The data was primarily sourced from various sources, namely the IMF- International Financial Statistics, the United Nations Statistical Division, the Central Bank of Botswana, the Central Bank of Lesotho, the Central Bank of Namibia, the Central Bank of Swaziland, and the African Development Indicators. The sample period runs from 1970 to 2008, as the data was reliable during this time. Due to data limitations for sample countries, some observations in our sample do not cover entirely cover the period under study

1.5 Contribution and relevance of the study

Europe's successful establishment of the Euro currency has inspired many regions to consider launching their own currencies. In Southern Africa, it is clear that there is a growing eagerness to accelerate regional integration through creating a common currency area. The viability of a monetary union in Southern Africa has become a recurring discourse recently. SADC has publicly expressed its intention to establish a monetary union by 2018. Creating a monetary union within SACU could provide the basis for the SADC's envisaged monetary union.

Masson and Pattillo (2004:12) posit achieving a common currency in Africa can only occur if there is successful integration of existing currency areas within regional African economic communities. They also argue that "a selective expansion of the CMA might be mutually desirable for existing and some new, members" (Masson & Pattillo, 2004:3). In a similar vein, McCarthy (2010:2) argues that the CMA presents the "best prospects for first seeking then expanding the membership of the monetary union". This study seeks to contribute to the discourse on the matter, by investigating whether SACU member states have economic requisite for adopting a common currency area.

1.6 Limitations of the study

The primary limitation in this study was the unavailability of the data. As a result, the analysis only covered the period from 1970 to 2008. This period was chosen because it was difficult to obtain a reliable data on the countries under study for other periods, particularly for the smaller members (Lesotho, Swaziland and Namibia). For instance, it was difficult to obtain data on CPI and interest rates which, forces the researcher to analyse and only covered the period from 1975 to 2008 and 1990 to 2008, in these indicators respectively. Hence, the analysis is only of the key macroeconomic indicators, with the latter being based on a set of data involving the five SACU member countries.

1.7 Organisation of the study

The study is set out as follows. Chapter 1 describes the background of the study, its objectives and problem statement. Chapter 2 reviews the literature on optimum currency areas, and addresses two key issues, namely the characteristics that are necessary for countries aspiring to establish a monetary (economic) union, and the major benefits and costs of monetary integration. Chapter 3 examines empirical evidence on optimum currency areas. It also draw reflects on some lessons derived from the global experience of monetary integration with a specific reference to the European Monetary Union (EMU) and the CFA Franc zone, as this could assist SACU in establishing a currency area. Chapter 4 reviews the history and organisational structure of SACU. Chapter 5 reviews the "Rand Monetary Area" and discusses its implications for SACU. It also assesses SACU members' compatibility and suitability for establishing a common currency area based on the OCA criteria. Chapter 6 presents the empirical evidence, focusing on the correlation of SACU member countries' key set of macroeconomic variables in real terms. Chapter 7 contains the conclusion of the study as well as recommendations.

CHAPTER TWO

THE OPTIMUM CURRENCY AREA THEORY

2.1 Introduction

An optimum currency area (OCA) is a framework for monetary integration. The OCA theory deals with factors that ensure the viability of a monetary union and the requisite economic characteristics countries, or regions, need to join a monetary union. In the 1960s, Robert Mundell (1961), Ronald McKinnon (1963), and Peter Kenen (1969) propounded and popularised the OCA theory. The OCA theory helps to identify an appropriate domain for adopting a common currency, and possibly estimates the costs and benefits thereof. A currency area is a domain in which exchange rates are irrevocably pegged, or where a single currency circulates, and a single monetary policy is adopted and implemented at a union-defined level (Mongelli, 2002:2). Mundell (1961) defines an OCA in terms of factor mobility, but within which exchange rates are fixed. In Mundell's (1961:659) own words:

> In a currency area comprising different countries with national currencies the pace of employment in deficit countries is set by the willingness of surplus countries to inflate. But in a currency area comprising many regions and a single currency, the pace of inflation is set by the willingness of central authorities to allow unemployment in deficit regions.
>
> …But a currency area of either type cannot prevent both unemployment and inflation among its members. The fault lies not with the type of currency area, but with the domain of the currency area. The optimum currency area is not the world.

McKinnon (1963:717) further defines an OCA as a single currency area within which monetary-fiscal policy and flexible external exchange rates can be used to resolve three (sometimes conflicting) objectives: (1) full employment; (2) external balance; and (3) price stability. These objectives, however, are impossible to achieve simultaneously.

Kenen (1969:41) expands on the notion of an OCA and offers a similar definition: "If the prevailing exchange rate regime, fixed or flexible, can maintain external balance without causing unemployment (or on the other side demand-induce wages inflation), that regime is optimal". This chapter provides an overview of optimum currency area (OCA) theory, the characteristics that are desirable in countries wanting to participate in a currency area and the costs and benefits of such participation.

2.2 The OCA theory

The OCA theory is an approach to discussing monetary integration. This brings up Mundell's important question: What is the appropriate domain for a currency area? The OCA theory has been fundamental in shaping Europe's Economic and Monetary Union (EMU). There are two major approaches to studying and evaluating the appropriate domain for a common currency area. The first approach is the traditional approach; this approach attempts to find the crucial economic characteristics of an appropriate domain. The second approach is the cost-benefit approach. According to Ishiyama (1975:78), this approach appears to be better at providing a unified framework that takes the economic characteristics of the region/domain into account as well as evaluates the costs and benefits for a country intending to participate in a currency area

2.2.1 The traditional approach (1960s-1970s)

The traditional approach tries to single out the crucial criteria of an appropriate domain; Mundell (1961), McKinnon (1963) and Kenen (1969) have significantly shaped the traditional approach to OCA theory. The traditional approach provides the theoretical framework for monetary integration and identifies the exchange rate regime as pivotal. It concentrates on identifying the most relevant characteristics in choosing appropriate currency area partners, or in using a common currency optimally throughout the domain. With a traditional approach, an optimal common currency and suitable currency union arrangement is determined referencing and fulfilling at least one of the requirements below.

2.2.1.1 Capital and labour mobility (Mundell, 1961)

In his seminal contribution to monetary cooperation, *A Theory of Optimum Currency Areas,* Mundell (1961) raises the concept of capital and labour mobility as a basis for participating in a unified currency area. His main argument is that where capital and labour mobility exist between countries intending to participate in a currency area, there is less necessity for exchange rate variation to correct disequilibrium. Mundell (1961:66) argues that if the degree of factor mobility between two countries is high, they are good candidates for a currency area, because the high factor mobility will substitute for exchange rate variation adjusting for asymmetric demand shocks and it makes flexible exchange rates less volatile. The assumption that a demand shift causes the balance of payment disequilibrium forms the basis of Mundell's argument.

For example, suppose two countries join a currency area, as in Mundell's example, and assuming that an asymmetric demand shock negatively affected the output of country B, "To the extent that prices are allowed to rise in A, the change in terms of trade will relieve B of some of the burden of adjustment" (Mundell, 1961:658). This adjustment means the trade-off between inflation and unemployment ensures the prevention of unemployment in country B because country A is willing to inflate its inflation. According to Mundell (1961:675), "Depreciation can take the place of unemployment when the external balance is in deficit, and appreciation can replace inflation when it is in surplus." In other words, averting unemployment in country B can only occur when country A is willing to inflate its inflation. If country A chooses/country A and B choose to not inflate inflation, however, unemployment cannot be avoided in either country.

The free mobility of factors of production, as suggested by Mundell (1961), can restore external equilibrium by reallocating unemployed inputs into areas that need them. The above example further illustrates that labour and capital will leave country B, where unemployment is high, and join the supply of labour and capital in country A, while wages in both countries remain constant. Unemployment and inflation vanish. Hence, the

adjustment problem between the two countries will disappear automatically if the factor mobility is sufficient. In this regard, the factor mobility will evoke sufficient equilibrating adjustment to demand shocks, and will help to minimise the costs of integration too.

Mundell's argument for factor mobility justifies a fixed exchange rate system, because sufficient factor mobility weakens the need for a flexible exchange rate system (Mundell, 1973). Furthermore, he suggests that factor mobility can serve as a better means of absorbing the impact of shocks when they occur. Consequently, the greater the factor mobility between countries intending to participate in a common currency area, the easier it is to form a common currency area. In short, the gist of Mundell's argument is that the factor mobility between countries weakens the need for exchange rates, and countries whose factor mobility is stable are suitable to join a common currency area.

On the other hand, when there is factor immobility between the countries, each country should keep a separate currency. Corden (1973) counters Mundell's argument that labour mobility is an important variable in adjusting to asymmetric shocks. Corden (1973:168) argues:

> Can it really be imagined that a U.K. depressed-area problem could be solved by the large- scale migration of British workers to Germany? It is a conceivable; but when Britons are reluctant even to move from Scotland or Tyneside to the South, though the language is almost the same, it takes some imagination to conceive of labor mobility solving the central problem of monetary integration.

This position was further supported by Mongelli (2002), who noted that differences in labour market institutions could lead to divergent developments in terms of wages and prices even in the presence of similar shocks. There have been numerous studies on factor mobility, particularly labour mobility, as a possible adjustment mechanism. Bayoumi and Prasad (1995) examined the degree of labour market integration for the United States (US) and European Union (EU) and found that inter-regional labour

mobility appears to be a more positive adjustment mechanism in the US, which has a more integrated labour market than the EU. Generally, one can conclude that even the EU does not meet the labour mobility criterion of OCA theory due to cultural and linguistic differences. However, Mundell's argument survives, despite the valid criticisms, as one of the criteria for ensuring an optimal currency area.

2.2.1.2 Degree of economic openness (McKinnon, 1963)

McKinnon (1963:717) raises the degree of openness, defined as the ratio of tradables to non-tradables, as a crucial criterion of optimising a currency union. According to McKinnon (1963), the more countries participated in integrated trade, and the more open their economies become, and the more suitable they are to forming a currency area. In other words, countries whose economies are open to world trade are more suitable for participating in a common currency as the flexible exchange rate system becomes less efficiently and effectively. He argues that the more open an economy is, the greater the need for fixed exchange rates to avert any price instability caused by exchange rate variations. McKinnon (1963:719) notes that, "If we move across the spectrum from closed to open economies, flexible exchange rates become both less effective as a control device for external balance and more damaging to internal price level stability." Open economies can absorb shocks and, thus, countries with open economies may find it beneficial to join a common currency area.

McKinnon (1963) favours a fixed exchange rate regime in open economies; he argues that the probability of money illusion is lowest in highly open economies. According to McKinnon (1963), the absence of money illusion makes a flexible exchange rate system incapable of performing its stabilising function. Furthermore, any exchange rate variation in a highly open economy has no impact on the terms of trade and real wages, because the fluctuation in the price of the currency will affect both the export price of domestic goods and the import price of foreign goods. Therefore, when an open economy employs a flexible exchange rate system to correct external deficit, it is likely to experience

greater internal price instability (Ishiyama, 1975:83). The more open economies are to foreign demand for and supply of goods, the less severe the variation is in external shocks; and the exchange rate also becomes less effective in correcting external deficits (McKinnon, 1963). In an open economy, wages and domestic prices quickly moderate the fluctuations in the exchange rate and render the necessary adjustment.

2.2.1.3 Product diversification (Kenen, 1969)

Kenen (1969) suggests product diversification as a crucial criterion in determining optimality of a currency area. He argues that in well-diversified economies (where there is high product diversification), group countries would be better able to sustain an optimum currency area than those with economies that are not well diversified; hence, the former countries can establish a currency area. The main argument is that larger production variety dissipates negative terms of trade shocks and brings about automatic adjustment to asymmetric shocks, so the need for exchange rate adjustment would simply be less necessary, or non-existent.

For example, in a country that produces limited product types and exports only a few, a reduction in export revenue would result in a relatively higher idle capacity (a higher rate of unemployed labour) than in a more diversified economy with a fixed exchange rate (Kenen, 1969:49). This argument implies that in well-diversified economies, asymmetric shocks would be less significant than in less diversified economies. Kenen (1969:49) argues:

> A country that engages in a number of activities is also apt to export a wide range of products. Each individual export may be subject to disturbances, whether due to changes in external demand or technology. But if those disturbances are independent consequent on variations in the composition of expenditure or output, rather than massive macroeconomic swings affecting the entire export array, the law of large numbers will come into play. At any point in time, a country can expect to suffer significant reversals in export performance, but also enjoy significant successes […] From the standpoint of external balance, taken by itself, economic

> diversifications, reflected in export diversification, serves, ex ante, to forestall the need for frequent changes in the terms of trade and therefore, for frequent changes in national exchange rates.

The higher the degree of diversity of the productive structure of economies, the better insulated the economy, it is against a variety of shocks and obviating the necessity of making frequent changes to the terms of trade through exchange rate manipulation, as suggested by Kenen (1969). As a result, fixed exchange rates are most appropriate – or the least inappropriate – for well-diversified economies. The fundamental point of this argument, which Presley and Dennis (1976:24) highlight, is that "positive changes with respect to some exports will be offset by negative changes with respect to others; as demand for some increases, the demand for others falls". The more diversified export products are, the greater this offsetting mechanism will be. In other words, a country with a less-diversified production structure should keep a floating regime and it benefits from a floating exchange rate system as it may help the economy to achieve efficient allocation of resources.

Furthermore, Rwakunda (2004:19) argues that having a variety of export products influences the balance of payment and so, ceteris paribus, increases pressures on the exchange rates; a country with high product diversification will have a lesser need for exchange rate changes, whilst the contrary holds for a country with low diversification of export products. Consequently, countries intending to join a currency area must take into account the diversity of the productive structure of their own and other countries' economies, as this is a key factor in determining whether a currency union is feasible. Moreover, the diversity of the export production structure affects terms of trade, thus the speed and ease business cycles adjustment, which obviates the need to use the exchange rate. Therefore, according to Kenen (1969), highly diversified economies are better candidates for currency areas than less-diversified economies. The more diversified the economy, the more attractive a common currency area is.

2.2.1.4 Similarity in rates of inflation

Haberler (1970) and Fleming (1971) considered the similarity in rates of inflation as an important criterion in establishing an optimum currency area. This criterion focuses on the macroeconomic phenomena. The main argument is that "the payments imbalance is most likely to be the outcome of divergent trends in national inflation rates due to structural developments, differences in trade unions' aggressiveness or differences in national monetary policies" (Ishiyama, 1975:88). However, when the rate of inflation is identical, there will be no effect on the terms of trade and, ceteris paribus, an equilibrated flow of a current account will take place within the currency area.

Fleming (1971:476) points out that when inflation rates between partner countries are similar over time, terms of trade will remain fairly stable and the countries would benefit from shifting to a common currency. This implies that countries that intend to form a common currency ought to have relatively similar inflation rates in order to make it easier to adjust to the same kinds of shocks. In addition, similar in inflation rates among member countries of a intending to participate in a common currency area enhance business cycle synchronisation and cause less macroeconomic volatility in those countries.

Furthermore, if countries have different historical rates of inflation, converging inflation rates can be difficult. Conversely, countries with the same historical inflation rates can accomplish convergence relatively easily. The greater the similarity of countries' inflation rates, the more beneficial it is to form a common currency area. However, Talvas (1993:673) argues that a similarity in inflation rates is not a precondition of participating in a currency area. Countries that want to form a currency area should implement measures to achieve integrated inflation rates to make establishing a common monetary policy relatively easy.

2.2.1.5 Financial integration

Scitovsky (1958) and Ingram (1973) considered financial integration as one of the crucial tenets for forming a currency union. Essentially, they argue that when there is a high degree of integration in the financial market of a domain, there will be less necessity for exchange rate variation (Ishiyama, 1975:87). Countries that experience seamless integration of their financial markets increase their propensity to form a currency union, as well as strengthen trade links. Furthermore, financial integration can also forestall financial crises and market instability, and the participating countries will equitably absorb the costs of shocks.

Rwakunda (2004:20) argues that if there is a high degree of international financial integration, exchange rate variations will not be need to restore external equilibrium, since negligible changes in interest rates will give rise to efficient exchange rates within the area where financial integration exists. The greater the financial integration in partner countries, the more attractive it will be to establish a common currency area.

2.2.1.6 Degree of policy integration

Ingram (1969) and Haberler (1970) emphasise that good policy integration between countries is a crucial criterion for forming a currency area. Serious policy coordination among sovereign states, as Ishiyama (1975:90) asserts, requires a great deal of political will and determination, particularly when it comes to dealing with domestic issues. Ingram (1969: 98) argues:

> I do not think the optimum size of a currency area can be discovered by looking for real economic determinants of it, such as degree of labor mobility or homogeneity of output, although these factors may certainly affect the speed and ease of adjustment. I think the efficacy of a currency area depends on policy positions taken by governments and on the firmness of their commitment to them, on attitudes of the population toward the adjustment processes involved, on the nature of financial and other institutions, and on some economic considerations that are largely omitted from much present analysis.

Concurring with Ingram, Haberler (1970) asserts that it is not the characteristics of the economy, but the similarity of policies, which creates the requisite conditions for a flourishing currency area. Effective policy coordination is necessary to avoid tension, disagreements and fragmentation of the union. Fiscal-monetary policies must be harmoniously aligned to that the common currency is not established while there are wildly different sets of policies, as this could result in serious issues; for instance, a country might reduce its inflation and budget deficit.

Kenen (1994) argues that having similar fiscal systems in a region may contribute to, offset or compensate for regional differences. It therefore requires that the members of the union be subjected to a common code of fiscal conduct to ensure smooth functioning of the union and share price stability. In addition, countries that agree to compensate or secure against contingent loss will be better candidates for an optimum currency area. The fiscal transfer can act as insurance to mitigate the costs of an asymmetric shock resulting from an adverse shock. This harmonisation of fiscal policy would consolidate and enhance the accruable benefits of a common currency area. Furthermore, policy integration can serve as a catalyst to facilitate coordination of partner countries' economic policies such that they surrender their fiscal-monetary policies to a supranational institution.

Policy integration between potential members increases their ability to achieve macroeconomic convergence. Moreover, successful regional integration and/or cooperation should be based on a shared vision, homogeneity of preferences, consultation and joint actions. The fiscal policy and monetary policy of a currency area must coincide. The experiences of European Monetary Union (EMU) in the process of implementing European currency integration suggest that conflicting domestic interests may jeopardize the policy coordination needed for the sustainable operation of the exchange rate regime. The traditional approach is a useful lens through which to look at the issues of establishing a common currency area, but does not comprehensively cover the many facets involved (Ishiyama, 1975). The traditional view is preoccupied with the

choice of exchange rate regime, or the search for the characteristics that could define an OCA. Participating in regional economic integration (e.g. a monetary union) incurs both benefits and costs for the partner countries involved. The cost-benefit approach focuses on the costs and benefits of participating in a common currency area. The cost-benefit approach provides further insights and acknowledges the shortcomings of the mainstream traditional views.

2.2.2 The cost-benefit approach (1970s to the present)

The cost-benefit approach developed from the optimum currency area theory of the early 1960s. This approach tries to evaluate the costs and benefits of participating in a currency area, from the perspective of the participating region/countries (Ishiyama, 1975:78). It has an analytical framework and results are applicable; it also acknowledges the biases and the asymmetric shocks among the partners in that particular domain. From the individual country's perspective, a common currency involves serious economic costs. Membership of a currency union imposes severe restraints on policy discretion and the possibility of losing seignorage. This makes participation in a currency area less attractive. Nonetheless, in terms of the progressiveness of a monetary union, several important benefits of a common currency can be enumerated.

2.2.2.1 Benefits of a common currency

A common currency area gives an opportunity to the individual states to create and adopt policies and institutions that focus on expanding their economic capacity in the long term and to make the adjustments essential for economic growth and industrial development. It is conceivable that the adoption of a single currency area could lead to numerous benefits and, hence, makes a currency area attractive. To put it differently, the theory of OCA promises numerous benefits of to those that join a single currency area. These benefits can be classified as follows:

2.2.2.1.1 The elimination of transaction costs

The most visible and straightforwardly quantifiable benefit of participating in a common currency area is the elimination of the costs of exchanging one currency into another (De Grauwe, 2003:60). In other words, having a single currency eliminates the cost associated with converting one currency into another. The gains derived from the elimination of transaction costs can only be reaped when national currencies are substituted with a common currency (De Grauwe, 2003:60). Gerber (2005:234) argues that the elimination of deceptive price signals that lead to exchange rate fluctuations is also a potential gain in the currency area.

Furthermore, a single currency area enhances transparency and builds the confidence of both consumers and firms. Within a single currency area, it would be easy, for instance, for a South African citizen to trade with or pay Botswanian citizen within the union. As freedom of economic transactions increases, it further fuels positive gains and augments the mobility of goods, services and factors of production. In this regard, a single currency area can create substantial trade and investment flows, and efficient resource allocation to member countries. In addition, it can reduce prices for products due to heightened competition, and promote efficacy of resource allocation within the union, thus increase trade among members of the community.

According to De Grauwe (2003:61), the elimination of transaction costs also leads to an indirect benefit, in the form of a reduction or abolition of price discrimination across the currency area. The use of a single currency simplifies trade and saves costs on converting one currency into another, dispatching goods and other logistics that impede trade (Kwan, 1998). It also contributes to the elimination of exchange rate risks and the costs of currency hedging. This makes the market more transparent and increases competition, which will benefit the consumers and increase the volume of trade in goods and services. Rose (2000:17) asserts that, “Countries with the same currency trade over three times as much as countries with different currencies.” In addition, in a currency area, money

serves as a unit of account, which facilitates the comparison of wages and domestic product prices (Szebeni, 2004:13).

2.2.2.1.2 Transparency of prices

The adoption of a common currency leads to homogenisation of domestic prices within the area. It therefore becomes less expensive to transport goods and permits consumers and firms to easily compare prices as the prices are expressed in one currency (De Grauwe, 2003:63). In other words, a single currency eliminates major price differentials among the union members and consumers can compare prices of goods and services in the market. This makes consumers price conscious buyers and forces businesses to become more productive and efficient competitors. Duma (2000:6) argues that the opaqueness of goods and services' price caused by different currencies operating in a currency area will be eliminated and, as a result, trade will be promoted.

Monopolies in a currency area will lose dominance due to the transparency of prices and the equalisation of factor prices. (2006:13), this could lead and encourage participating countries' governments to adopt more market-oriented reforms. Trade and competition will be heightened in national markets, as prices in the area will be fully transparent and directly comparable. For example, in a single currency area, the firms that compete in the market will set the same prices for goods and services, as they will use the same currency with the same value.

2.2.2.1.3 Elimination of uncertainty caused by exchange rate fluctuation

The adoption of a common currency eliminates the foreign exchange rate uncertainties or risks across the currency area due to the disappearance of the exchange risk premium and non-currency considerations. A single currency area purges overshooting of the exchange rate within the area and promotes economic stability. As Duma (2000:5) notes, the exchange rate overshooting causes instability and insecurity, which may undermine the credibility of economy and currency. It is well known that economic uncertainty prevents

efficient co-operation and economic credibility to attract foreign investment. The elimination of exchange rate uncertainty will enable investors to make decision with some degree of long-term confidence, as a stable financial environment and the highest standards of financial responsibility and integrity will , 2006:339). Emerson et al. (1992) advocate this point by arguing that a currency area is the only means of totally eliminating exchange rates uncertainty and transaction. They further point out that there is much evidence that a positive relationship exists between foreign direct investment and exchange rate stability.

Hasin (2006) argues that a single currency area eliminates speculative capital flows among the participating countries and saves the members' exchange reserves for transaction within the area. Gerber (2005:234) posits that the elimination of exchange rates through the adoption of a single currency can increase political trust, and eliminate some problems caused by misalignment of the exchange rates. The elimination of currency risk and the harmonisation of market practices are likely to increase cross-border investment, and thus, economic growth across the currency area. The exchange rate stability would further promote mutual trade in the area because the uncertainty associated with trade would be eliminated, making intra-union trade more similar to domestic trade (Jepma et al., 1996:359). Reduced risk (volatility) provides investors an impetus to make foreign direct investment and a favourable business environment across the currency area (De Grauwe, 2003:67).

2.2.2.1.4 Other benefits of a common currency area

Firstly, a common currency area can reinforce the credibility of macroeconomic policies, i.e. monetary and fiscal policies. An added benefit is that it can also protect the central banks from political pressures. Furthermore, it can assist in terms of ensuring that policies are better aligned to economic needs, and ensures that the costs of high inflation and instability are recognised and factored into macroeconomic policies.

Secondly, through collaborative efforts within the union, it can promote joint development in all fields of economic activity and in financial infrastructure. It can also expand and create additional opportunities for less developed members, who will learn from the more advanced members, and thus bridge the development gap that exists between members. Furthermore, it lowers the cost of doing business with each other, creates a monumental potential market for investors and brings about the gradual removal of capital flow controls. It may further promote initiative, innovation and constant amelioration in the allocation of resources. This heightens competition and trade, which in turn can help in make the region a more attractive investment option.

Thirdly, a common currency area can improve and strengthen collective bargaining, resulting in positive regional development. Furthermore, it can create broader economic synergies and political relationships, and cement domestic market-orientated reforms in a manner that propels economic and financial development (Jovanovic, 2006:13). Moreover, a currency union can contribute towards the improvement of participating member states' national welfare, and strengthen the functioning of a free market. Finally, according to Bayoumi (1994:552), a currency area can improve the welfare of regions within a domain.

2.2.2.2 The costs of a common currency

While the introduction of a common currency could create lucrative opportunities and gains, it could also become a source of challenges and costs. This is simply because the member countries lose complete autonomy over their domestic policies to a common central bank's approval. According to Gerber (2005:347), participating in a common currency area implies a "one size fits all" policy, and leads participating countries to relinquish instruments of economic policy such as monetary policy. The costs of participating in a common currency area encompassed in the requisite macroeconomic management of individual members of a currency area.

2.2.2.2.1 Loss of autonomy over monetary policy

The main cost of participating in a currency area is the country's loss of national control over their monetary policy as a stabilising instrument of adjustment in their economy (Gerber, 2005:326). By belonging to a currency area, the individual country foregoes some sovereignty in regulating its monetary-fiscal policies in conformity with the prevalent economic conditions (Kwan, 1998). In other words, the adoption of a common currency means that the union members must give up their own national monetary policies and accept whatever contractionary or expansionary policy the supranational central bank chooses (Duma, 2000:7). According to De Grauwe (2003:5), a country that belongs to a common currency area cannot determine the volume of its national money circulation, or even change the short-term interest rate.

2.2.2.2.2 Loss of autonomy over exchange rate policy

Losing sovereignty over one's national exchange rate policy is perceived as a major cost of participating in a currency area. Joining a monetary union means that the member country must also relinquish its national control over its exchange rate policy. According to De Grauwe (2003:37), participation in a monetary union means that a member country is not able to independently revalue or devalue, and even control, the quantity of money circulating in the economy. The exchange rate policy in a monetary union cannot be used as an adjustment mechanism to offset demand and supply shocks in the economy (Duma, 2000:7). Jenkins and Thomas (1997:5) argue that members' loss of control over their exchange rate policy increases the fiscal burden of countries with high inflation by diminishing revenue if disinflation is necessary. That loss will be more costly when macroeconomic shocks are more asymmetric.

2.2.2.2.3 Loss of seigniorage

The loss of seigniorage can be another cost associated with participating in a currency area. It is also known as inflation tax. National governments lose their ability to raise

revenues through inflationary finance when they are using or, participating in a common currency area (Zestos, 2006:348). Seigniorage comes from the national currency held abroad. For instance, a government may print more money to raise revenue in order to cover its budget deficit instead of selling debts. Seigniorage in some countries is a major source of government revenue in economies with high inflation, as governments finance their deficits by creating more money. In a currency area, according to Jovanovic (2006:337), it is not possible for a country to inflate its way out of an economic crisis and, as a result, a country in crises should trim down its debts and/or sell more reserves.

Duma (2000:7) argues that, "[t]he ability of an economy to earn seigniorage is lost in a monetary union since the economy cannot independently manipulate fiscal and monetary policy." Furthermore, member countries' involvement in a monetary leads to loss of seigniorage revenue through banknotes issuance and the use of seigniorage to finance the budget deficit and other projects. According to Emerson et al. (1992:120), however, seigniorage is not an important cost since it usually contributes less than 1 % of the gross domestic product (GDP).

2.2.2.2.4 Changeover costs

A country intending to participate in a single currency area has to accept there are changeover costs associated with switching to a new currency. In a common currency are, a new bills and coins have to be minted and old ones have to be removed from circulation. Furthermore, businesses have to convert their selling prices and wages into a new currency (Bayoumi & Eichengreen, 1997). These changeover costs include administrative functions, technical printing, vending machines and distribution of new currency within the area (Jovanovic, 2006:337). The OCA theory recommends that a fixed exchange rate system be used if the benefits thereof outweigh the costs, from the view-point of national-self-interest and welfare (Ishiyama, 1975:79). Appendix B presents more variables that influence the OCA approach and their effects

2.3 Conclusion

In conclusion, the OCA theory, and subsequent modifications, forms the intellectual foundation of any discussion on currency unions. The traditional approach focuses on identifying specific ideal economic characteristics most relevant to choosing potential participants in a currency area. It presents a range of economic conditions that countries need in order to benefit from joining a currency area, including factor mobility; having an open economy with a diversified production structure; and symmetry with potential partners' domestic business cycles. Contrary to the traditional approach, the cost-benefit approach concentrates on the potential benefits and costs of participating in a currency union. The former arise from the elimination of the deadweight loss associated with multiple currencies and the latter arise from the loss of independence over macroeconomic policies (Ishiyama, 1975:83).

It should be noted that a monetary union does not depend entirely upon economic factors; it also depends on political will of member countries intending to establish a currency area (Frankel & Rose, 1996). Without political willingness and effective management of the implementation process by member states, establishing a common currency will not succeed, irrespective of having other key factors in place. The success of such initiatives requires leaders who think beyond the short-term gains and consider the long-term benefits of regional cooperation. A detailed analysis of the OCA theory is included in the works of Ishiyama (1975), Kwai (1987), Talvas (1993) and Bayoumi and Eichengreen (1997), among others. Given the above theoretical foundations of optimum currency areas, the next chapter reviews the empirical evidence related to currency areas.

CHAPTER THREE

EMPIRICAL REVIEW OF OPTIMUM CURRENCY AREAS

3.1. Introduction

The previous chapter discussed the theoretical literature on optimum currency areas. Much of the analysis of the benefits and costs of a monetary union is based on the theory of optimum currency areas. However, whether establishing a monetary union can lead to net trade creation (or diversion) needs to be taken for analysed methodically. This chapter presents selective empirical evidence on optimum currency areas. As such, it has drawn some lessons from the global experience of monetary integration, and it makes specific reference to the European Monetary Union (EMU) and the CFA Franc zone.

3.2 A selective review of the empirical literature

A number of empirical studies assess the effects of currency areas, the optimal potential and/or actual currency areas. These include the work of Grandes (2004), Jenkins and Thomas (1997), Rose (2000), Tjirongo (1995), Bayoumi (1994), Matsaseng (2008), Edwards and Magendzo (2003), Jonung and Sjoholm (1998), Frankel and Rose (2002), Zhao and Kim (2009), Nielsen et al. (2005), Mkenda (2001), and Shirono (2007), among others. These studies are briefly reviewed below.

A study by Rose (2000) investigated the effects of a currency union on trade; it used a treatment regression analysis and found that trade is tripled in countries that share a common currency. Frankel and Rose (2002) performed panel data studies of the common currency effects on trade and concluded that adopting a currency union leads to an increase in trade. Moreover, the authors argued that trade induced by a currency union might beneficially affect income. Rose and Stanley (2005) conducted a quantitative survey and found that a currency union increases trade by between 30% and 90%.

Edwards and Magendzo (2003) studied inflation, output growth and output volatility of currency union countries, and concluded that currency union members have lower inflation and higher output volatility than countries with their own currencies.

Using a general equilibrium model to evaluate the impact of currency unions, Bayoumi (1994) found that a currency union can raise the welfare of the regions within the area, while it lowering the welfare of those outside the union. In another study, Shirono (2007) used a micro-founded gravity model to investigate trade-creating effects and welfare gains linked with a common currency arrangement in East Asia. He found that an East Asian currency union substantially increases bilateral flows among the members; however, the welfare effects are minimal. On the other hand, he found that if Japan, a major trade partner in East Asia, is included in the union, the welfare effects increase substantially.

Tjirongo (1995) used the theory of optimum currency areas as a framework to evaluate Namibia's suitability as a member of the CMA, examined the costs and benefits of joining the CMA and the instruments that can be used to address asymmetric shocks in the region. He concluded that, given the relative size of the Namibian economy versus South Africa's, the degree of openness to international trade and the high degree of capital mobility, the use of the nominal exchange rate instrument would have limited effects on asymmetric shocks and thus, it would be beneficial for Namibia to join the CMA arrangement.

Grandes (2004) studied the ongoing monetary integration in Southern Africa and whether the CMA has been optimal currency area, as well as the costs and benefits of participating in the CMA. Using the generalised purchasing power parity (G-PPP) modelling technique to investigate these issues, he concluded that the CMA group, with Botswana as a de facto member, forms an OCA. Mkenda (2001) used the theory of optimum currency areas (OCAs), together with the generalised purchasing power parity (G-PPP) model, to assess whether the East African Community (EAC) of forming a

monetary union. He found that the G-PPP method supports the formation of a currency union in the region. Zhao and Kim (2009) examined the characteristics of the CFA Franc zone and compared them to those of the EMU by operationalising the criteria for an optimum currency area. They found that the CFA Franc zone countries are structurally different and thus are more likely to be subject to asymmetric shocks, and a monetary union may be a costly arrangement for the member countries unless they are compensated with other significant benefits. Eichengreen and Rose (1998) have analyzed the correlation of pursuing a certain exchange rate regime to financial fragility. They find varying linkages between the type of exchange rate regime and the likelihood of a financial crisis. Similarly, Dormac and Peria (2000), using an empirical analysis, they find that adoption of a fixed exchange rates reduces considerably the probability of a banking crisis happening to inflict damage in the economy.

3.3 The global experience of monetary integration: The EMU

There has been a wide range of monetary integration initiatives around the world. The most familiar monetary integration project is that of the European Monetary Union (EMU). The success of the EMU forming the European currency has inspired many regions to consider launching their own currencies (Zhao & Kim, 2009:1877). The Delors Report (1989) and the Maastricht Treaty (1991) provide much insight into the establishment of the EMU. The Delors Report laid out the context in which the monetary union could evolve, while the Maastricht Treaty officially endorsed the Delors Report and called for the formation of EMU. In 2002, a fully-fledged European Monetary Union (EMU) emerged with a single currency, known as the Euro (Giovannini, 1995).

Despite the stresses and challenges of establishing the European monetary system, it functioned much better than many observers had expected. It is hard, however, to argue that the EMU satisfies the requirements of an optimal currency area to any appreciable extent. In fact, Jovanovic (2006:332) argues that the EMU does not satisfy the OCA criteria. The EMU, which has thus far been a plausible model for monetary integration,

had a low correlation of shocks and labour and capital mobility were relatively scarce among its members in the pre-union period (Ricci, 1997:7). As pointed out by Frankel and Rose (1998), currency areas that do not resemble currency unions *ex ante* may do so *ex post.* The economic impact of the EMU on member countries includes the elimination of transaction costs and foreign exchange risk, and it achieves price stability through the set-up of an independent central bank (Giovannini, 1995:164). The detailed review of the EMU is beyond the scope of this study. However, certain lessons can be drawn from the EMU's success to assist SACU in establishing firmer integration or a currency area.

3.4 Lessons from the EMU community

The EMU is a very expedient case for SACU and its members to follow. First and foremost, political willpower and commitment played a pivotal role in the formation of the EMU and engendered the successful launch of a single currency, the Euro. As Rutledge (2008:125) argues, the formation of the EMU was not exclusively driven by economic merits per se, but also by political will, which had a major influence on its realisation. Such strong political will and unity on issues around the formation of the European monetary union were able to override the fact that the EMU, in many instances, is not a model optimum currency area. Some commentators have propounded the view that the EMU was instituted before satisfying the strict requisite conditions (Yeh, 2008:248). However, political will and a great sense of community, certainly, are indispensable. This is imperative to SACU's success and progress. Masson and Pattillo (2005) argue that the EU countries have shown considerable political will and commitment to sustaining an integrated goods and financial market.

Secondly, the experience of the EMU clearly indicates that to establish a viable monetary union, it requires alignment of economies and policies, and having a common central bank to monitor and regulate economic policies. The economic surveillant must be vested with the authority to sanction countries that do not comply with the protocols

(Feldstein, 1997). All EMU members have had a say in the formulation of European monetary-fiscal policies.

Thirdly, the European experience shows that regional integration is likely to thrive if one country serves as a leader. However, the success of the EMU was mainly enforced by two economic superpowers: Germany and France were willing to provide leadership. In the context of SACU, one can argue that it is possible to establish a currency area in which the South African Rand is the central currency. South Africa has a strong economy and a central bank with a good track record of currency stability, as it strictly monitors inflation via inflation-targeting policies. As a result, South Africa's central bank could act as the nucleus bank for the region.

Interesting questions in this regard are: Will Botswana, Lesotho, Namibia and Swaziland (BLNS) accept South Africa in this role? Moreover, will South Africa be willing to take on this role? One cannot confidently answer these questions, as the drive for regional integration in the SACU region is sometimes overshadowed by members' concerns about their national interests. This is evident in the recent incident where Botswana, Lesotho and Swaziland signed an Economic Partnership Agreement (EPA) with the EU, while Namibia and South Africa did not sign the agreement. South Africa and Namibia did not sign the agreement because they felt that the agreement will negatively impact on their economies since it does not address all issues of their concern.

Fourthly, according to Article 31 (3) of the 2002 SACU Agreement: "No member state shall negotiate and enter into new preferential trade agreements with third parties or amend existing agreements without the consent of other Member States" (SACU, 2007). The provision of the agreement binds members to negotiate and conclude negotiations as a group. This shows that the members of a 100-year-old customs union still lack the political commitment to unity and come up with one solid voice. Fourthly, the success of a monetary union lies with all stakeholders. The success of the EMU can be attributed to

the fact that it was supported by multi-stakeholder constituency comprising corporate groups, government and non-governmental organisations (Feldstein, 1997).

3.5 The African experience of a monetary union: The CFA Franc zone

Despite all the setbacks to economic integration in Africa, the CFA Franc zone and the CMA group testify to the success of monetary integration in Africa. The CFA Franc zone is an existing currency union in Africa; formed in 1945, it consists of two sub-zones (WAEMU and CEMAC) and has 14 member countries (Zhao & Kim, 2009). Rutledge (2008:132) argues that the CFA Franc zone has existed for over half century and has a large number of member of members no due to economic considerations, but because it was driven by the political legacy of French colonial rule. The CFA Franc zone represents a classic full monetary union, with a common currency, the CFA Franc (Hadjimichael & Galy, 1997).

Members enjoy the free transfer of funds within the CFA Franc zone; common rules apply to countries outside the union; there is a common banking and monetary policy; there are uniform interest rates as well as a credit policy (Aziakpono, 2008:190). Interestingly, according to Hadjimichael and Galy (1997:33), the CFA Franc zone is a "monetary union with a fixed exchange rate, and the anchor currency country, France, guarantees the convertibility of the CFA Franc into French francs". Some commentators argue that the CFA region is a political project that is not driven by efficiency considerations. Kawai and Takagi (2005:104) posit that, the CFA Franc zone is not regarded as an optimum currency area due to its poor integration.

Masson (2005:47) argues that, "without France's active encouragement of its former colonies to remain in the CFA Franc zone […] it is likely that the monetary unions […] would have been dissolved". In the CFA Franc region, France leads the monetary cooperation. Although, according to Kawai and Takagi (2005:102), over the past decade, France's influence waned and market mechanisms have gained importance in monetary

policy-making and management. The CFA currency has been entrusted to a common central bank (comprising BCEAO and BEAC). A detailed review of the CFA Franc zone is beyond the scope of this study. However, certain lessons can be drawn from the CFA Franc zone's success to assist SACU in establishing better integration or a currency area.

3.6 Lessons from the CFA Franc Zone

Firstly, the CFA region shows that having ideal economic conditions is not the only way to achieve and strengthen regional economic integration; despite the limited trade linkages between the CFA countries, their political commitment and great sense of community has been instrumental in achieving monetary cooperation. Secondly, the experience of the CFA regions shows once again that one country must assume a leadership role. France has played a key role and has encouraged the CFA members to remain in the CFA Franc zone. Lastly, the CFA regions' experience indicates the importance of ensuring adequate autonomy and decision-making powers in the formation of a strong supranational institution. The absence of such a supranational institution makes it hard for member states to move toward the successful formation of a monetary union.

Some salient features of a successful regional arrangement are suggested by a brief review of the EMU and CFA region. Instrumental to both the EMU and CFA region has been the frequent consultations, participative processes, and member countries' transference of a significant share of their national sovereignty to the respective supranational body (Mongelli, 2002). Their experiences in economic integration suggest that effective monetary cooperation should encompass: (i) economic surveillance mechanism; (ii) a regional financing facility; (iii) exchange rate coordination; and (v) a single currency (Mongelli, 2002). As a modality of regional monetary cooperation for SACU, the EMU and CFA Franc zone are likely to be a useful guide. From these lessons, SACU should implement three progressive steps: (i) participative policy-making and economic surveillance; (ii) a regional financing arrangement; and (iii) a keen desire and

commitment to its success and deeper integration. SACU has to adapt and evolve to stay relevant. However, there has to be a fundamental mindset change among SACU countries if they are to exploit global trade for their own growth rather than be exploited by global trade. SACU countries have to adopt a spirit of imitation, learn by doing, and renewed impetus towards economic diversification to foster their integration into the world economy.

3.7 Conclusion

In conclusion, a review of the selected empirical studies shows mixed results. Some studies have indicated that the monetary union double trade (Rose, 2000; Frankel & Rose, 2002); others show that the monetary union does not improve trade (Jonung & Sjoholm, 1998; Tjirongo, 1995). It is important to note that the economic prerequisite for the formation of OCA cannot solely engender the successful formation of a monetary union. As Rutledge (2008:125) posits, political will and institutional integration have an important role to play in accomplishing and deepening the process of regional economic integration. The experiences and success of the EMU and the CFA zone demonstrate that a monetary union is highly dependent on political will and commitment to ensuring integration. Furthermore, support from a multi-stakeholder constituency (i.e. corporate groups, government, and non-governmental organizations) is essential for regional integration in member countries. Hence, SACU member states can use the experiences of the EMU and the CFA region as a blueprint in its bid for a currency (or deeper integration) union.

CHAPTER FOUR

THE SOUTHERN AFRICAN CUSTOMS UNION (SACU)

4.1. Introduction

Regional economic integration has been attempted across the world, at various levels – for instance, using tariff reductions and various other integration methods – as a means of securing access to the world market and bargaining power, and as an important strategic move to reinforce growth in order to overcome developmental challenges (Jovanovic, 2006). Manifestly, the formation of these regional economic groupings was expected to provide, among other things, each member country with better access to others' markets and technology, lower transaction costs, labour and human capital and economies of scale that do not occur in small markets limited by trade barriers. However, in many respects, there was little progress in these areas, especially in the African continent (African Development Report, 2000:177).

African states have also identified regional economic integration as an important strategic imperative for promoting economic and export-oriented growth and sustainable development. Makhan (2002) argues that the regionalism in Africa is fundamentally a development strategy that incorporates the objective of diversifying the productive base of African countries in order to increase trade and export at regional level and as a means of integrating into a global economy. Regional economic integration in Africa is not in its infancy (Davies, 1994:1), and SACU, despite its challenges and conflicts, is regarded as the most effective and functional customs union in Africa. This chapter discusses the evolution of SACU and its organisational structure.

4.2 History of the formation and development of SACU

SACU has a rich history and is the oldest operating customs union in the world. The members of SACU have developed positive relationships since its inception in 1910, both on the political and commercial fronts (Chauvin & Gaulier, 2002). To recap, SACU's member countries include Botswana, Lesotho, Namibia, South Africa and Swaziland. Members of SACU have successfully sustained a spirit of cooperation over a century. In 1969, SACU agreement of 1910 was converted into an official customs union agreement (Venter & Neuland, 2007). SACU was established because meaningful trade and market cooperation, market liberalisation (the removal of trade barriers), economic growth and development and monetary cooperation were necessary (Hentz, 2005:1). After its inception, SACU signed a treaty to abolish all import duties imposed on its members and it current imposes a common external tariff (CET) on all other countries (Adedeji, 2004:201). The 1969 agreement has remained pivotal to SACU member states and this agreement was only amended in 2002.

SACU has done much to ensure economic integration amongst its members, chiefly by achieving its customs union status. There is a free flow of goods between member countries and a common external tariff is applied. The aim of SACU's integration initiatives, past and present, is to stimulate regional economic flows between its members and to foster development for the whole area, particularly for the less advanced member countries, and monetary cooperation (Hentz, 2005:1). Oyejide (2000:8) argues that, of Africa's attempts at regional integration, SACU has had the most consistent success, as it has a long history of intra-regional trade between member states.

However, it is apparent that the trade patterns in SACU tend to favour the regional superpower, South Africa. According to the African Development Report (1993), SACU and the Common Monetary Area (CMA) are good examples of successful regional integration schemes in Africa and serve as a reminder that sub-regional arrangements that combine mutually supportive trade and monetary cooperation have positive ramifications

for advancing economic integration. There is huge potential for SACU to move beyond its customs union structure to become either a common market or a monetary union. The latter may be one way in which cohesive economic integration could be strengthened in the region. Arguably the most effective economic organisation in Africa, according to Hansohm and Adongo (2006), SACU cannot overlook the possibility of creating a monetary union.

4.2.1 The 1969 SACU Agreement and its objectives

The 1910 agreement was officially converted into a Southern African Customs Union agreement in 1969. The main aim of this agreement was to maintain and facilitate the free interchange of goods among the member countries (Steenekamp, 2007: 236). The 1969 agreement describes the objective of SACU as:

> Maintaining the free interchange of goods between (member) countries and applying the same tariffs and trade regulations to goods imported from outside the common customs area […] on a basis designed to ensure the continued economic development of the customs union area as a whole, and to ensure in particular that these arrangements encourage the development of the less advanced members of the customs union and diversification of their economies, and afford all parties equitable benefits arising from trade among themselves and with other countries (Davies, 1994:1).

It also provided for a common external tariff and excise tariff for the common customs union and all customs and excise duties collected from the common customs area were paid into South Africa's national revenue fund and shared among members according to the prevailing revenue-sharing formula (Leevashni, 2007). Several scholars among, them McCarthy (1999b), have argued that this agreement was based on a dispensation managed unilaterally by South Africa and, thus, the other members of SACU were not happy and satisfied, and called for renegotiation of this agreement in order to democratise SACU and address the current needs of all of its members.

4.2.2 The 2002 SACU Agreement and its objectives

After 1994, members of SACU concurred that the 1969 agreement should be reviewed in order to more effectively address SACU member countries' needs in terms of the revenue-sharing formula and the decision-making processes of the customs union. The new agreement was signed in 2002 and came into effect in 2004. The 1969 agreement had remained a fundamental treaty among members, and the 2002 agreement had passed as the amendments of the original agreement (SACU, 2007).

According to Hansohm and Adongo (2006:4), SACU is now closer to being a "true" regional integration (RI) scheme because it no longer allows South Africa to unilaterally manage its activities and it is an independent institution with equal partners. The new agreement underscores SACU's resurgence with a strong commitment to economic development and democratisation, and relatively more equitably distributed costs and benefits. It also encourages member countries' to better align with its policy coordination and trade strategies. The new agreement presents a radical shift in the management of SACU; its stated objectives include:

- To facilitate the cross-border movement of goods between the territories of the Member States.
- To create effective, transparent and democratic institutions which will ensure equitable trade benefits to Member States.
- To promote fair competition, substantially increase investment opportunities in the Common Customs Area.
- To enhance the economic development, diversification, industrialisation and competitiveness of Member States.
- To promote the integration of Member States into the global economy through enhanced trade and investment.
- To facilitate the equitable sharing of revenue arising from customs, excise and additional duties levied by Member States; and

- To facilitate the development of common policies and strategies (SACU, 2007).

The fact that member countries may not enter into new preferential trade agreements with third parties without the other members' consent (SACU, 2007) is important t for two main reasons. First, it gives preference to a multilateral framework agreement(s). Second, it implicitly compels members to commit to the customs union's goals. Members of SACU have also established a compensation formula to mitigate the negative effects that a customs union might have on the less developed members (Hentz, 2005:1). Furthermore, the new agreement encourages the member countries to develop common policies, such as industrial, agricultural, competition and intellectual property policies, as this will ensure the coordinated development of SACU policies (Draper et al., 2007). Hence, SACU members have started work on the development of a common industrial policy, competition policy and agricultural policy.

Venter and Neuland (2007:11) note, successful regional integration has to be guided by principles that foster harmonisation of sub-regional and national polices for programmes to be compatible and mutually reinforcing. Moreover, the 2002 SACU Agreement addresses members' prior concerns and balances the interests of all of its members. Its revamped policies and new institutions are based on democratic processes and have addressed inequality by using a new revenue-sharing formula (Hansohm & Adongo, 2006). In principle, the new agreement can be considered a success as it normalises trade relations between members, and provides for the creation of a number of democratic institutions and joint decision making.

4.2.3 The SACU revenue-sharing formula

The new agreement encompasses a compensatory formula to mitigate the customs union's potentially negative effects on less developed members (Hentz, 2005:1). A common external tariff under SACU guarantees the free movement of goods and represents a significant source of revenue for less developed members, namely, Lesotho,

Swaziland and Namibia. Table 4.1 and 4.2 show that under the old and new SACU revenue-sharing arrangements, the BLNS members have received a large proportion of total government revenue from this source, and there is a substantial amount of implicit redistribution of fiscal revenues from South Africa to the BLNS. South Africa, which accounts for over 90 % of SACU's GDP, receives slightly more than half of the total revenue pool, and the revenue share of the BLNS far exceed their shares of SACU economic activity. According to Manuel (2007:1), SACU revenues from intra-trade have increased enormously from 1995, when they were at 3.2 billion, to the 23.1 billion recorded in 2005.

Table 4.1: SACU Revenue Payment Under the Old Revenue Share Formula, 2001/2002

Country	Botswana	Lesotho	Namibia	South Africa	Swaziland
SACU Payment (R million)	2,622	1,438	2,641	9,897	1,503
% of Revenue Pool	14,5	7,9	14,6	54,7	8,3
% of Total Gov't. Rev.(Excl. Grants)	12,8	51,0	30,4	3,9	54,1

Source: Flatters and Stern (2005)

Table 4.2: SACU Revenue Payment Under the New RSF, 2005/2006

Country	Botswana	Lesotho	Namibia	South Africa	Swaziland
SACU Payment (R million)	4,008	1,984	3,228	13,027	2,795
% of Revenue Pool	16,0	7,9	12,9	52,0	11,2
% of Total Gov't. Rev.(Excl. Grants)	12,1	48,6	25,1	3,4	68,5

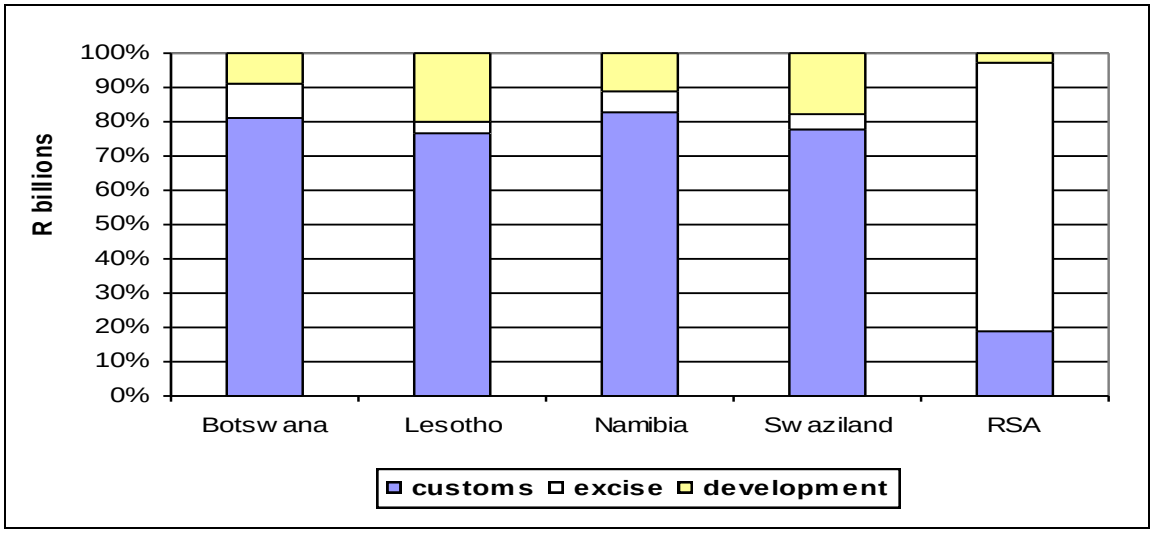
Source: Flatters and Stern (2005)

As can be seen from the above tables, almost all of the implicit redistribution from South Africa to the BLNS under the new formula arises from the sharing of customs revenues. This is because the new formula allocates customs revenues, not on the basis of each member's imports of dutiable products, but rather in proportion to their share of intra-SACU trade and South Africa depends on the BLNS for only a very small share of its

imports. The 2005 estimates indicate that SACU payments accounted for 49% of government revenue in Lesotho, 69% in Swaziland, 25% in Namibia, 12% in Botswana, and 3% in South Africa (Flatters & Stern, 2005:2).

The new SACU agreement has made substantial changes to this revenue-sharing arrangement and the revenue share accruing to each member is now calculated with three basic components: a share of the customs pool; a share of the excise pool; and a share of the development budget. The present formula distributes customs and excise revenue on the basis of forecasts of reconciled against actual collections and intra-trade data. A more precise image of the importance of these shares is provided in Figure 4.1, which shows the composition of SACU payments by component under the new revenue share formula.

Figure 4.1: Composition of SACU Payment by Component Under the New RSF



Source: Flatters and Stern (2005)

The new SACU agreement has affected the revenue sharing arrangements between members. As illustrated in the above Figure 4.1, it is instructive to note that South Africa, the dominant partner accounting for over 90% of SACU GDP and over 80% of SACU's total imports, receives the majority (about 80 percent) of its SACU revenue through the excise

component whilst the remaining BLNS members each receive most of their revenue from the customs component. The BLNS countries are therefore extremely vulnerable to fluctuations in the level of customs collections.

4.2.4 The SACU institutional structure and arrangements

The New Agreement has been perceived more comprehensive than the old Agreement. It provides an establishment of an independent full-time administrative secretariat to manage all SACU affairs (Kirk & Stern, 2003). Members of SACU meet annually to discuss all matters related to the Customs Union Agreement. The organisational structure of SACU comprises:

- **The Council of Ministers:** A body represented by one minister from each SACU member country. It is the supreme SACU decision-making body.
- **The Commission:** An administrative body comprised of senior officials, three technical liaison committees and an established agricultural liaison committee.
- **The Tribunal:** An independent body of experts, that reports directly to the council of ministers. The tribunal is responsible for tariff setting and the anti-dumping mechanism.
- **Ad Hoc Tribunal:** This is a body responsible for the settlement of disputes.
- **Secretariat:** This body is responsible for the day-to-day operations of the revenue pool (SACU, 2007).

4.3 Key characteristics of the economies of SACU

Members of the SACU have close economic relations going back over a century; four of its members forming part of a monetary union (Kirk & Stern, 2003). SACU region is completely dominated by South Africa in terms of economic size and population size.

McCarthy (2008:1) states that the inequality in economic size and levels of development among the SACU member states is extreme, and this sometimes frustrates the progress of the customs union. South Africa contributes over 90% of the SACU GDP and completely dominates other members in terms of size and because it is industrially advanced. As mentioned earlier that the small members of SACU depend heavily on South Africa in terms of trade, investment and (migrant) employment (Kirk & Stern, 2003). The South African companies completely dominate the business landscape of the Southern Africa region (Mbeki, 2005; Kirk & Stern, 2003).

The South African economy is based on the extraction of natural resources, but is much more diversified than any of the BLNS countries. Although South Africa has dominating the region, Botswana's economy has been experiencing the highest growth rate than all other countries in the region over the past decades. Botswana's economy, according to Kirk and Stern (2003) and CIA (2010), is dominated by the mining industry (i.e. the exploration of the diamond). The Namibian economy is also dominated by the mining sector. The Swaziland's economy is predominantly an agricultural economy (Kirk & Stern, 2003). Lesotho remains the poorest economy in the region, and it is heavily dependent on SACU revenues and on remittances from migrants working in South African mines, though the numbers employed in the South African mines have declined over the past decade. Lesotho's economy is also based on agricultural economic activities and water, which is a major natural resource in the country (CIA, 2010).

4.4 Macroeconomic convergence in SACU

The co-movement of macroeconomic variables within SACU and among members is analogous. Members of SACU share relatively similar macroeconomic policies (such as monetary, fiscal and exchange rate policies) because of the CMA arrangement. Maleke (2008:70) argues that the SACU member countries have achieved a reasonable level of convergence in terms of macroeconomic variables such as exchange rates, inflation, GDP growth rates and interest rates. South Africa's economic dominance in the region means

that changes in its domestic economic policy may affect its neighbours, especially other members of SACU. As Guma (1985:177) argues: "The effects of South African economic policy are quickly transmitted to other members via the fixed exchange rate and other factors mobility, whilst reverse flows of causation are likely to be negligible. Thus, not only must the rates of inflation and interest rate structure in all members approximate those obtained in South Africa but, in addition, monetary and fiscal shocks originating from South Africa must elicit an immediate response in the other countries."

Harvey (2000) and Jenkins and Thomas (1997) have shown that there is little convergence between SADC countries, whereas there is major convergence of SACU member countries. According to the African Development Bank Report (2004:i) and Maleke (2008), members of SACU have reached a very high level of stability and macroeconomic convergence in terms of their fiscal and monetary policies, inflation rates, interest rates as well as per capita incomes. The fiscal deficits are much lower among SACU members than non-SACU SADC members, with the former averaging 1.6 % of the GDP for the period 2000-2003 and the latter averaging 5.6 %. In addition, with the exception of Lesotho, all SACU members have a lower external debt ratio, below 25 % of the GDP (ADBR, 2004:6-7).

Jenkins and Thomas (1997:23) also note that there is a marked pattern of convergence amongst the SACU countries, with Botswana and Lesotho "catching up" with other member states in terms of economic progress and development. It is important to note that macroeconomic convergence is critical for the long-term sustainability of a monetary union. Having noted the magnitude of macroeconomic convergence between members of SACU, one can argue that members of SACU would share similar regional shocks. Hence, this makes members of SACU suitable and compatible candidates for a currency (or monetary) union.

Ricci (1997:7) raises a very interesting point, arguing that even in the EMU, which is the most plausible model of the monetary integration to date, the correlation of shocks was low, and labour and capital mobility were relatively scarce among its members prior to the formation of the union. Similarly, Mulhearn et al. (2001:361) suggest that the business cycles among the EMU members were not presences from the entry into the monetary union, but the strong political drive to establish a flourishing monetary union overcame what were perceived as narrow technical objections.

Overall, the picture provided by convergence indicators suggests that members of SACU share some policy preferences. Macroeconomic convergence among the SACU countries could be attributed to the fact that members of SACU have adopted domestic policies that engender low inflation rates, fiscal deficits and public debts in order to promote trade and investment. This gives credence to the argument that SACU members have achieved the economic requisite for forming a currency area.

4.5 The economic performance of SACU

Of the SACU countries, South Africa has the broadest industrial base, expertise and technology. South Africa has emerged as a major source of investment in the Southern African region (Mbeki, 2005). The trade share of Botswana, Lesotho, Namibia and Swaziland (the BLNS countries) remains low. According to Khamfula and Tesfayohannes (2004:43), for the past five years South Africa's exports to the rest of the SADC region were three times higher than imports from the region. Lesotho and Swaziland are the lowest contributors to SACU's GDP, contributing 0.6 % and 0.9 % respectively. Table 4.3 shows SACU member states' contribution to the GDP.

Table 4.3: SACU's GDP and Countries Percentage in 2005

Country	GDP (US$ million, 2000 prices)	% of SACU GDP
Botswana	8.204	4.7
Lesotho	988	0.6
Namibia	4.231	2.4
South Africa	159.695	91.4
Swaziland	1.548	0.9

Source: Braude and Sekolokwane (2008)

Table 4.4: Estimates of BLNS Intra-SACU Imports, 2002/2003

Country	**Intra-SACU Imports (R bn)**		**Excess**
	(1) Reported by BLNS	**(2) Recorded by SARS**	**(1-2)/(2)**
Botswana	17.2	11.4	51%
Lesotho	8.1	5	61%
Namibia	13.9	10.9	28%
Swaziland	12.5	10.4	20%
South Africa	7	6	17%
Total	58.7	43.8	34%

Sources: Flatters and Stern (2005)

It is important to note that there are some discrepancies between the import data reported by BLNS members and the export data for the same trade recorded by SARS. According to Flatters and Stern (2005), each member state has a strong interest in estimating such import values in order to enhance its share of the pool. In both records, Botswana is at the top, followed by Namibia and Swaziland. Lesotho and South Africa were at the bottom, respectively. The following table shows SACU Members' intra-SACU and total imports.

Table 4.5: SACU Members' Intra-SACU and Total Imports

Country	Imports (R million)		Ratio
	(1) Intra-SACU (2002/03)	(2) Total Imports - 2002	(1)/(2)
Botswana	17165	18434	93%
Lesotho	8073	9194	88%
Namibia	13943	15800	88%
Swaziland	12453	11977	104%
South Africa	7045	318272	2%
Total	58679	373677	16%

Sources: Flatters and Stern (2005)

Table 4.5 demonstrates that Botswana had the highest rate of intra-SACU imports, with 93 % of all imports from all sources; it was followed by Lesotho and Namibia, both with 88 %. Swaziland imported more than SACU member countries; its intra-SACU imports amounted to 104 %. South Africa imported only 2%. This indeed shows that South Africa is dominant in the union. The BLNS countries import more goods from South Africa than South Africa imports from them. Table 4.5 shows the GPD structure in SACU countries.

Table 4.6: GDP Structure in SACU countries, 2005 (%)

Country	Agriculture	Industry	Manufactured	Services
Botswana	2.3	53.3	3.9	44.4
Lesotho	17.3	41.4	18.5	41.3
Namibia	9.9	31.7	13.5	58.4
South Africa	2.5	30.3	18.6	67.1
Swaziland	11.5	47.6	36.9	40.9

Source: Braude and Sekolokwane (2007)

The above table clearly shows unequal levels of development within SACU. South Africa has shown labour capacity (services) and manufacturing skills followed by Botswana. In Lesotho, Namibia and Swaziland, the economies are less diverse. In light of SACU's potential to be the best institution through which to ensure regional integration in Africa, it is fitting to compare it with other African regional trade blocs as well as the successful trade blocs such as the North American Free Trade Area (NAFTA)

and the European Union (EU). The comparative analysis (see Appendix C) reveals that, SACU shares 61,3 % of that of successful attributed to the successful trade blocs, while SADC rated 48,3 %, COMESA 32,5 % and the EAC 52,5 % (Venter & Neuland, 2007). This indicates and confirms that SACU is a good example of a regional economic integration body that is operating relatively efficiently in Africa.

4.6 SACU and international agreements

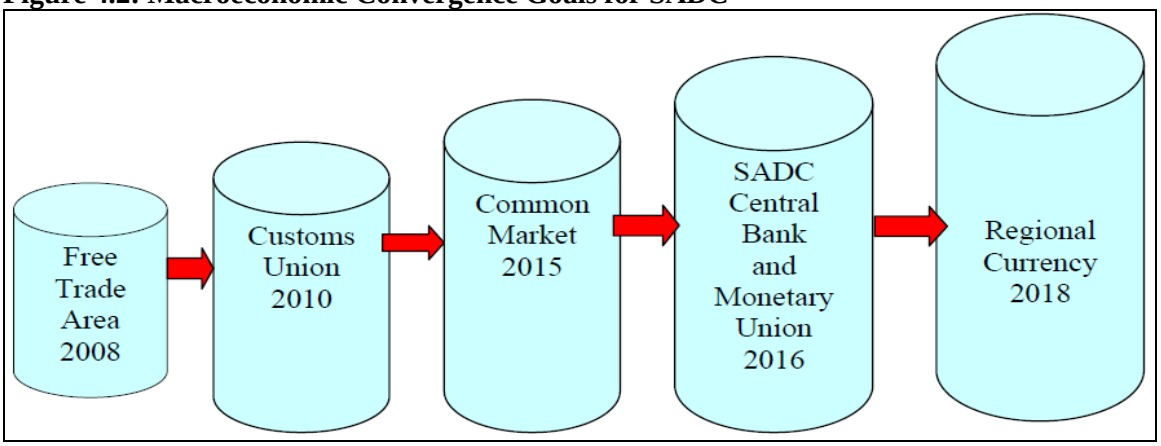
Many countries or regions across the world have signed cooperation agreements with the intention of accessing, among other things, others' markets, technology, lower transaction costs, labour and human capital and take advantage of economies of scale that would not occur in small markets limited by trade barriers. Likewise, SACU and its members see international agreements as a strategy for acquiring development (i.e. capacity/infrastructure/know-how) and economic linkages and as an opportunity to assimilate into the global economy.

Members of SACU are highly open towards each other and even towards the global economy. They have trade-oriented economies and firmly support the concept of free trade and; all SACU's members are signatories of the World Trade Organization (WTO). SACU has signed several trade agreements, namely the SADC Trade Protocols, SACU-Mercosur Preferential Trade Agreement, SACU-EFTA Trade Agreement, SACU-India Trade Negotiations, and the SACU-China Trade Negotiations (Tralac, 2005; SACU, 2007; Braude & Sekolokwane, 2008). These agreements offer SACU member states easy access and exposure to other, larger regional markets and could serve as a trading base from which to fully integrate into the global economy.

4.7 SACU vs. the Southern African Development Community (SADC)

SACU finds itself operating alongside similar organisations such as COMESA and the SADC. The most worrying outcome from such parallel organisations is "policy conflict" (Khamfula & Tesfayohannes, 2004:40). As demonstrated in 1977 with the EAC, a policy conflict played a significant part in its demise (Mkenda, 2001). The SADC was formed in 1992 as an evolution of the Southern African Development Community Cooperation (SADCC). Members of the SADC include Angola, Botswana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, the Democratic Republic of the Congo, Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. The SADC is committed to the abolishment of all forms of external protection measures imposed on countries in the Southern African region and the creation of a common market with free movement of factors of production to ensure that equitable and sustainable development becomes a reality. The SADC has set the following milestones to be achieved by 2018.

Figure 4.2: Macroeconomic Convergence Goals for SADC



Sources: own calculations from SADC (2007)

In order to achieve its macroeconomic convergence goals, the SADC has adopted formal frameworks and time frames to guide its integration process and to promote the harmony and progressive convergence of national economic structures and macroeconomic policies. Macroeconomic convergence targets are as follows: (i) inflation is to be reduced to single-digit levels by 2008, to 5% by 2012, and to 3% by 2018; (ii) the ratio of the

budget deficit to GDP should not exceed 5% by 2008, should be between 3% and 1% by 2012 and be maintained at the 2012 level up until 2018; (iii) the nominal value of public and publicly guaranteed debt should be less than 60% of the GDP by 2008, and should be maintained through-out the period (until 2018); and (iv) the current account deficit should be less than 9% of the GDP by 2008 (SADC, 2007).

These convergence targets were set in light of the fact that macroeconomic stability should precede the formation of a monetary union in order to guide and integrate key aspects of future economic and financial policies among the SADC member countries. The convergence targets for the SADC Monetary Union are quite feasible for all SACU member states. For instance, all SACU countries, except Lesotho, have average public debt ratios below the 60% benchmark GDP (Maruping, 2005). However, as yet the SADC deepening of economic integration has not yet been fulfilled (i.e. such as customs union 2010).

The SADC members aim to form a monetary union by 2016 and launch a regional currency for the monetary union by 2018. This will facilitate the free movement of goods, services, capital and labour across national borders and eventually lead to full regional monetary integration. SADC and SACU have similar regional integration mandates, but the modalities and strategies to achieve their objectives differ. Looking at the two organisations' respective trade objectives shows that they converge in some areas and diverge in others. Table 4.9 shows the similarities and differences between SACU's and SADC's trade objectives.

Table 4.7: SADC and SACU Trade Objectives (SADC 1996, SACU 2002)

Objective (Randomly Numbered)	SADC Trade Protocol Objectives	SACU Objectives	Objectives' Convergence/Divergence
1	To further liberalise intra-regional trade in goods and services on the basis of fair, mutually equitable and beneficial trade arrangements	To facilitate the cross-border movement of goods between the territories of the member states	Converge
2	To contribute towards the improvement of the climate for domestic, cross-border and foreign investment	To substantially increase investment opportunities in the Common Customs Area	Converge
3	To enhance the economic diversification and industrialisation of the region	To enhance economic development, diversification, industrialisation and competitiveness of member states	Converge
4	Achieve complementary national and regional strategies and programmes	To facilitate the development of common policies and strategies	Diverge
5	To establish a Free Trade Area in the SADC region	To promote the integration of member states into the global economy through enhanced trade and investment	Diverge

Source: SACU (2008); SADC (2007)

From the above table one can see that there is relative convergence on the objectives. Even though the objectives are not identical, but both regions tend to pursue the same goals of promoting free movement of goods within their region, make an effort to increase investment in their region and desire to diversify and industrialise their economic region. These factors seem to bolster the integration of SADC markets. Thus, countries that are members of more than one group will have to choose between them, as

it is impractical to claim membership with different customs unions. Should the SADC succeed in realising its targets, it is likely that SACU will be incorporated into the SADC customs union. Khamfula and Tesfayohannes (2004:42) suggest that the SADC members should start by adopting a common monetary area (CMA) such as the one adopted by Lesotho, Namibia, South Africa and Swaziland.

4.8 The challenges and the future of SACU

In addition to the challenges addressed earlier (see page 56), members of SACU have different economic profiles and levels of development. Moreover, they all face the problems of poverty alleviation and income distribution, HIV/AIDS and a high unemployment rate. Members' lack of resources to finance customs union programmes, SACU personnel and the implementation of a proper institutional structure is highly problematic. SACU's lack of autonomy (chiefly due to members' multiple memberships and complications this introduces) means that it lacks internal policy-making capabilities, which undermines its ability to forge good intra-regional trade relationships.

Notwithstanding the fact that SACU is grounded on economic motivations, the lack of real political will and sustained commitment between member states threatens its viability. The recent EPA episode demonstrated members' inability to balance their national interests and those of the region as a whole. As Erasmus (2008) argues, the council and commission appear to represent national interest rather than the common interest of the region. To summarise the challenges that SACU faces:

- The disparities between SACU member states' economic size and the levels of development are extreme and sometimes problematic, thwarting the progress of the customs union (McCarthy, 2008:1).

- SACU does not have its own budget nor the comprehensive authority to make laws that would effectively regulate and monitor areas of common interest.

- SACU members do not have industrial strategies specifically aligned with the customs union's objective; as such, Regional Trade Agreements (RTAs) are weakened and SACU's administrative capacity is unnecessary burdened (Yang & Gupta, 2005:6).

- Transport and communication infrastructure remains a significant challenge for SACU countries.

- SACU often lacks the authority and the resources to implement its initiatives due to lack of policy coordination with members, resulting in members, failure to comply with agreements and a breakdown in its effectiveness. The case of the EPA refers.

- SACU members' multiple memberships (i.e. belonging to SACU as well as the SADC and/or COMESA) cause conflicts in terms of policy objectives and loyalty to various treaties, and limit SACU's ability to implement its initiatives. Moreover, several SACU/SADC member countries are members of the CMA and COMESA, while COMESA member countries are also members of the EAC.

Table 4.8: Regional Economic Blocs for Eastern and Southern Africa countries and Overlapping of membership

Country	SADC	COMESA	SACU	CMA	EAC
East Africa					
Burundi		X			
Comoros		X			
Djibouti		X			
Kenya		X			X
Mauritius	X	X			
Madagascar		X			
Uganda		X			X
Eritrea		X			
Rwanda		X			
Tanzania	X	X			X
Seychelles	X	X			
Sudan		X			
Somalia					
Southern Africa					
Angola	X	X			
Botswana	X		X		
D.R. Congo	X	X			
Lesotho	X		X	X	
Madagascar	X				
Malawi	X	X			
Mozambique	X				
Namibia	X		X	X	
South Africa	X		X	X	
Swaziland	X	X	X	X	
Zambia	X	X			
Zimbabwe	X	X			
Total	15	19	5	4	3

Source: - Own Calculations from the World Bank (2004)

In addition, all of these countries are simultaneously involved in individual trade and developmental bilateral or multilateral agreements. This can create conundrum for the way forward and must be addressed immediately, otherwise SACU and its members will suffer for it. Table 4.8 shows the serious overlaps of membership of Eastern Africa and Southern African countries' regional organizations.

Turning to the future of SACU, it will only succeed if it manages to balance the interests of all of its members, who will need to proactively determine SACU's efficient functioning. Other successful regional integration initiatives (such as the EMU) relied on frequent consultation, surveillance, participatory processes and political commitment – these factors are essential ingredients for any successful regional integration, and SACU needs to incorporate such measures into its efforts. Members of SACU have the potential and capacity to bring about meaningful integration. This potential, however, will largely depend on SACU member states' willingness to initiate a deeper level of cooperation and concretise a well-defined vision and a greater sense of community. Keeping the long-term goals and the move towards regionalism in mind, Venter and Neuland (2007) suggested several important steps to be taken by the Eastern and Southern African regional economic groups to ensure their efficacy and viability. These include:

- Coordinated regional planning and the pooling of regional resources;
- Reversing the brain drain and national and regional capacity building;
- Creating "think tanks" and the promoting educational programmes; and
- Improving healthcare and SMME development (Venter & Neuland, 2007:217).

4.9 Conclusion

SACU embodies the most advanced form of regional integration in the African continent. It provides for the duty-free movement of goods and services between member countries and for a common external tariffs, but also goes beyond being a pure customs union in that it provides excise duties as well. SACU can evolve beyond its present customs union structure to become either a common market or a monetary union. To achieve such profound integration, members of SACU need to share a common vision, engender political commitment to regional integration, and align their domestic trade policies and regional industrial development strategies in such a way that national interests advance regional goals. South Africa's Trade and Industry Minister, Rob Davies (2009:1), concurs and adds that SACU's commission must prioritise regional integration

practically, not just in broad declaratory statements. SACU has advanced its integration more than what is required in a Customs Union; four of its Members are cooperating in the Common Monetary Area (CMA). The next chapter will discuss the CMA arrangement.

CHAPTER FIVE

THE RAND MONETARY AREA AGREEMENT

5.1. Introduction

As previously noted, SACU members, except Botswana, belong to a common monetary area (CMA). Although Botswana is not a formal member of the CMA, it is regarded as a de facto member (Grandes, 2003). The CMA encompasses South Africa and smaller countries, namely Lesotho, Namibia and Swaziland (LNS states), which integrates them into the South African money and capital markets. The CMA countries are thus closely connected with South Africa in terms of trade and macroeconomic inter-relationships, and, Botswana being a de facto member of the CMA group (Grandes, 2003), it has also been converging in line with the CMA group countries.

It is arguable that CMA member countries are quite sensitive to the movement of South African interest rates. As Aziakpono (2008:189) argues, among SACU's BLNS countries (Botswana, Lesotho, Namibia and Swaziland), their financial systems are highly dependent on South Africa's, which suggests that monetary unification and a common monetary policy for the union is feasible. This chapter starts by briefly discussing the CMA (known as a Rand Monetary Area) and its implications for SACU member countries. It further reviews the selected empirical studies on SACU members' economic suitability to form a currency union, and assesses their economies in terms of their readiness for monetary integration based on the OCA criteria.

5.2 History of the formation and development of the CMA

In 1974, South Africa, Botswana, Lesotho and Swaziland signed the Rand Monetary Area agreement. In 1975, Botswana opted to withdraw from the RMA and launched its own currency, the pula. However, Botswana did not allow the real pula-rand exchange rate to diverge and the two currencies are interchangeable (Grandes, 2003). The RMA

was superseded by the CMA in 1986, and the Multilateral Monetary Area (MMA) of 1992 resulted; the latter also includes Namibia (Wang et al., 2007; Venter & Neuland, 2007). Appendix A gives a detailed description of the historical development of the CMA. Membership in the CMA implies that LNS countries lose control over the nominal exchange rate as an instrument of economic policy. In addition, the free flow of capital between the CMA groups ensures that interest rates are determined in the large money/capital markets of South Africa.

The main objectives of the CMA were (and are) to implement common exchange controls and the free movement of funds between contracting parties (Venter & Neuland, 2007:163) in order to sustain the economic development of the contracting parties, especially with respect to facilitating the advancement of the less developed member states and equitable benefits for all members. Under the CMA arrangement, the LNS countries are linked 1:1 with the South African Rand (Grandes, 2003). The economic factors of the LNS countries do not affect the value of their currency and, hence, development in the exchange rate dependent on the underlying factors affecting the South African Rand's performance against other currencies. The rand is a free-floating currency and is a legal tender in Lesotho, Namibia and Swaziland.

According to Aziakpono (2003), all members of SACU have a history with the rand being a legal tender. The members of the CMA group have a similar set of policy preferences. The CMA members, together with Botswana, have demonstrated evidence of convergence: they have a common currency, similar inflation rates, interest rates and narrowly fluctuating real bilateral exchange rates. The other members of the CMA group, namely the LNS countries, follow policies that strongly reflect South Africa's preferences for good finance practice and price stability. As a result of the parity maintained against the South African Rand by currencies of other contracting parties, all of the CMA countries have the same exchange rate against outside currencies. The small-scale CMA members (with the exception of Swaziland) do not have the option to change their exchange rates to attain or maintain external competitiveness (Grandes, 2003).

The CMA arrangement means that members are not limited with respect to both current and capital account transactions (Aziakpono, 2008:190). The CMA members hold regular consultations to facilitate and ensure continued compliance with the CMA's requirements and to reconcile different interests when formulating and implementing CMA monetary and foreign exchange policies. The CMA membership limits the LNS countries' discretion over their monetary and exchange rate policies (Vollan, 2000:76). This makes it difficult for the LNS countries to react timeously to external shocks unless they coordinate decisions with South Africa.

According to Aziakpono (2008:190), "Botswana's currency, the pula, has remained informally linked to the rand through a currency basket where, since 1990, the latter weighs around 60 to 70% […] Botswana would be regarded as a de facto member of CMA." The South African Reserve Bank has been mandated to monitor and determine the processes of controlling money supply and it serves as a settlement centre for the CMA countries (Vollan, 2000:78). The members of the CMA arrangement have access to capital markets, foreign exchange transactions, and compensatory payments for seigniorage forgone by using the South African Rand.

Notwithstanding the LNS countries' limitation on policy discretion, they have benefited from the credibility of the South African Reserve Bank's (SARB) policies, and the CMA allows an unrestricted transfer of funds without any transaction costs and foreign exchange risks, whether for current or capital transactions, between CMA member countries; this has facilitated cross-border trade among them. As the South African Rand is a legal tender in these countries, economic activity is facilitated because of the transferability of funds within the CMA. More importantly, the CMA member countries have been very committed to and have sustained the terms of the agreement. As such, the CMA group has made significant strides in promoting trade, free movement of factors of production and harmonisation of economic policies. Members of the CMA have abolished their own national borders in terms of factors of production flows across member countries. Grandes (2003) argues that the CMA countries, together with

Botswana, form an optimum currency area. Although Botswana is not a member of the CMA, its monetary and financial systems have been informally linked to the South African financial system.

Furthermore, other SACU countries' financial integration with and dependence on the South African financial system has been found by Aziakpono (2006; 2008), Matsaseng (2008) and others. This indicates that South Africa's monetary policy is transmitted to CMA members and to Botswana through interest and exchange rates. Ingram (1962) suggests that if countries are highly integrated in terms of financial trading, then capital flows can smooth or eliminate potential sources of temporary asymmetric shocks. The evidence suggests that members of SACU are financially integrated and are good candidates for a currency area (Aziakpono, 2008).

5.3 Monetary policy in the CMA group and Botswana

The monetary policy developments in SACU closely follow developments in South Africa, the biggest and dominant economy in the zone. It is widely recognised that the LNS countries' monetary policies are entwined with South Africa's via CMA arrangement. Guma (1985:166) points out that, "The currency and monetary systems of Botswana, Lesotho and Swaziland, although now structurally different, evolved from an informal integration into the South African economic and monetary orbit". Monetary policies in the LNS countries are geared towards maintaining the 1:1 parity of their domestic currencies with the South African Rand:

> Monetary and exchange rate developments in Southern Africa closely follow developments in South Africa, the largest economy of the zone. Three countries, Lesotho, Namibia and Swaziland, have their currencies pegged to the South African rand at parity under the Common Monetary Area. The rand is also a currency of reference in Botswana (African Development Bank, 2005:85).

Notwithstanding the fact that all members of the CMA have their own central banks responsible for their monetary policy, the South African Reserve Bank (SARB) effectively formulates the monetary policy of the CMA countries (Mboweni, 2006:9). Consequently, the members also indirectly adhere to an inflation-targeting monetary policy framework that South Africa is currently pursuing; however, it is possible that some deviations in interest and inflation rates could occur. It is important to note that the CMA recognises that each member is responsible for its own monetary policy and the control of its financial institutions.

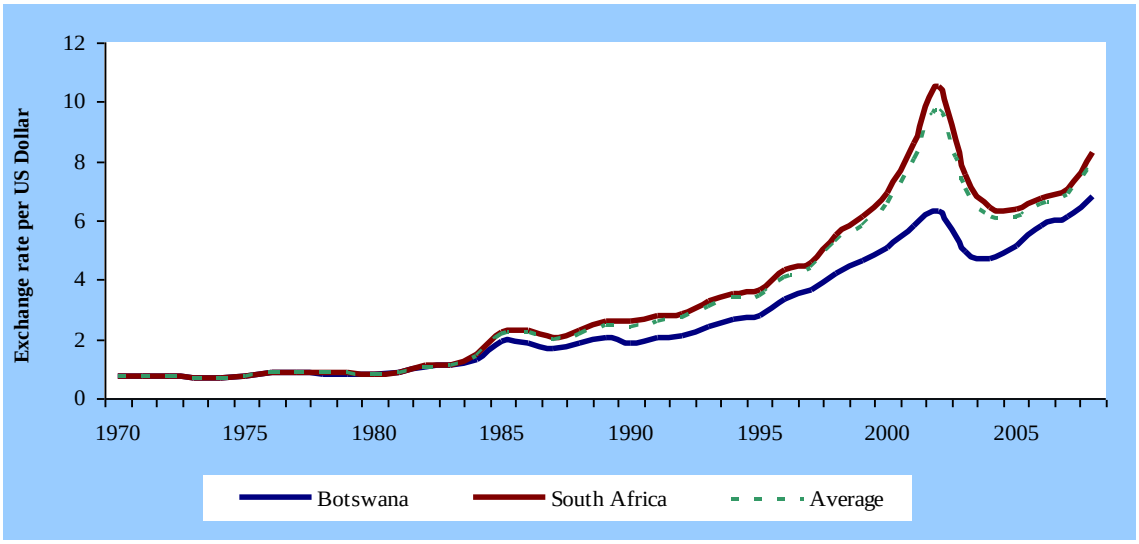
The main objective of these countries' monetary policies is to ensure that their exchange rate linkage to the South African Rand is maintained and that interest rates are kept at levels that prevent any distortion of the exchange rate (Grandes, 2004). It should be noted that the similarities in monetary policies are regarded as an important prerequisite for the successful implementation and sustainability of a fixed exchange rate regime. Coordination of SACU members' monetary policies can serve as a stepping-stone to monetary unification and a common monetary policy for the union. Given the strong coordination of monetary policies, members of SACU have a solid foundation from which to establish a fully-fledged monetary union.

5.4 Exchange rate coordination in the CMA group and Botswana

Within the CMA, there are no exchange control restrictions and the exchange rates among the four currencies (the Loti of Lesotho, the Namibian Dollar, the Lilangeni of Swaziland and the Rand of South Africa) have been maintained at equal value. South Africa, as the dominant and biggest economy in the arrangement, has been responsible for setting up terms and policies such as the monetary policy and exchange rate policy. For the LNS countries, the expected exchange rate change is always zero, as their local currencies are directly pegged to the South African Rand. As a member of the CMA, the LNS countries and South Africa are subjected to CMA foreign exchange regulations and the expected exchange rate change is against the ZAR. According to Grandes (2003:13),

the real exchange rate (RER) between the CMA countries and Botswana vary in a similar way, indicating that the underlying economic shocks or policy responses to them do not spark divergent relative price effects. Hence, the more open the countries are (Grandes, 2003:14), the less there is need for different RER adjustments and the more their CPIs should be correlated. Furthermore, according to Matsaseng (2008:186), a floating exchange rate between South Africa and Botswana might not be essential and, as a result, Botswana would make a good candidate for a monetary union with the CMA group.

Figure 5.1: Real exchange rate convergence in Botswana and South Africa, 1970-2008



Source: - Own Calculations from IMF-International Financial Statistics (2009).

The above figure shows that Botswana and South Africa's exchange rates vary in a similar way and indicating that the underlying economic shocks in these countries are relatively similar and they do not park essential divergent of price effects. Therefore, the CMA group together with Botswana can be good candidates for a currency area. It should also be noted that Botswana has linked its currency (pula) to the South African currency, the rand. In fact, the rand is also a currency of reference in Botswana and, thus, Botswana is also regarded as a de facto member of CMA group (Grandes, 2003). The rand function as the regional anchor currency in the SACU area.

5.5 The impact of the CMA arrangement on SACU

The CMA arrangement will play a pivotal role if SACU and its members can establish a fully-fledged monetary union. Grandes (2003:3) argues that the characteristics demonstrated by the SACU region suggest the existence of an optimum currency area. Similarly, Matsaseng (2008) examined SADC countries' readiness for macroeconomic convergence and monetary unification and the extent of price flexibility within the CMA group, and concluded that the CMA countries have managed to foster price flexibility between members. He further suggested that CMA members and Botswana would be good partners in the formation of a monetary union as opposed to all of the SADC member countries (2008:187).

The CMA arrangement offers member countries an opportunity to easily access a good financial regional market. However, according to Tjirongo (1995), there has been no substantive increase of intra-trade between the CMA member states. The CMA arrangement serves as an appropriate framework to ensure medium to long-term price and interest rate stability, thus enhancing investor confidence in the economy. This kind of economic environment is critical for SACU and its members' drive towards accomplishing economic growth and sustainable development. According to Thiam (2002), it is easier for countries that have been pursuing relatively similar monetary policies to adjust to a single monetary policy. Accordingly, it should be relatively easy for members of SACU to adapt to a common monetary policy. Making concerted efforts to coordinate, members of SACU could achieve some agreed upon convergence criteria and become a full monetary union.

5.6 SACU countries and empirical evidence

There is a vast body of literature and empirical work on optimum currency areas, and it is rich in terms of its scope and depth. However, there is a paucity of empirical work on SACU. Gama (1985:168) notes that the "Southern African region could be considered as having the potential to become an optimum currency area. Given the existence of factor

mobility, exchange-rate policy could be eschewed; all that would seem to be required is gradual elimination of existing impediments to factor mobility and consensus on the management of the exchange rate".

A study by Grandes (2004) investigates two questions: (i) Has the ongoing monetary integration in Southern Africa's common monetary area (CMA) constituted an optimal currency area? (ii) What are the costs and benefits for countries participating in the CMA? The generalised purchasing power parity (G-PPP) modelling technique was used to investigate these questions. He concludes that the CMA group and Botswana as a de facto member form an OCA and the benefits for the CMA membership is free capital movement and free exchange rate while the costs is associated with the loss of seigniorage. Matsaseng (2008) investigated the presence of flexibility within the CMA as compared to a selected group of Southern African Development Co-operation (SADC) countries using the purchasing power parity (PPP) model. The results indicate that there is a high degree of price flexibility and quick adjustment in prices for CMA countries, and Botswana converges with the CMA group too. He concluded that a monetary union is a feasible option for CMA group and Botswana (Matsaseng, 2008: 176).

Using cointegration and error correction modelling techniques, as well as impulse response analysis, Aziakpono (2006; 2008) investigated the extent of financial integration amongst the SACU countries. He found that SACU countries' financial systems heavily rely on South Africa's financial system, which indicates that a monetary union is a feasible option for the customs union. All of these empirical studies support Grandes' (2004) hypothesis – that the CMA group constitutes an optimum currency area. This being the case, monetary unification and a monetary policy that uses a single central bank is a feasible option for SACU member states.

5.7 Optimum currency area criteria and SACU

As seen earlier, literature on optimum currency areas from the 1960s and 1970s has proposed a number of possible criteria that countries should ideally fulfil in order to ensure a successful monetary union. These include international factor mobility, openness, product diversification, inter-regional prices and wage flexibility, macroeconomic convergence, and similar inflation rates and policy preferences. SACU's viability as a common currency union must be assessed using similar criteria from the economic literature. The aforementioned factors are considered next.

5.7.1 International factor mobility

Mundell (1961) raises the international factor (capital and labour) mobility as one of the crucial tenets for forming a currency union. As previously stated, his main argument is that, if the degree of factor mobility between the potential members is high, it can replace exchange rate flexibility in eliminating external disequilibrium and they would then be better candidates for a currency union. In other words, if countries or regions experience factor mobility, they "could form a currency union and rely upon factor mobility to assure trade balance with full employment at stable prices" (Guma, 1985:168).

Historically, cross- border mobility of labor in the region was extensive (i.e. migrant workers employed in the South African mining sector) and there were no border controls between Lesotho, South Africa and Swaziland (Crush, 1999). There is anecdotal evidence on the movement of skilled workers from the small countries, particularly Lesotho and Swaziland, to South Africa. The flows may have increased in recent years as growth accelerated in South Africa, in part reflecting changes in South Africa's immigration policy. The analysis of labor mobility is hampered by the scarcity of reliable and comparable wage data.

When capital is generally mobile, due to a high degree of financial integration between the countries (or regions), short-term capital movements could finance any trade imbalance as long as the long-term capital movements affect ultimate economic adjustment (Scotovsky, 1958; Corden, 1962; Guma, 1985). According to Nielsen et al. (2005:710), "high capital mobility and hence degree of financial integration for instance will limit the ability of countries to undertake independent monetary policy even where labour is shown to be relatively immobile". The capital mobility within the CMA group is high because the economic provisions of the CMA group encourage free capital movement. Khamfula and Tesfayohannes (2004:42) argue that the existence of the CMA arrangement in the region demonstrates the large amount of capital and degree of money market integration among the member countries. However, the financial flow within the CMA is one-way, and is slanted towards South Africa's interest.

Nielsen et al. (205:712) state that South Africa accounts for about 93 % of the region's direct investment abroad, 99 % of portfolio investment abroad and 87 % of total foreign investment assets in the region. The presence of a substantial financially integrated market within SACU has been found by, among others, Aziakpono (2006; 2008), Matsaseng (2008) and Nielsen et al. (2005). Schiava (2008:170) argues that financially integrated economies tend to display a good correlation of business cycles. Indeed, members of SACU experience similar business cycles given their integrated financial system.

Rwakunda (2004:20) notes that if there is a high degree of international financial integration among countries or regions, exchange rate variations will not be needed to restore external equilibrium, since negligible changes in interest rates will give rise to efficient exchange rates within the area where financial integration exists. Frankel and Rose (1998) suggest that a currency union is more justifiable ex post than ex ante. Accordingly, as financial integration contributes to a greater mobility of factors of production, members of SACU are suitable for a currency area.

5.7.2 Openness of the economies

According to McKinnon (1963), openness is one of the crucial tenets that determine the optimality of a single currency. Trade liberalisation indicates the extent of an economy's openness to the world market and is indicated by the ratio of exports and imports to the gross domestic product (GDP). McKinnon (1963) maintains that the more open an economy is, the lower the need for autonomous exchange and monetary policy as independent policy instruments, and, therefore, ceteris paribus, the more suitable and beneficial it will be to join a currency union.

Members of SACU have embraced trade liberalisation as a strategy to gain better access to the world market. As a result, members of SACU are highly open towards each other and even towards the global economy (Jenkins & Thomas, 1997:19). According to the African Development Report (2004:90), "Southern Africa is heavily trade orientated, with a trade-to-GDP ratio of over 75 %. Botswana, Lesotho, Namibia, Swaziland […] are the most open economies in the region". In a similar vein, Grandes (2004:14) notes that members of SACU have highly open economies, whether looking at trade flows in relation to GDP or tradability according to the consumer price index, which makes their economies vulnerable to foreign price developments.

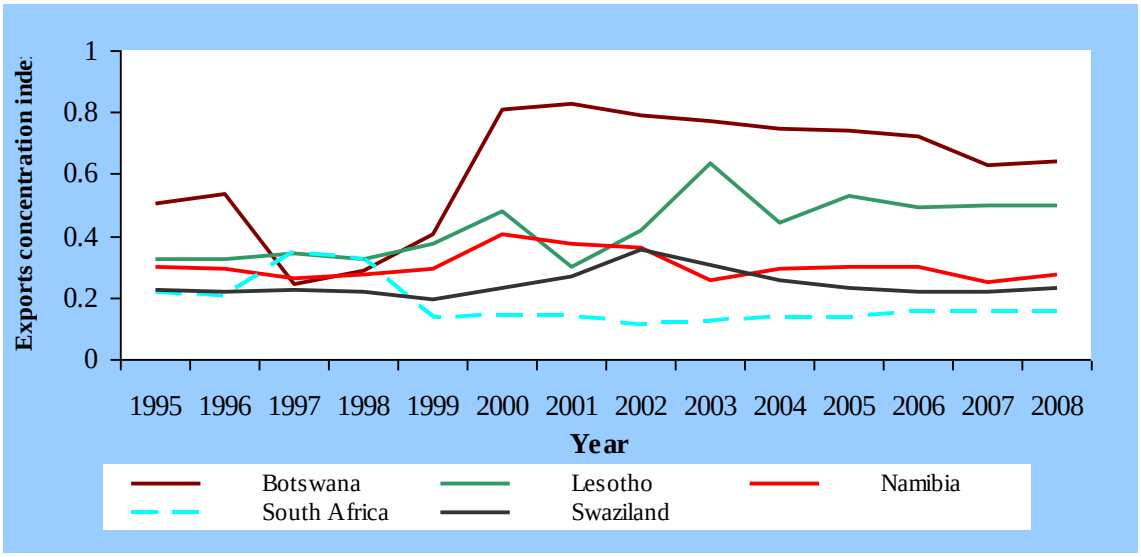
Members of SACU have adopted trade-oriented reforms and firmly support the concept of free trade; all of them are signatories of the World Trade Organisation (WTO), which is a key organ in the management and governance of global trade. For example, members of SACU are embarking on and promoting both bilateral and multilateral free trade agreements with regional countries, having already signed agreements with India, the US, the SADC and Mercosur etc. Members of SACU are also beneficiaries of the US African Growth and Opportunity Act (AGOA). Moreover, members of SACU enjoy a free market economy with pricing determined by supply and demand, which results in an open economy within the union and economies open to the rest of the world. Using the

criterion of openness, one can therefore conclude that members of SACU can adopt a single currency.

5.7.3 Product diversification

Countries with productions and exports that are widely diversified and that have appropriately configured structures are better candidates for an OCA (Kenen, 1969). This is because the more diversified a country's products, the less likely it is to suffer from generalised adverse shocks and, thus, the less likely it is to need exchange rate adjustment (Kenen, 1969). Kenen's diversification criterion may not fully favour SACU countries for forming a currency (or monetary) union as some SACU members in particular the case of Botswana and Lesotho and to a lesser extent Namibia (as indicated in Figure 5.2 below) are still characterised by high exports concentration.

Figure 5.2: Exports concentration index for SACU countries, 1995 – 2008



Source: Own calculations from the UNCTAD (2009)

It is instructive to note that in the case of Botswana and Namibia, their exports remain highly concentrated in minerals whilst in the case of Lesotho, the economy remains primarily dependent on subsistence agriculture. Overall, South Africa is the most diversified. According to Mbeki (2009) and Kalaba (2006), of all the SACU member

countries, South Africa has the broadest industrial base and expertise and better technology and capital. This has therefore facilitated South Africa's diversification.

Nevertheless, notwithstanding the fact that members of SACU have different industrial structures and different levels of development, they still exhibit high covariation in their economic activities, which makes them potentially good candidates for a common currency. Even if countries have different levels of development, free trade could be beneficial because countries would benefit from economies of scale, and lower production costs.

5.7.4 Inter-regional price and wage flexibility

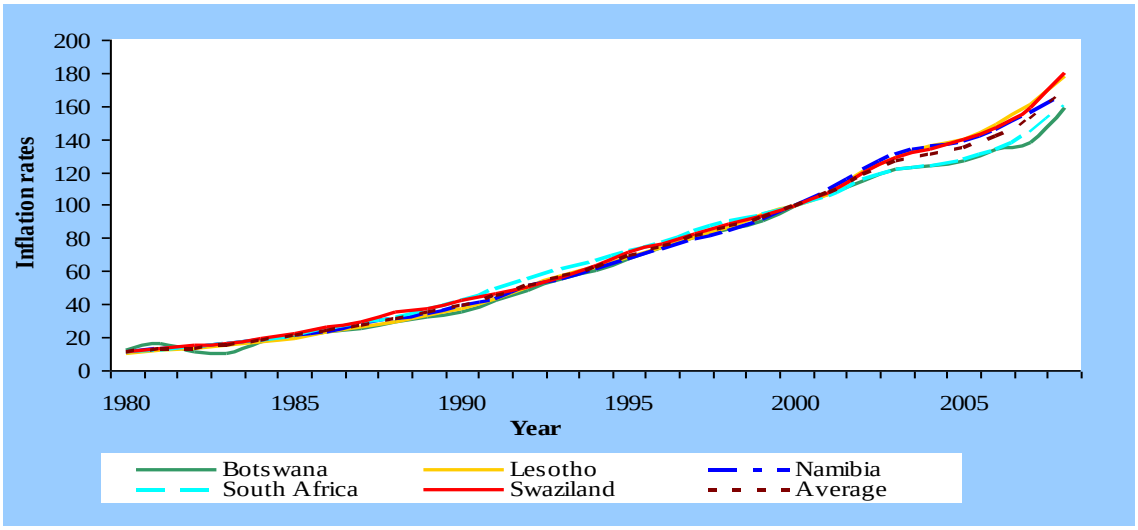
Inter-regional price and wage flexibility is one of the important tenets of the OCA theory. It is premised on the notion that "it is possible to effect a change (increase or decrease) in real income of a region relative to another region without changing the apparent real income within the area" through wage and price adjustment (Matsaseng, 2008:178). However, if real wages and prices are sticky, they obstruct market-clearing conditions that smooth out fluctuations and restore external equilibrium.

Matsaseng (2008) examined SADC countries' readiness for macroeconomic convergence and monetary unification and the extent of price flexibility within the CMA. He concluded that the CMA group has managed to foster price flexibility and, hence, the CMA group, together with Botswana, would make good candidates for the formation of a monetary union, as opposed to the whole of the SADC (2008:187). This clearly suggests that a floating exchange rate between SACU countries is not important. In other words, the variation in the CMA countries' and Botswana's exchange rates are quite similar, suggesting that the underlying economic shocks or policy responses to them would not spark divergent relative price effects. Thus, members of SACU can form an optimum currency area.

5.7.5 Similar inflation rates

The OCA theory suggests that countries whose inflation rates do not diverge significantly from those of their trading partners are good candidates for a currency domain. The divergence of inflation rates causes substantial fluctuations in terms of trade, thereby affecting the flow of goods and services, and heightening current account disequilibrium, which offsets exchange rate variations. However, if the inflation rates are identical among the countries, the terms of trade will not be affected and so, ceteris paribus, an equilibrated flow of current account transactions will take place within the area without exchange rate variations occurring (Rwakunda, 2004:22).

Figure 5.3: SACU Inflation rates convergence, 1980-2008



Source: - Own Calculations from IMF-International Financial Statistics (2009), Central Bank of Namibia (2010), Central Bank of Lesotho (2010), and African Economic Indicators (2010).

The monetary union that exists in SACU is playing an important role in fostering macroeconomic convergence. This is also evident from the co-movement of inflation rate between the member countries (see Figure 5.6 above). Given the similarities of policy preferences between the SACU member countries, it is expected that the levels of inflation rates may not deviate a lot from each other due to the CMA group arrangement. It can also be expected that the LNS countries' discount and prime rates will drop in line

with South Africa's because their central banks maintain policies that align their rates with those of South Africa. There is significant inflation differential between countries and, thus, it will be easier to maintain the fixed exchange rate.

Harvey (2000:8) argues that, "Lesotho, Namibia and Swaziland are bound to have similar inflation rates to that of South Africa, because money and goods flow freely between the four countries, and because the central banks of the three countries have a limited or zero power to finance budget deficits by money creation". Botswana is also expected to have a similar inflation rate to those of the CMA group, because its currency, the pula, is informally linked to the rand in which the rand comprises a currency basket around 60 to 70 % (Grandes, 2003). Furthermore, the strong trade links that exist between SACU countries – particularly because BLNS countries depend on imports from South Africa, coupled with the fact that South African retailers operate in the BLNS countries using common pricing policies – reinforces the view that inflation and interest rates in the five countries must be closely linked. This implies that the costs of forming an OCA among the members of SACU will be negligible.

In addition, given the small economies of BLNS countries relative to South Africa's economy, the interest rates may be considered exogenous to these economies. The interest rates in the BLNS countries have managed to balance attempts to obviate capital flight to South Africa and affordable investment costs in the domestic economies, with the aim of stimulating investment (Aziakpono, 2006:4). Low inflation differentials is one of the prerequisites for forming an optimum currency area and, therefore, the similarity of inflation rates among the SACU members suggests that members of SACU have achieved the economic requisite for establishing a currency area and are suitable candidates for a common currency.

5.7.6 Similarities in policy preferences

Ingram (1969) and Haberler (1970) emphasise the degree of policy integration between countries as being a crucial criterion for forming a currency area. Countries that share similar policy preferences make good candidates for a monetary union, while those that do not share the same preferences make poor candidates. For example, according to Willett and Tower (1970), a country that tolerates low inflation and a country that tolerates low employment would make poor candidates for a monetary union. Most SACU members already operate with a number of common policies (monetary-fiscal policies and exchange rate policies) and share a number of economic goals (e.g. free internal trade, price stability and some factor mobility, continual integration efforts in the economic sphere and the will to build a more united region). Members of SACU have display compatible macroeconomic policies, which indicates that; SACU has the rudimentary elements of monetary integration. It is therefore important to look at the foreseeable benefits and costs relevant to a common currency area within SACU member states.

5.8 Benefits and costs of a currency union for SACU members

The benefits SACU members would derive from establishing a common currency area are enormous; these benefits can create an economic environment that promotes growth and sustainable development and lowers the costs of doing business with each other. SACU members would benefit tremendously if SACU adopt a full-fledge monetary integration. The small members of SACU are already benefiting from SACU, as the customs duties from SACU accounts for two-thirds of Lesotho and Swaziland's government revenue.

5.8.1 The benefits

Benefits of participating in a common currency area that are relevant to SACU members include a reduction in transaction costs, greater economic competitiveness, price stability, and less uncertainty with exchange fluctuation between member countries. As a result, members of SACU would be able to build robust and inclusive national economies at regional level by expanding local opportunities through linkages, real potential and competitive advantage. In addition, the member countries would be able to address local needs and contribute to both national and regional development objectives, such as ensuring economic growth, poverty alleviation, generating jobs and developing skills.

5.8.1.1 Lower transaction costs on trade and financial flows

The most visible and quantifiable benefits of participating in a common currency area are the lower transaction costs associated with trading goods (Mundell, 1961; McKinnon, 1963) and the elimination of costs of exchanging one currency into another. These further simplify trade and reduce the costs of converting one currency into another, particularly relevant when dispatching goods and with other logistics that impede trade in the region. Furthermore, this will enhance trade and economic horizons, giving more access to less risky finance. This will generate economic specialisation (and thus more benefits), foster development based on local potential and facilitate participation in external trade.

As noted earlier, the CMA agreements has allowed the small member countries to share the benefits of this integration along with the dominant economy in the sub-region; to those benefits includes, a lender of last resort, the distribution of seignorage, the common foreign exchange pool and the unlimited access to the South African financial market. The recent empirical evidence suggests that, currency unions significantly and positively affect trade (Rose, 2000) and income (Frankel & Rose, 2002). In addition, a currency

union would offer more prospects to expand and diversify their export markets and mitigate risks to external shocks.

5.8.1.2 Greater economic competitiveness

The monetary union will enable SACU members to build more resilient economies that could enhance productivity, intensify economic diversification, and improve their products' competitiveness in the global market. It will intensify cross-border competitive pressures geared to attract a wide range of investors, retailers and consumers, and, resulting in accelerated growth and development and the alleviation of poverty and unemployment. It should be highlighted that sustainable and competitive enterprises are a principal source of growth, wealth creation and employment. Trade and competition will be heightened in local markets, as prices in the area will be fully transparent and directly comparable. This could contribute towards building the economic capacity of the region and creating a more conducive local environment for business, trade and investment, and for sustainable development generally. It will further improved allocation of common market capital.

5.8.1.3 Clear commitment to monetary-fiscal policies by SACU members

According to Shaw (1973, McKinnon, 1973), financial deepening has a positive relationship with economic growth. A full monetary union would strengthen regional economic integration and yield additional benefits in terms of monetary policy credibility and fiscal policy prudence, and maintain exchange rate competitiveness in the region. This could help members of SACU to create an economic environment that is conducive to growth, can attract more investors and set the region on the road to achieving sustainable development. A currency union will enforce macroeconomic stability and speed up industrial growth in the region, and ultimately speed up the development of an export-oriented economy in the region. According to Metzger (2008:12), "Although South Africa dominates economic relations within SACU, the other members have nevertheless benefited from a highly redistributive revenue-sharing formula".

Furthermore, a monetary union will improve allocation of resources to strategic priorities between countries and to focus on strengthening competitiveness, through the conduct of prudent fiscal policy and accelerated structural reforms. Overall, the monetary union will enhance investors' confidence in the SACU countries policies and synergies reduce South Africa's hegemony through a single central bank with the power to monitor economic policies, and improve the investment climate for local businesses, in the respective member countries.

5.8.1.4 Elimination of exchange rate uncertainty

The general benefit of establishing a currency area is that currency risks between union members disappear. It is well known that uncertainty is a major factor that prevents efficient cooperation. Many economists believe that exchange rate uncertainty reduces international trade and discourage investors. Dormac and Peria (2000) argue that, transparency and credibility associated with fixed exchange rate may insulate a country from contagion. The elimination of exchange rate uncertainty will enable investors to make decisions with some degree of long-term confidence and they will be encouraged to invest because a stable financial environment and high standards of financial responsibility and integrity will be maintained in the region.

Gerber (2005:234) argues, the adoption of a common currency eliminates the foreign exchange rates uncertainties or risks across the currency area because the exchange risk premium will disappear. This will improve international trade and cash flow among the SACU countries as well as their concomitant contagion. Grandes (2004: 56) argues that "South Africa's capital flows to its partners help to smooth consumption in recipient countries, hence allowing some risk sharing." It can be argued that all these benefit mentioned above, can materialised much more vividly than they are when SACU countries adopt a full-fledge common currency area.

5.8.2 The costs

There are substantial costs associated with adopting a common currency. This is simply because SACU member countries will lose their autonomy over their domestic policies because they will be subject to the decisions of a common central bank. It is certainly true that complete control of domestic policies will be forfeited by all member countries and that they will no longer be able to exercise unilateral control over their money supply or exchange rate.

5.8.2. 1 Loss of autonomy over policies

An immediate relevant cost to SACU members as a result of monetary integration is the loss of instruments to guide their economies (i.e. autonomy over their monetary policy and exchange rate policy). Members of SACU will lose autonomy, or the ability to respond proactively, if a distorting event is predicted. Furthermore, SACU members might not be able to align their economic policies with those of SACU to meet their specific needs, as well as socio-economic and development needs. This can reduce the political support for a currency union.

5.9 Conclusion

From the above discussion, it is evident that there are compelling economic reasons to suggest that it is in the interest of all SACU countries to promote intra-regional and economic cooperation. For instance, the formation of the CMA and the entwined monetary and exchange rate policies of SACU member states have already benefited SACU members – there is free movement of goods and funds in SACU and the CMA. Vital steps in transforming SACU from a customs union to a monetary union include convincing Botswana to rejoin the CMA arrangement and establishing a single central bank that will not only issue a single currency for all member states, but will also pool their foreign exchange reserves and coordinate their monetary and fiscal policies. Thus,

with respect to the traditional criteria mentioned above, there is evidence to suggest that the SACU countries can successfully form an OCA.

Systematic empirical studies have also suggested that a common currency and monetary policy is a feasible option for SACU member countries due to the currency peg and to instruments akin to those of monetary union between four other SACU members, which belong to the CMA group (Grandes, 2003, 2004; Aziakpono, 2008; Matsaseng, 2008). Indeed, on the strength of this preliminary evidence presented above, it could be argued that SACU and its members have met the economic requisites for establishing a common currency and, therefore, members of SACU are suitable and compatible candidates for a common currency area. The adoption of a single currency will have both benefits and costs for members. The former will mainly comprise lower transaction costs and the elimination of currency risks. The latter will be caused by member countries' inability to pursue independent monetary policies to stabilise their economies. It can be beneficial for SACU countries to endorse and foster a common currency area. While the economic criteria discussed above are essential for determining the suitability of South African Customs Union for a monetary union, the geo-political factors play an equally important role in this process.

CHAPTER SIX

EMPIRICAL RESULTS AND DISCUSSION

6.1 Introduction

The viability of a monetary union in Southern Africa has long been under discussion. The Southern African Customs Union (SACU) is the oldest, and one of the most efficient, operating customs union and it has the potential to foster meaningful regional economic integration. SACU's member countries have laid a strong foundation in terms of trade relations, financial cooperation, and policy coordination. Members of SACU are recognisant of the benefits that regional economic integration and financial cooperation can bring about. Building upon the CMA arrangement as a core, SACU is in a good position to establish a fully-fledged monetary union. With some SACU members, macroeconomic policy coordination and harmonisation has demonstrated progressive alignment of exchange rates and monetary policies.

Empirical evidence and international experience suggest that for monetary integration to be successful, countries intending to form a currency area must demonstrate convergence of macroeconomic indicators. This chapter ties in with chapter five and focuses, specifically, on the empirical test to investigate convergence or non-convergence of the key inter-country macroeconomic variable in real terms (i.e. GDP, GDP growth rate, CPI, interest rate, exports and imports).

6.2 Method and data description

6.2.1 Method

Macroeconomic variables are supremely important and required before the monetary integration is formed. The convergences of macroeconomic variables enhance business cycle synchronisation and prepare the central bank to focus on the whole area when

setting up monetary policies. Convergence between countries on the key economic variable can be tested using several methods such as panel unit root test, vector auto-regression model (VAR), sigma (σ) and beta (β) convergence. This study use graphical representation analysis and bivariate analysis correlations to analyse the synchronisation of macroeconomic convergence between variable and the existence of co-movement between variables between SACU members. The result from these two analyses will give an understanding in terms of macroeconomic convergence and the relationship that exists between variables and between SACU members.

Most empirical studies following the optimum currency area approach have been descriptive (Goto & Hamada, 1994; Bayoumi & Eichengreen, 1994; Taguchi, 1994), focusing on the costs of a monetary union, and studying the correlation of various macroeconomic variables. It is important to note that the correlation relations may change after the formation of a monetary union, as exchange rates are limited, which changes the behaviour of all economic agents; however, a negative correlation between the given macroeconomic variables does not necessarily mean that the two countries fail to meet the criteria to form an optimum currency area (Kwan, 1998).

6.2.2 Data description

It is informative to study macroeconomic variables for with a highly frequency data, but there are limitations on the availability of the long period data. This study uses the annual data of SACU member countries observed from 1970 to 2008. The panel was assembled from various sources: the IMF- International Financial Statistics, the United Nations Statistical Division, the Central Bank of Botswana, the Central Bank of Lesotho, the Central Bank of Namibia, the Central Bank of Swaziland, South African Reserve Bank, and the African Development Indicators. Due to data limitations for sample countries, some observations in our sample do not cover entirely the period under study. For analysis of CPI, interest rate and inflation rate there was a problem obtaining data that covers the period – 1970 to 2008. The analysis for GDP growth rates, CPI, inflation rate

and interest rate covers the period – 1971 to 2008, 1975 to 2008; 1980 to 2008 and 1990 to 2008 respectively. The SPSS 15 was used to analyse the quantitative data.

6.3 Empirical analysis

6.3.1 Descriptive statistics

Table 6.1 shows countries-specific values of the mean and standard deviations of macroeconomic variables under the investigation period. When the mean and standard deviations are declining and lesser the frequency, it means that the countries are converging.

Table 6.1: The mean and standard deviations

	GDP (growth rate)	**INFL**	**EXC**	**CPI**	**INT**
Country	**1971-2008**	**1980-2008**	**1970-2008**	**1975-2008**	**1990-2008**
Botswana	9,6(6,8)	69,5(45,3)	2,6(2,0)	44(37)	16(3,4)
Lesotho	4,9(7,8)	73,5(50,5)	3,4(2,8)	51(37)	16(3,5)
Namibia	3,6(3,6)	73,1(48,9)	3,4(2,8)	52(37)	16(3,5)
South Africa	2,7(2,3)	72,(44,8)	3,4(2,8)	48(37)	16(3,4)
Swaziland	5(9,9)	74,9(49,3)	3,4(2,8)	45(37)	16(3,7)

Source: - Own calculations from IMF-International Financial Statistics (2009), the African Development Indicators (2010), the Central Bank of Botswana (2010), the Central Bank of Lesotho (2010), the Central Bank of Namibia (2010), the Central Bank of Swaziland, and United Nation Statistics (2009).

Note: - values in parenthesis are standard deviations

The low and closest levels of standard deviation between the five SACU member countries point to potential macroeconomics convergence. Variability of interest rates in slightly higher in Swaziland and Namibia while it is lower in Botswana, Lesotho and South Africa respectively. In terms of the CPI, all countries have achieved equal spread. As far as the exchange rate, Botswana has experience lowest spread (2.0) followed by all other countries with (2.8) spread. Similarly, there is less variability in Botswana's inflation rates compared to other members

In summary, the above statistics analysis point to the possibility that members of SACU have manage to achieved reasonable levels of macroeconomic convergence, as Maleke (2008), Jenkins & Thomas (1997) and Grandes (2003) argue that members of SACU appears to form "a convergence club". This means that members of SACU have rudimentary aspects for participating or establishing a monetary union. The following sections discuss graphical representation and the correlation results about convergence and the co-movement of macroeconomic variables.

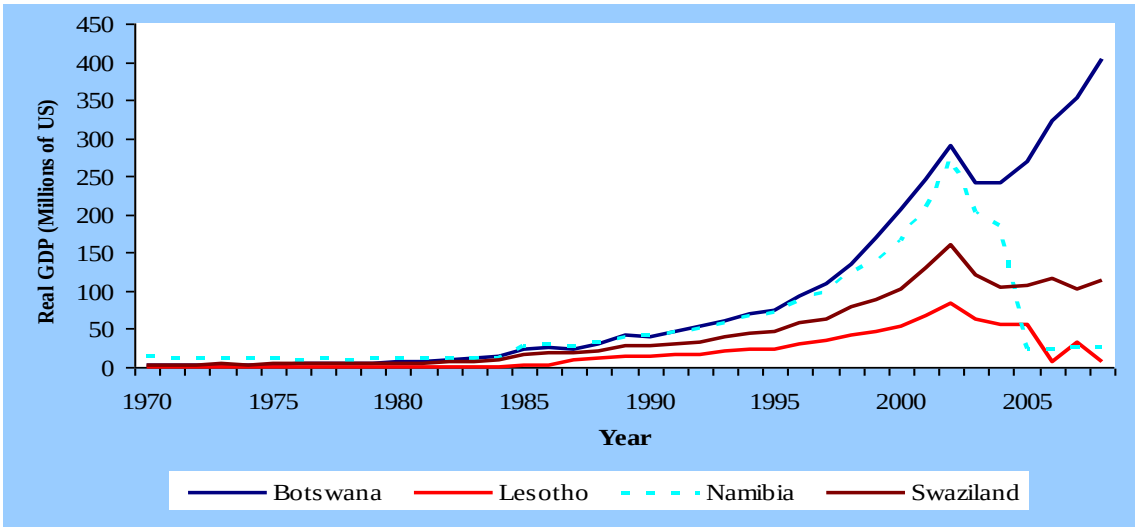
6.3.2 Graphical representation analysis

The graphical representation analysis which is a simpler analysis for convergence is undertake to find out the extent to which the real gross domestic product (RGDP), real GDP growth rate, CPI, real interest rates, real exchange rates, real exports and real imports for SACU member countries move simultaneously. Figures 1 to 7 shows the potential convergence of the SACU member states on different macroeconomic variables.

Real GDP

Figure 6.1 show that from 1970 onwards, small SACU the countries were moving together, although Botswana and Namibia in the late 90s their real GDP picking-up respectively. This reflects the fact that these countries have a similar production structure (i.e. primary commodities) and low levels of industrial output. Botswana has experience the highest growth rate in the region since 1997 until the year data ended, although in 2001 to 2002 the dramatic depreciation of the South Africa Rand prompted slowdown to all countries in the region. Botswana's growth rate is heavily driven by the exports of diamonds, which accounts for more one third of real GDP. Swaziland and Lesotho are lagging behind respectively, and both these countries rely on customs duties from SACU the majority of their government revenue.

Figure 6.1: SACU countries' real GDP (Excl. South Africa), 1970- 2008



Source: - Own calculations from IMF-International Financial Statistics (2009).

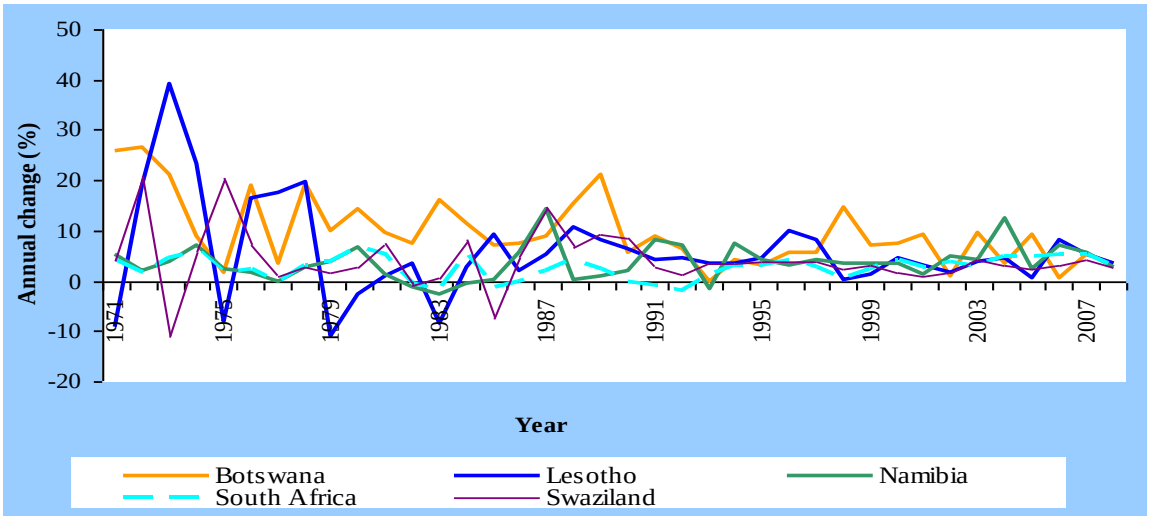
Lesotho, given that is a smallest country and its economy is largely based on subsistence agriculture and has severely affected by drought and the recent global financial crisis like all other countries. It is important to note that, despite small countries (BLNS) economies being heavily tied to their major trading partner – South Africa, their economic development vary quite substantially. This is also reflected in their real GDP's. South Africa and Botswana are ranked as upper middle-income countries, while Namibia and Swaziland are classified as lower middle-income countries, and Lesotho is a least developed country. More importantly, South Africa is one of the important economies on the African continent and its economic weight is felt across the continent.

Real GDP growth rates

Variations in real GDP growth rates have been reduced, not only across SACU countries but also over time within each country. Lesotho recorded its strongest performance in 1972-74 due to among other things, higher agricultural output and wage remittances from migrant mineworkers in South Africa. Lesotho's economy is relatively open to external influence, mainly from South Africa and, as a result, it had experienced peaks and troughs. The economy stagnated in 1997-2001 due to the political disturbances in 1998, recurrent droughts and the fall in remittances from mineworkers. Swaziland, on other

hand, has recorded its strongest performance in 1974/5 and then followed by a slowdown in the following. Over the years, Swaziland's economy has been growing at a slow pace. The GDP growth rate grew at an annual average rate of 2.9 % during 2003 to 2008, mainly recurrent droughts and low external demand for some of Swaziland's traditional exports (i.e. textiles and clothing). Lack of growth in Swaziland is also a result of the declined of remittances of Swaziland migrant workers, as demand for unskilled and semi-skilled workers in South Africa fell.

Figure 6.2: Real GDP growth, 1971-2008



Source: - Own calculations form United Nations statistics (2009).

Botswana has experienced the highest growth rates from 1997 until the year that the data ended. Botswana's growth rate can be attributed to the exploration of diamond and to a rallying global diamond and a regenerated demand from United States and Europe. Furthermore, Botswana has continued to make progress towards sound macroeconomic management and stability. Namibia experienced substantial positive growth rates in 1987 and was then followed by a slowdown in the following year. The economy had recovered considerably during 1992, and continues to perform throughout the following years. South Africa had been going through slowdown in the early 1990s. In 1993, South Africa got a modest recovery and after 1994 gained a momentum as political instability come to an end after democratic elections. Both countries, economic performance since mid-

2000s has been impressive. Economic growth has picked up quite modestly against the backdrop of sound macroeconomic policy management.

From 2000, all countries seem to be moving together, even though Botswana is growing faster than its counterparts – Lesotho, Namibia, South Africa and Swaziland. It is import to note that Botswana and Namibia's peaks and troughs are more pronounced than the other countries. Botswana has been among the world's fastest growing economies over the two past decades. Botswana's GDP growth has average over 8% per annual, and its success can be attributed to a vast exploration of diamonds and sound economic policies.

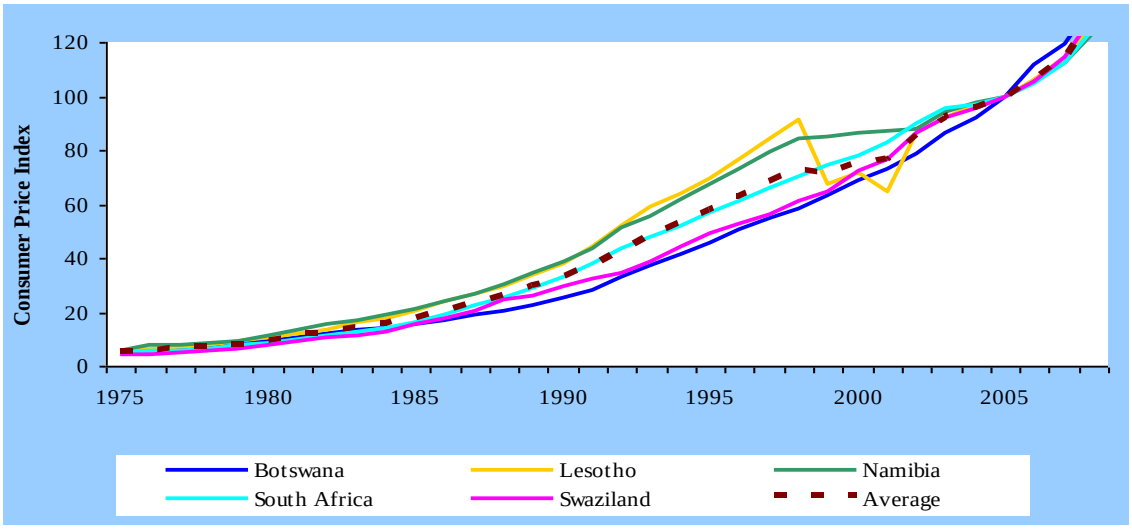
During the period, South Africa remained the richest and Lesotho the poorest country in the group in per capita terms. However, looking at the averages for all SACU countries, South Africa has been growing slower than the rest of the countries, followed by Lesotho and Swaziland. Botswana and Namibia were the fastest growing economies respectively. The income gaps between South Africa, Botswana and Namibia and Swaziland have also been reduced. In 1980s to early 1990s, all countries experienced a slowdown in growth rates which can be attributed to several factors – such as the fleeting increase in oil prices world-wide. Variations in real GDP growth rates have been reduced, not only across SACU countries but also over time within each country. The GDP growth rates analysis show that the economic growth rates for these countries were around 4% on average.

Consumer price index (CPI)

The price level (CPI) is an important indicator of macroeconomic stability. The CPI for SACU countries, as shown in Figure 6.5, is moving quite together. This synchronisation could be a result of the fact that price development in South Africa is linked to that of the BLNS countries through cross-border trade, and suggests a *de facto* common monetary policy within SACU. This confirms Matsaseng (2008) findings, which suggests that the CMA group has managed to foster price flexibility and Botswana can be a potential candidate for a monetary union with the CMA group. Such similar movement of commodity prices between the CMA countries and Botswana means that these five

countries are likely to share similar shocks and, therefore, are compatible and suitable candidates for a currency union.

Figure 6.3: Consumer Price Index, 1975-2008



Source: - Own Calculations from IMF-International Financial Statistics (2009).

In 1989 to 1998, prices in Lesotho and Namibia were above the average. In 1997 and 1998, the prices in Lesotho were high due to some political instability that occurred in the country. This CPI convergence shows the presence of macroeconomic interdependence among SACU member countries. This also confirms the Aziakpono (2008) findings, which reveals and suggests that there is a higher degree of dependence of the other SACU countries' financial systems on South Africa's financial system and the feasibility of a monetary union with a single central bank. It should be noted, however; that even if the law of one price prevails on tradable goods and services throughout the region, the consumer price indexes may not be perfectly synchronised due to the fact that the prices of non-tradable goods and services are not necessary moving simultaneously across the countries.

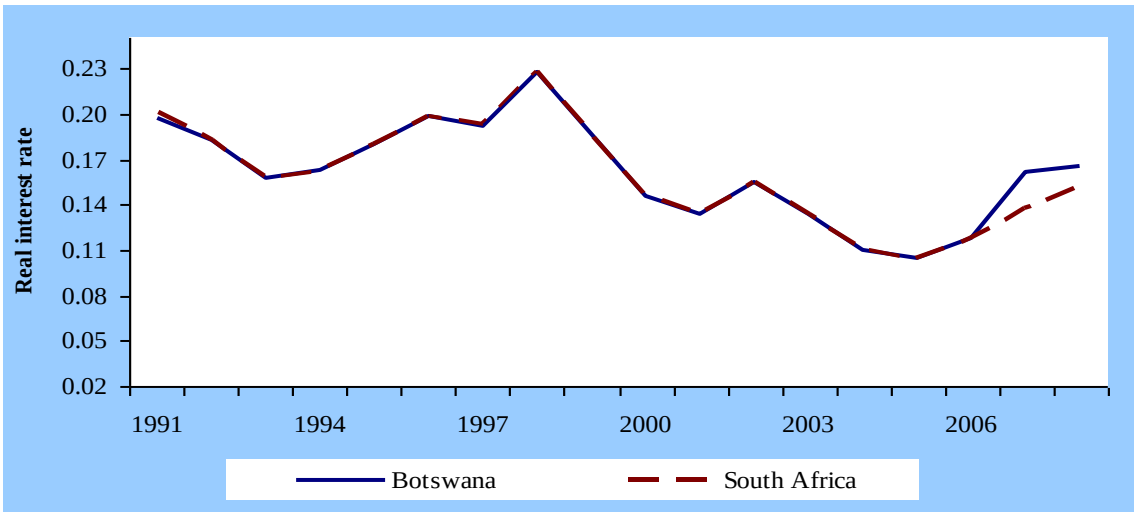
Real interest rates

The interest rate converge in real terms is quite important for the countries intending to establish a currency area. In other words, the interest rates convergence is necessary for

deeper integration among the countries. The similarities interest rates between the countries intending to establish a common currency indicate that those countries relatively share the same business cycles. Due to the currency peg, the monetary policy within the CMA arrangement is largely determined by the South African Reserve Bank (SARB) and the interest rates within the CMA area follow similar trends to that of South Africa's. Furthermore, the CMA membership is based on a close trade and financial links with South Africa.

Given the geographical context and the dominance of the South African economy in the region, Botswana is also importing South Africa's interest rate (see Figure 6.4 below). It should be noted also that Botswana has pegged the pula to a trade-weighted basket rand. This can also induce convergence between Botswana and South Africa. Such convergence indicates a clear trend towards business-cycle assimilation among the SACU countries, and signifying a process of real convergence.

Figure 6.4: Real interest rate between Botswana and South Africa, 1991-2008

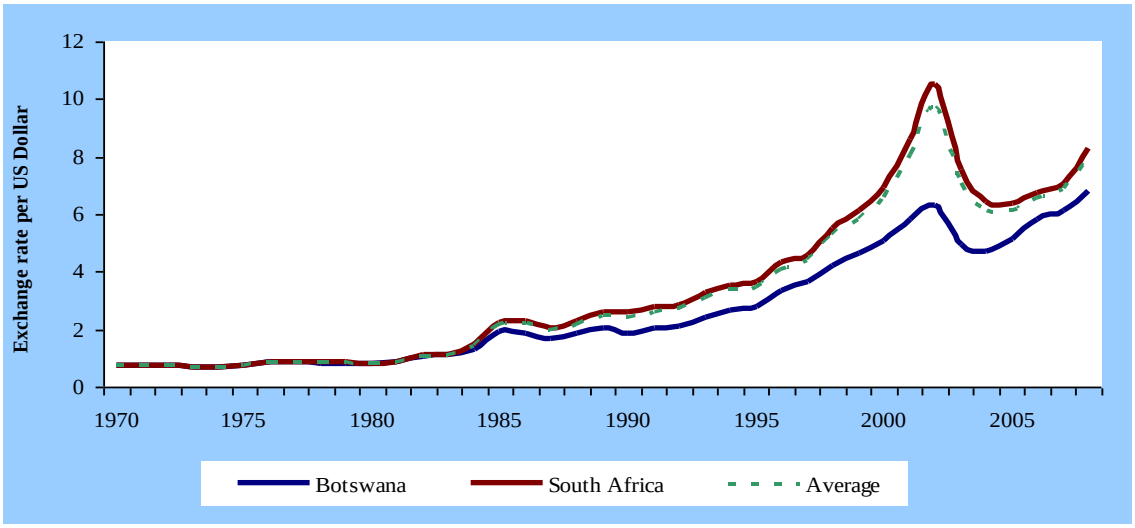


Source: - Own Calculations from African Development Indicators, 2009, the Central Bank of Botswana, 2010, the Central Bank of Lesotho, 2010, the Central Bank of Namibia, 2010, the South African Reserved Bank, 2010, and the Central Bank of Swaziland, 2010.

Real exchange rates

A common trend is evident by visual inspection of the real exchange rates of the SACU countries. Figure 6.6 shows only for Botswana and South Africa's exchange rate movements. This is due to the fact other member of the CMA group, when trade in international market, they used the same exchange rate: the South African exchange rate, although the small member countries have not made an irrevocable commitment to keep a given parity. Tjirongo (1995, and Wang et al, 2007), argue that the exchange rate arrangements under the CMA group share certain characteristics of a currency board, but there is no legal constraint preventing the central banks for the small countries from acquiring domestic assets.

Figure 6.5: Real exchange rate (Botswana and South Africa), 1970 - 2008



Source: - Own calculations from IMF-International Financial Statistics (2009).

The exchange rate between Botswana and South Africa is very similar and the countries seem to be sharing the same turning point, meaning that the underlying economic shocks or policy responses to them do not spark divergent relative price effects (Grandes, 2003). It should also be noted that Botswana has linked its currency (pula) to the South African currency, the rand. In fact, the rand is also a currency of reference in Botswana and, thus, Botswana is also regarded as a de facto member of CMA group. The rand function as the regional anchor currency in the SACU area. In 2002, both countries reached the peak,

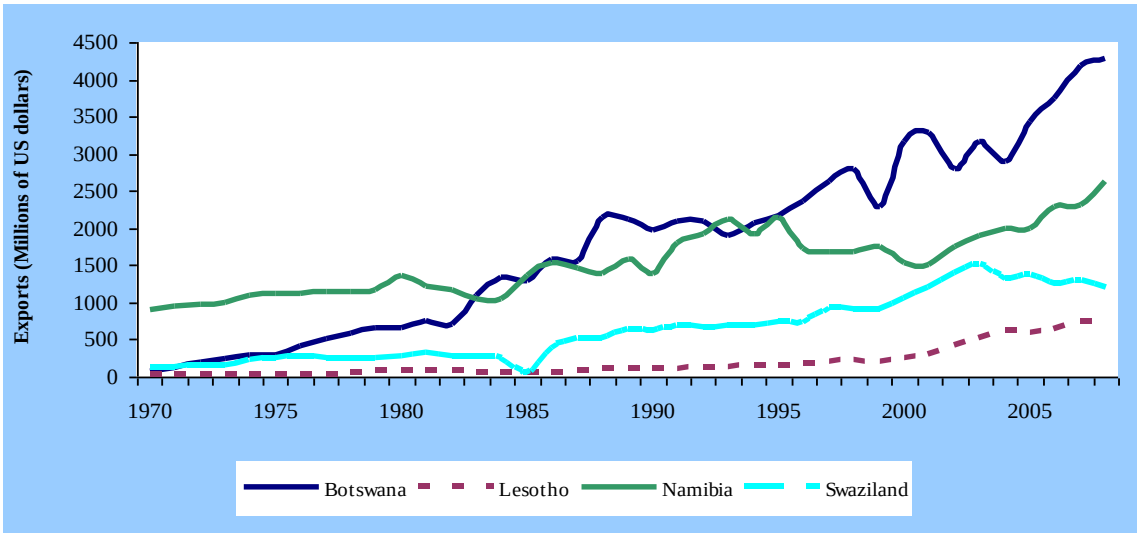
and this synchronisation means a similar movement for the other countries (i.e. LNS countries) since they are subjected to CMA foreign exchange regulations together with South Africa. Moreover, the small member countries of the CMA arrangement are following macroeconomic preferences of South Africa as a dominant country and their major trading partner in the region.

Real exports

Export is also an important indicator of macroeconomic stability, as it affects the current account. Figure 6.7 shows only Botswana, Lesotho, Namibia and Swaziland. The graph shows that Lesotho and Swaziland had been the lowest performing countries in the region respectively. This is not surprising for the fact that Lesotho and Swaziland are the smallest countries in the group, and subsuming their production structure, which is largely based on the primary product (i.e. agriculture is a key sector of the economy in both these countries) and net importers of services.

The direction of Lesotho's and Swaziland's trade remains highly concentrated both in terms of markets and products and heavily dependent on South Africa and they send more than 60% of their exports to South Africa. The lack of exports performance in both these countries can also be attributed to recurrent droughts and low external demand of their traditional exports (i.e. textiles & clothing, sugar, and agricultural products). Botswana and Namibia have been performing relatively well over the past years. Botswana's high exports growth has been driven by mainly by booming diamond and other minerals (i.e. copper-nickel) and its stable currency whilst Namibia's exports has been boosted by diamond production and sustained strengthening of the non-mining sectors such as manufacturing and services.

Figure 6.6: SACU countries' real exports (Excl. South Africa), 1970-2008



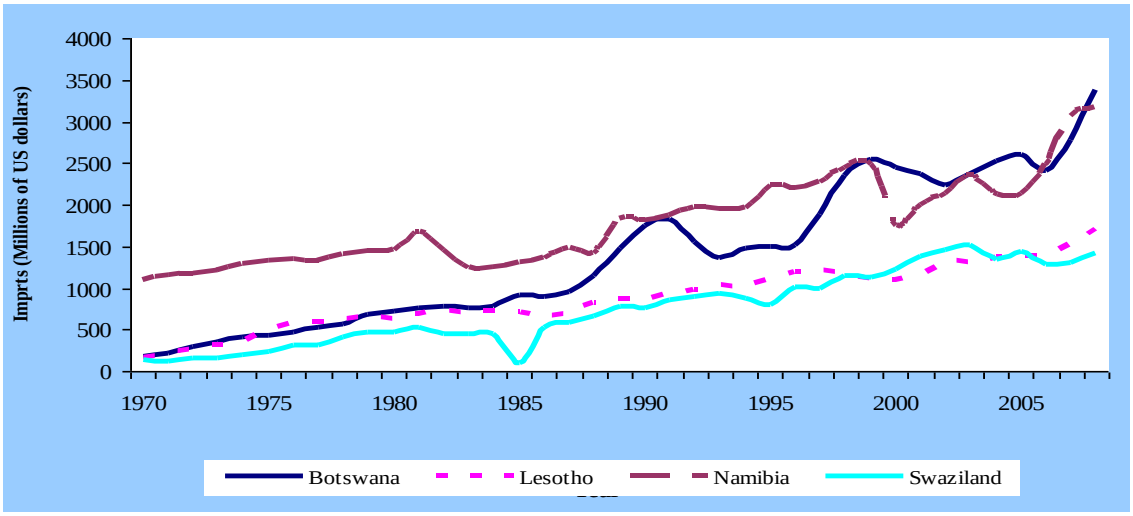
Source: - Own Calculations from the United Nations Statistics (2009).

It is import to note that Botswana's and Namibia's peaks and troughs are more pronounced than Lesotho and Swaziland. This is due to the fact that their exports depend on global economic prospects, especially in the major markets (e.g. the United States and Europe), which imports more 50% of their diamonds and their mineral resources.

Real imports

Figure 6.8 for real imports, which exclude South Africa and only shows Botswana, Lesotho, Namibia and Swaziland. All SACU countries' economies are highly dependent on international trade: exports and imports of goods and services. The BLNS countries imports are mainly from South Africa and may have arrived via South Africa from another country of origin. All SACU countries are net importers of industrial products and services. The graphical representation shows that the imports of all these countries are relatively moving together, however; Lesotho and Swaziland imports are far less than the rest of the countries in the union. This is due to their economic size and other structural issues such as slow pace of industrial development and heavily reliance on the South African market which accounts about 70% or more of each of these countries' total imports (Metzger, 2006:52).

Figure 6.7: SACU's real imports (Excl. South Africa), 1970-2008



Source: - Own calculations from the United Nations Statistics (2009).

The graphical analysis shows that SACU member countries are relatively moving together, although countries like South Africa, Botswana and Namibia are better than Swaziland and Lesotho owing their economic size and development at large. These results confirms findings of many studies among others, Maleke (2008), Matsaseng (2008), Aziakpono (2008), and Jenkins and Thomas (1997), who finds that members of SACU have made plausibly progress in terms of macroeconomic convergence (i.e. in terms of their fiscal and monetary policies, inflation rates, interest rates as well as per capita incomes). This then leads us to another approach for convergence analysis – bivariate correlation analysis between the countries.

6.3.3 Bivariate analysis: correlations

Another simpler analysis for synchronisation of macroeconomic convergence is to establish pair-correlation coefficient for each variable in order to inquest the existence of co-movement between variables. The correlation coefficient evaluates the relationship (or degree) to which the two variables are linearly related, and its ranges from -1 to 1. The correlation coefficient of 1 (positive value) means that the two variables are moving in the same direction at all times, whereas a correlation coefficient of -1 (negative value) indicates that two variables are moving in the opposite direction at all times; a correlation

coefficient of 0 indicates that two variables are uncorrelated (Brooks, 2002; Koop, 2009). However, if the coefficient is greater than 0.50 (in either direction- positive or negative), it indicates a significant correlation between two variables (Koop, 2009).

It should be noted that SACU members have not decided on the convergence criteria, which they have committed to, except for the SADC region. The correlation matrices are only used to indentify if there is a possibility of convergence, and thus, they do not form the basis for quantifying the degrees of convergence. Table 6.2 reports the correlation coefficient for real GDP. It is evident from the results that the cross-sectional correlation coefficients are relatively high. The correlation coefficient for Botswana – Swaziland is 0.98, for Lesotho and Namibia; correlation coefficients are 0.78 and 0.68 respectively. The correlation coefficient for all countries is significant at 0.01. The correlation coefficients signify the presence of co-movements.

Table 6.2: Correlation Matrix (GDP)

Country	South Africa	Botswana	Lesotho	Namibia	Swaziland
South Africa	1				
Botswana	0.98**	1			
Lesotho	0.78**	0.69**	1		
Namibia	0.68**	0.56**	0.92**	1	
Swaziland	0.98**	0.94**	0.87**	0.78**	1

Source: - Own Calculations from IMF-International Financial Statistics, 2009.
Note: Significant at **0.01%, *1%.

It is evident from the result that the cross-sectional coefficients for GDP growth are low (see table 6.3 below). The correlation coefficients are below 0.50, which means that there is no evidence of co-movement between countries. The Lesotho GDP growth has the highest level of co-movement with Botswana, with a correlation coefficient of 0.24. The correlation coefficients are 0.19 for Namibia and Swaziland, 0.07 for South Africa and Botswana, -0.17 for Botswana and Namibia, 0.24 Swaziland and South Africa, 0.05 for Botswana and Swaziland, -0.01 South Africa and Lesotho. Finally, for Lesotho –

Swaziland and Lesotho – Namibia, the correlation coefficients are -0.07 and -0.05 respectively.

Table 6.3: Correlation Matrix (GDP growth rate**)**

Country	Botswana	Lesotho	Namibia	South Africa	Swaziland
Botswana	1				
Lesotho	0.24**	1			
Namibia	-0.17**	-0.05**	1		
South Africa	0.07**	-0.01**	0.26**	1	
Swaziland	0.05**	-0.07**	0.19**	0.24**	1

Source: - Own Calculations from IMF-International Financial Statistics, 2009.
Note: Significant at **0.01%, *1%.

Further, CPI correlation coefficients (table 6.4 below) are higher between South Africa – Swaziland and Botswana – Namibia and Lesotho: they are 1.00, 099 and 0.98 respectively. The other pairs are Botswana – Swaziland and Lesotho – Namibia; a correlation coefficient is at 1.00 and 0.99 respectively. These results support the findings from other authors like Jenkins and Thomas, Grandes, and Maleke, who argue that SACU members have achieved a reasonable level of convergence in terms of macroeconomic variables such as exchange rates, inflation, GDP growth rates and interest rates. The close movement of the CPI between SACU members reflect the fact that the rand is a key currency in the region and it also implying the likelihood that members of SACU are likely to be affected by shocks in a similar way, and thus making these countries more suitable candidate for a currency union.

Table 6.4: Correlation Matrix (CPI)

Country	South Africa	Botswana	Lesotho	Namibia	Swaziland
South Africa	1				
Botswana	0.99**	1			
Lesotho	0.98**	0.96**	1		
Namibia	0.99**	0.98**	0.99**	1	
Swaziland	1.00**	1.00**	0.98**	0.98**	1

Source: - Own Calculations from IMF-International Financial Statistics, 2009.
Note: Significant at **0.01%, *1%.

It also confirms Nielsen et al findings that the CMA countries have harmonised their monetary and exchange rate policies over the past years. As far as the exchange rate as concerned (see table 6.5), the correlation coefficient between the CMA countries is the same. This is not surprising since Lesotho, Namibia South Africa and Swaziland are members of the CMA. The correlation coefficient between the CMA group and Botswana is also the same: 0.98. This coefficient is very high, meaning that Botswana's exchange rate with the CMA group is highly synchronised. This is due to the fact that Botswana's currency, pula; is linked to the Rand via the currency basket, where the Rand weighs around 60 to 70 % (Grandes, 2003). Furthermore, this implies that the fact that the Rand and Pula appreciate or depreciate more or less at the same time. This synchronisation of the exchange rate between SACU member states makes them more suitable to participate in a currency area.

Table 6.5: Correlation Matrix (Exchange rate)

Country	South Africa	Botswana	Lesotho	Namibia	Swaziland
South Africa	1				
Botswana	0.98**	1			
Lesotho	1.00**	0.98**	1		
Namibia	1.00**	0.98**	1.00**	1	
Swaziland	1.00**	0.98**	1.00**	1.00**	1

Source: - Own Calculations from IMF-International Financial Statistics, 2009.
Note: Significant at **0.01%, *1%.

In terms of interest rate, once again the correlation coefficient for the CMA countries is positive and moving in the same direction (see table 6.6). The correlation coefficient is ranging from 0.960 to South Africa and Swaziland, 0.993 to South Africa and Lesotho, and 0.993 to Namibia and South Africa. This is inevitable because Lesotho, Namibia and Swaziland have pegged their currency to the South African Rand and, thus, the South African Reserved Bank (SARB) determines de facto monetary policy for the CMA group via its interest rate policy. Botswana is moving opposite to other countries with all coefficients being high and negative. This is also expected due to the fact that Botswana pursues its own independent monetary policy.

Table 6.6: Correlation Matrix (Interest rate)

Country	Botswana	Lesotho	Namibia	Swaziland	South Africa
Botswana	1				
Lesotho	0.957**	1			
Namibia	0.957**	1	1		
Swaziland	0.934**	0.961**	0.961**	1	
South Africa	0.981**	0.993**	0.993**	0.960**	1

Source: - Own Calculations from African Development Indicators, 2009, the Central Bank of Botswana, 2010, the Central Bank of Lesotho, 2010, the Central Bank of Namibia, 2010, the South African Reserved Bank, 2010, and the Central Bank of Swaziland.

Note: Significant at **0.01%, *1%.

The interest rates convergence is necessary for deeper integration among the countries. The interest rates evaluate the similarities of monetary policy between the countries intending to establish a currency area. The higher the co-movements of interest rates it is between the countries, the lower the cost of adopting the same monetary policy. The results presented here, confirms the findings of other of the prior studies (such as Jenkins and Thomas,1997, Maleke, 2008, Matsaseng, 2008) that there is a greater degree of interest convergence among SACU members and the monetary integration may be more beneficial since the interest rates are moderately moving together between the countries.

Table 6.7 below reports the correlation matrix for exports. The correlation coefficients for these countries are positive and very high. The coefficients are ranging from 0.88, to Lesotho and Swaziland, 0.87 to Botswana and Namibia, 0.86 to Botswana and Lesotho, Lesotho and Swaziland are closely correlated to South Africa due to the fact that most of their imports and exports are destined to South Africa. The result shows that South Africa is moving along with all countries, as the all coefficients between South Africa and other countries high and above 0.50. Furthermore, this shows that all members of SACU have relatively the same economic structure (dependent on primary product) except South Africa.

Table 6.7: Correlation Matrix (Export)

Country	South Africa	Botswana	Lesotho	Namibia	Swaziland
South Africa	1				
Botswana	0.92**	1			
Lesotho	0.95**	0.86**	1		
Namibia	0.81**	0.87**	0.79**	1	
Swaziland	0.93**	0.93**	0.88**	0.81**	1

Source: - Own Calculations from the United Nations Statistics, 2009.
Note: Significant at **0.01%, *1%.

Moving to our last variable, imports correlation matrix (see table 6.8 below), the results also indicate the fact that the five countries are moving in the same direction. The correlation coefficients are ranging from 0.95 to Botswana, Lesotho and Swaziland, 0.94 to Lesotho and Swaziland, 0.92 to Lesotho and Namibia. Again the results demonstrate that South Africa, which accounts substantial share of intra-regional imports, has moved in the same direction with other countries. This is also not surprising due to fact that the BLNS countries have more similar production structures and they also trade substantially with their major partner South Africa.

Table 6.8: Correlation Matrix (Imports)

Country	South Africa	Botswana	Lesotho	Namibia	Swaziland
South Africa	1				
Botswana	0.85**	1			
Lesotho	0.84**	0.95**	1		
Namibia	0.88**	0.91**	0.92**	1	
Swaziland	0.79**	0.95**	0.94**	0.87**	1

Source: - Own Calculations from the United Nations Statistics, 2009.
Note: Significant at **0.01%, *1%.

The overall correlation results show that, to a degree, the variable in question are moving in the same direction. It result demonstrate a substantial co-movements between countries in terms of CPI, exchange rate and interest rate. For some historical and other reasons, SACU members' economies have been dominated by South Africa. The bulk of their imports originate from South Africa, and the bulk of their exports is destined for the

South African market or transits its economy (Grandes, 2004:48). Having noted the magnitude of macroeconomic convergence between members of SACU, one can argue that members of SACU would share similar regional shocks. Hence, this makes members of SACU suitable and compatible candidates for a currency (or monetary) union.

6.5 Conclusion

This chapter examined macroeconomic convergence in SACU. The inquiry was done to find out is GDP, GDP growth rates, consumer price index, interest rates, exports and imports of the SACU member states have attained certain common degree of convergence. It is evident from the correlation coefficients and graphical representation analysis that members of SACU have a higher degree of real economic convergence. The CMA is also playing a principal role in improving macroeconomic convergence within SACU area. By all accounts, members of SACU have met the economic requisites and are compatible candidates for establishing a common currency.

The results reveal that there is a common trend among SACU member states in terms of economic activities. A significant interest rate and exchange rate convergence was observed. It is also observed a significant convergence of inflation rate, which suggest that the countries are undergoing similar price shocks particularly the CMA group countries. This suggests that, among other things, coordination of macroeconomic policies exists between member countries. On the strength of the evidence presented in this chapter and chapter five, it could be argued that SACU and its members have met the economic requisites for establishing a common currency and, therefore, members of SACU are suitable and compatible candidates for a common currency area. The next chapter provides a conclusion and recommendations.

CHAPTER SEVEN

CONCLUSION AND RECOMMENDATIONS

7.1 Conclusion

Given SACU's maturity and reputation as the most efficient customs union globally, it has always been subject to discourse about its viability as a monetary union. In this study, the researcher hypothesised that SACU members can strengthen their integration if the OCA criteria can be satisfied, and they seem to have the economic attributes necessary for adopting a common currency. With its illustrious history of operational efficiency, SACU has demonstrated over time that it has the capacity to bring about meaningful regional economic integration. The financial cooperation, high degree of policy coordination and positive trade relations that exist within SACU are arguably all precursors of establishing a successful customs union. Some commentators have propounded the view that the requisite foundation for the formation of a currency area within SACU already exists. It is further argued that such currency area could herald greater regional economic integration in Southern Africa. Accordingly, this study has attempted to examine the viability of SACU as a potential customs union and the readiness of SACU member countries to adopt a single currency.

This study has relied upon the theoretical lenses of the OCA theory to assess SACU's viability as a potential currency area. This theory reveals that the relations within SACU satisfy some of the technical conditions necessary for forming an optimum currency area. Furthermore, the empirical findings from previous studies, such as those by Aziakpono (2006; 2008), Grandes (2003; 2004), Jenkins and Thomas (1997), Khumfula and Huizing (2004), Nielsen et al. (2005), and Matsaseng (2008), confirm the feasibility of monetary unification and establishing a common monetary policy for the customs union. Grandes (2003:16) also argues that SACU members satisfy the preconditions for implementing an OCA. Frankel and Rose (1996, 1997) further point out that even when countries do not

satisfy the theoretical criteria ex ante, they can always do so ex post i.e. once the currency union is established. The implication is that even in cases where the current configuration of the existing customs union does not readily lend itself to the formation of a currency area, this can be addressed through other compensatory means.

The study found that the depth of financial integration, the cohesiveness of the exchange rate regime arrangement and the co-movement of macroeconomic variables between SACU. This shows there is substantial trade and financial integration among the members of the customs union. This could be attributed to the fact that all SACU members, except Botswana, are members of an ongoing monetary integration scheme known as the "Rand Zone", which was forged in 1974. Again, this is critical for SACU member countries' monetary unification bid. In fact, having such a high level of integration could make it easier for SACU members to adapt to having policies collectively managed by a central regional body.

Convergence in the five SACU countries' gross domestic product, consumer price index, exchange rates, exports and imports in real terms has been empirically demonstrated. This supports the argument that the formation of a currency (or monetary) union by SACU members is feasible, both in technical terms and practical terms; the only major impediment would be member countries' political will to facilitate such a move. The formation of a currency area translates to the establishment of a supranational authority that would have monopoly over trade arrangements with other trading blocs and wield authority over the economic policies of member countries. Thus, this issue cannot be framed merely as an economic issue. Its implications transcend both the economic and political realm. In fact, some may argue that establishing a currency area is in reality more politically than economically motivated. The fact that politicians will decide whether to establish a currency area indicates that the associated political implications cannot be downplayed. In the end, political forces will determine whether SACU countries should form a currency area, irrespective of the fact that economic conditions permit such a move.

Despite the fact that SACU countries are structurally different (McCarthy, 2008), a monetary arrangement may be beneficial to all SACU members Linking macroeconomic policies, particularly of the small-scale countries with countries that enjoy a good economic and financial reputation, for instance, South Africa, can yield positive results (Maleke, 2008). Furthermore, the empirical results suggest that, from an economic perspective, it is feasible for SACU countries to move towards a fully-fledge monetary union because of the increasing macroeconomic convergence, and this means that the countries are undergoing similar shocks. The deeper trade relation that exists between SACU member states seems to have important influence on business cycle co-movements. Accordingly, this study concludes that a monetary union in SACU is feasible, as the current economic conditions within SACU permit for the formation of a currency area; however, its successful implementation requires the political will of member countries. SACU countries should learn from others' experiences of monetary integration, aiming to emulate their ideas and initiatives and to draw on their knowledge.

7.2 Recommendations

The Southern African Customs Union (SACU) has huge potential to create meaningful regional economic integration and its members have already laid a strong foundation. Based on the conclusions above, the following recommendations should be considered. While a caveat is in order, a giant step for SACU in its bid for a monetary union would be to consolidate and capitalise on the existing monetary system through the CMA arrangement, and to persuade Botswana to officially get on the CMA bandwagon. This would assist in terms of setting up a common monetary policy and exchange control measures.

Members of SACU must indeed continue with their efforts to cooperate and coordinate policies in order to strengthen regional market integration and widen the regional spatial perspective. Moreover, member states must further align their labour laws and patent and property laws in order to realise deeper integration. The benefit of policy coordination

and cooperation is that member countries can better administer their economies with more discreet policies. The interchange of sound macroeconomic policies attracts both local and foreign direct investment, and ultimately leads to high economic growth and sustained development, as demonstrated in the East Asian emerging economies. Furthermore, common policies will promote and sustain financial stability between members and steer their economies towards better economic integration. These common policies will ensure that the existing relationship between their fiscal policies assures fiscal solvency without price jumps and insulates the union against external shocks. This would provide a strong and necessary foundation for establishing a monetary union, as argued in optimal currency areas theories.

However, to accomplish such policy coordination, members of SACU must establish a supranational institution or commission with real autonomy and policy-making influence, which will be fully responsible for implementing agreed treaties and enforcing compliance. The commission should hold regular consultations, at least twice a year, for the purpose of reconciling the interests of member countries on different issues pertaining to monetary and foreign exchange policies and trade at large. There are many features of the EMU and the CFA Franc zone's integration processes that members of SACU can learn from: the political goodwill, consultative processes, the shared vision, and compliance and commitment to the agreements and protocols. Political will is needed to bring about political legitimacy, the availability of public resources, and responsibility for policies and regulation thereof. This necessitates leadership that is focused on driving its local economy. Members of SACU must demonstrate political goodwill and commitment to the union in order to realise meaningful economic integration.

SACU members must also focus on SMME development (appropriate labour/capital ratios to absorb labour) as a means to develop economic power in localities. This should be done in conjunction with efforts to promote the free flow of goods and services, and factors of production and market accessibility. Mollentze (2002:7) argues that a

monetary union eliminates the uncertainty that arises when the exchange rates are not permanently pegged, thus fuelling the flow of trade, investment and specialisation of production within the area. This being the case, members of SACU will be able to promote self-sustainable development on the basis of collective self-reliance, and diversify their economies into the manufacturing of exports. As Tang (2010:13) states, "One of the most important policy issues facing South and Southern African governments is how to successfully diversify their economies into the manufacturing of exports". Since strategic investment in economic infrastructure is critical and essential for development to take its course, members of SACU have to invest in economic infrastructure (soft and hard infrastructure) in order to attract more local and foreign investment and improve the commercial environment for business.

Notwithstanding the fact that market integration has failed substantially on the continent, African countries continue to be actively involved in pursuing regional market integration. This is evident through various economic associations that exist in the continent and the overlapping of memberships. However, multiple memberships remain the most worrying concern for SACU, as its members are not immune to this pitfall. This issue should be addressed immediately; otherwise, SACU will lose its focus and thrust. The overlapping memberships reduce the regional economic communities' ability to pursue coherent and effective integration programmes.

If South Africa withdrew its membership from SACU, it would be a great loss, particularly for the small-scale members. South Africa's contribution and investment are sizeable in the SACU market. The disbandment of SACU would be detrimental and a regressive event to all members of the customs union. Fear over its potential disbandment is founded on the possibility that South Africa may withdraw from SACU because three members (Botswana, Lesotho and Swaziland) signed an interim Economic Partnership Agreement (EPA) with the European Union (EU), thereby breaking ranks with the union. Their conduct goes against the SACU Agreement of 2002, Section 31(3),

which states that members are prohibited from entering new trade agreements without obtaining the consent of other members of the trade bloc.

Members of SACU should banish the notion of protecting their individual interests, and all should respect and honour their declarations under the union and strive to advance their collective interest. The recent conduct of these three members offers an excellent opportunity for serious dialogue, further talks and engagement between members of the customs union, with a view to entrenching greater economic integration and preventing the dissolution of the longstanding customs union. Consequently, this needs to be addressed immediately in order to provide clarity on the future and functioning of SACU.

SACU members should move towards full monetary integration. A monetary integration would bring a more credibility to their financial systems and clarify their commitment to sound macroeconomic policy management. This process should, however, be anchored in a shared vision, mutual interest, consultation and joint actions. As Davies argues, "Successful integration programmes have always been driven by a high level of continuing commitment on the part of the co-operating partners" (1993:220). South Africa, as the dominant member in terms of its economic development, is required to play a leading role, as Germany did in the formation of EMU.

The experiences of other monetary unions (e.g. the EMU and the CFA Franc zone) show that forming a currency (or monetary) union is not solely concerned with which countries are willing to join, but also the degree to which prosperous economies are willing to integrate with smaller or weaker economies. Members of SACU should learn from such experiences. Admittedly, progress in establishing meaningful and proper economic integration depends, to a large extent, on the willingness of member countries to abandon their sovereignty. A full monetary union would further regional economic integration, yield additional benefits in terms of monetary policy credibility and fiscal policy

discipline, maintain exchange rate competitiveness, and diversify SACU members' exports, which is critical for their economic growth and development.

It is important that members of SACU ensure that there is political agreement, backed by real commitment, not mere grandstanding rhetoric, on the move towards establishing a monetary union. In addition, the proponents of this issue need to further devise political tactics and strategies to get the attention of key political actors in the region. Getting Botswana to formally join SACU would be a vital political coup for the proponents of the monetary union and it could significantly benefit their ambitions. Given its powerful economy, and the prevailing dominance of the rand, it would be foolhardy to imagine that this issue could progress without South Africa's backing. Therefore, it is incumbent on the advocates of the customs union to consider how they could use the existing economic conditions that permit for the establishment of the monetary union as one of the measures to win over political commitment from the members' states. They could use the EMU and CFA Franc zone, which are widely touted as classic models of monetary unions, as a reference guide to circumvent political opposition.

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APPENDICES

Appendix A

CMA and SACU: Major Events in history

Year/Period	Monetary Arrangements	Customs Union
Before 1960	Informal monetary union. Following establishment of the South African Reserve Bank in 1921, the South African pound became the common currency.	Arrangement became effective in 1910.
The 1960s	Countries became independent (except Namibia). The rand replaced the pound in 1961	New agreement reached on December 11, 1969; the shares of the smaller members were determined based on a revenue-sharing formula, with the residual allocated to South Africa.
1974-75	South Africa, Botswana, Lesotho, and Swaziland signed the Rand Monetary Area treaty on December 5, 1974. Swaziland set up its own monetary authority and introduced its national currency, the lilangeni, pegged at par to the rand. Botswana opted to withdraw from the RMA in 1975.	
1980	Lesotho established its own central bank and issued its national currency, at a one-to-one rate to the rand, in January 1980.	
1986	South Africa, Lesotho, and Swaziland signed the CMA Trilateral Agreement in April 1986, replacing the RMA. Additional provisions concerning capital account, intra-CMA fund transfers, and seigniorage compensation were made. Swaziland discontinued the use of rand as legal tender within its borders.	
1989	The CMA was amended to remove exchange restrictions arising from the limitations on conversion of balances upon termination of the agreement or withdrawal of one party.	
1992-93	Namibia became independent in 1990. The Multilateral Agreement replaced the Trilateral Agreement when Namibia joined the CMA in 1992. It issued its national currency, the dollar, in 1993.	
2002	After 17 years of interruption, Swaziland reauthorized the use of the rand as legal tender alongside the lilangeni in the country.	
2003		New revenue-sharing formula had a development component.

Source: Wang et al., (2007; Grandes, 2003).

Appendix B

The most important attributes regarding Optimum Currency Areas (OCA)

Variables	Effect
Labour mobility	The greater the labour mobility (when wages and prices are not flexible) the easier it is to join/form a common currency area.
Wage and price flexibility	If there is wage and price flexibility in a common currency area, it will be easier to overcome asymmetric shocks and the common currency area will be more stable.
Openness	The more open the economy is, the stronger is the case for joining/forming a common currency area.
Diversification of Production	The more diversified the economy, the more attractive is a common currency area.
Inflation differential	If there is inflation differential between countries, it will be harder to maintain the fixed exchange rate.
Capital mobility	The higher the capital mobility, the harder it is to maintain a fixed exchange rate (except, if the country joins a common currency area).
Endogeneity	A country is more likely to satisfy the criteria for entering a common currency area ex post than ex ante due to increased business cycle correlation.
Similarity of shocks	Costs of loosing independent monetary policy are lower the higher the association of shocks between the client (potential member of a common currency area) and the anchor is.
Monetary shocks	If a country is facing monetary shocks, having a fixed exchange rate will be attractive.
Specialisation	A country is more likely to satisfy the criteria for entering a common currency area ex ante than ex post due to increased specialisation of the countries forming the area.
Business cycle Synchronization	If countries forming a common currency area have synchronised business cycles, they will not need flexible exchange rates as an adjustment mechanism.
Dominant trading Partner	If a country has a dominant trading partner, it is beneficial to form a common currency area.
External nominal Shocks	If what a country is facing are external nominal shocks, a flexible exchange rate will be even more attractive.
Real shocks	If what a country is facing are real shocks (domestic or foreign), a flexible exchange rate will be more feasible.

Labour market Institutions	If countries have different labour market institutions, it will be hard to adjust to the same kind of shock in the same way in a common currency area.
Credibility of monetary Authorities	If monetary authorities do not have credibility to curb inflation, having a fixed exchange rate as a nominal anchor will be beneficial.
Effectiveness of monetary policy	If a monetary policy is not effective, the loss of monetary independence is not a high cost.
International risk Sharing	If a country is able to share risk with its partners in a common currency area, this regime could ameliorate other rigidities in the area.
Usefulness of money	Joining the common currency area enhances the usefulness of money, but the effect is that much greater the smaller and more open the economy is.
Size of economy	The larger the economy, the more attractive is the flexible exchange rate.
Effectiveness of exchange rate adjustments	If exchange rate adjustments are not effective, the cost of loosing the exchange rate as adjustment mechanism is not significant.

Source: Bronz (2005)

Appendix C

SACU and non-SACU-SADC Macroeconomic Indicators

	Inflation (%)		Fiscal Deficit as a % of GDP		Current Account Deficit as a % of GDP		External Debt as a % of GDP	
	2000-02	2003	2000-02	2003	2000-02	2003	2000-02	2003
ANGOLA	195.5	95.2	-5.6	-4.6	-4	-4.3	108.2	67.8
BOTSWANA	6.9	4.7	2.5	-2.7	8.3	3.5	22.7	17.7
DRC	313.1	9.1	-3.4	-4.9	2.3	-3.3	244.7	143.3
LESOTHO	8.4	9.3	-1.5	-3.5	-14.5	-12.3	69.4	48.8
MALAWI	23.6	5	-5.9	-1.3	-6.9	-6.6	154.2	171.2
MAURITIUS	5.4	5	-5.2	-5.9	2.3	4.5	22.3	19.4
MOZAMBIQUE	12.8	12.9	-5.6	-3.9	-19.4	-27.9	46	97.5
NAMIBIA	10.0	9.5	-3.1	-3.7	3.6	3.8	2.6	2.2
SEYCHELLES	4.1	7	-11.2	6.4	-14	-6.8	75.5	80.1
SOUTH AFRICA	6.7	5.8	-1.6	-2.1	-0.1		29.5	13.5
SWAZILAND	9.7	9.5	-4.4	-6.7	-3.7	-3.3	28.2	23.1
TANZANIA	5.3	5.3	-2.0	-3.2	-4.3	-7.3	81.8	74.8
ZAMBIA	23.4	18.4	-6.1	-5.6	-18.2	-16.6	158.5	107.4
ZIMBABWE	90.9	420	-13.1	-8.8	-1.6	-3.2	50.8	81
SADC	**32.2**	**23.3**	**-2.8**	**-1.8**	**-1.4**	**-2.0**	**47.1**	**35.5**

Source: African Development Bank (2004)

Appendix D

Comparative Analysis of Trade Characteristics of Successful Regional Trade Blocs EU/NAFTA and Those of SADC, COMESA, SACU and EAC

No	Successful Trade Blocs' Characteristics	EU/NAFTA	SADC	COMESA	SACU	EAC
		Rating	Rating	Rating	Rating	Rating
1	Same geographical area	10/10	8/10	4/10	8/10	6/10
2	Geographical closed but with direct access	10/10	5/10	3/10	8/10	6/10
3	Geographical mobility with direct air, road & sea link	10/10	2/10	2/10	8/10	6/10
4	Vast natural resources	10/10	6/10	3/10	5/10	6/10
5	Substantial labour capacity & manufacturing skills	10/10	2/10	2/10	3/10	3/10
6	Entrepreneurial culture	10/10	2/10	2/10	3/10	3/10
7	Formal treaty exists	10/10	5/10	5/10	6/10	5/10
8	FTA exists with substantial reduction of tariff & non-tariff barriers	10/10	5/10	5/10	6/10	4/10
9	Rating	80/80	35/80	26/80	49/80	42/80

Source: Venter and Neuland (2007)

Appendix E

Descriptive Statistics Results

Real Gross Domestic Product (RGDP) for SACU countries, 1970 - 2008

Descriptive statistics	*Botswana*	*South Africa*	*Lesotho*	*Namibia*	*Swaziland*
Mean	95876	4531923	19156	58754	45578
Standard Error	19068	719918	3759	10986	7537
Median	40337	2835921	9555	27660	27745
Standard Deviation	117542	4437873	23170	67722	46458
Sample Variance	13816090511	19694717539242	536843269	4586296484	2158381024
Kurtosis	0	0	0	2	-1
Skewness	1	1	1	2	1
Range	403001	14489175	83520	263144	158442
Minimum	1465	500931	301	9619	2497
Maximum	404466	14990106	83820	272763	160939
Sum	3643284	172213070	727915	2232638	1731951
Count	38	38	38	38	38
Confidence Level (95.0%)	38635	1458693	7616	22260	15270

Source: - Own calculations from IMF-International Financial Statistics (2009).

Real GDP growth rate for SACU countries, 1971 - 2008

Descriptive statistics	***Botswana***	***Lesotho***	***Namibia***	***South Africa***	***Swaziland***
Mean	9.584210526	4.965789474	3.647368421	2.65	5
Standard Error	1.10813317	1.263596193	0.569928458	0.371892052	1.612967543
Median	8.1	4.3	3.35	3.05	3.05
Mode	5.5	8.1	7.1	3.1	2.6
Standard Deviation	6.830991631	7.789330066	3.513274967	2.292496574	9.942999711
Sample Variance	46.66244666	60.67366287	12.343101	5.255540541	98.86324324
Kurtosis	0.240133943	1.106558744	1.605295996	-0.6601285	14.4723619
Skewness	0.93097254	0.420838942	0.92212354	-0.44169782	3.180763309
Range	26.6	37	16.8	8.7	63.7
Minimum	-0.2	-10.9	-2.5	-2.1	-10.9
Maximum	26.4	26.1	14.3	6.6	52.8
Sum	364.2	188.7	138.6	100.7	190
Count	38	38	38	38	38
Confidence Level (95.0%)	2.24529106	2.560289063	1.154784737	0.753524867	3.268182654

Source: - Own calculations from IMF-International Financial Statistics (2009).

Consumer Price Index (CPI) for SACU countries, 1975 - 2008

Descriptive statistics	*Botswana*	*South Africa*	*Lesotho*	*Namibia*	*Swaziland*
Mean	45	49	53	54	46
Standard Error	6	6	6	6	6
Median	33	44	52	51	35
Standard Deviation	37	37	37	37	37
Sample Variance	1364	1363	1333	1342	1362
Kurtosis	0	-1	-1	-1	-1
Skewness	1	0	0	0	1
Range	129	120	121	116	126
Minimum	6	5	6	8	4
Maximum	135	125	127	124	130
Sum	1484	1621	1738	1778	1512
Count	33	33	33	33	33
Confidence Level (95.0%)	13	13	13	13	13

Source: - Own calculations from IMF-International Financial Statistics (2009).

Real interest rate for SACU countries, 1991 -2008

Descriptive statistics	***Botswana***	***Swaziland***	***Lesotho***	***Namibia***	***South Africa***
Mean	16.18	15.46	15.87	15.87	16.00
Standard Error	0.786000246	0.880107771	0.82403608	0.824036078	0.805972396
Median	16.225	14.75	15.65	15.65	15.65
Mode	13.4	10.5	13.4	13.4	13.4
Standard Deviation	3.334716625	3.733981036	3.49608899	3.496088991	3.41945128
Sample Variance	11.12033497	13.94261438	12.2226382	12.22263824	11.69264706
Kurtosis	-0.523970258	-1.047894778	-0.88781563	-0.887815628	-0.724244792
Skewness	-0.044107772	0.229870792	0.2061997	0.206199704	0.135169782
Range	12.2	12.2	12.2	12.2	12.2
Minimum	10.5	10.5	10.5	10.5	10.5
Maximum	22.7	22.7	22.7	22.7	22.7
Sum	291.25	278.2	285.63	285.63	288
Count	18	18	18	18	18
Confidence Level (95.0%)	1.658315549	1.856865067	1.73856414	1.738564138	1.700453101

Source: - Own Calculations from African Development Indicators (2009), the Central Bank of Botswana, (2010), the Central Bank of Lesotho (2010), the Central Bank of Namibia (2010), the South African Reserved Bank (2010), and the Central Bank of Swaziland (2010).

Inflation for SACU countries, 1980 - 2008

Descriptive Statistics	*South Africa*	*Botswana*	*Lesotho*	*Namibia*	*Swaziland*
Mean	72.5538571	69.48121429	73.5728214	73.07025	74.9314643
Standard Error	8.46133666	8.579553186	9.53326684	9.22588157	9.30195773
Median	69.5	63.813	64.894	64.449	67.442
Standard Deviation	44.7731851	45.39872818	50.4453065	48.8187765	49.2213337
Sample Variance	2004.63811	2061.04452	2544.72894	2383.27294	2422.73969
Kurtosis	-1.16435944	-1.22150738	-0.9575245	-1.1227183	-0.86644565
Skewness	0.26334298	0.325586502	0.49833369	0.4473604	0.51250406
Range	147.508	148.123	166.02	154.017	166.648
Minimum	12.5	10.5	11.755	12.6	13.398
Maximum	160.008	158.623	177.775	166.617	180.046
Sum	2031.508	1945.474	2060.039	2045.967	2098.081
Count	28	28	28	28	28
Confidence Level (95.0%)	17.3612286	17.60378884	19.5606476	18.9299451	19.0860405

Source: - Own calculations from IMF-International Financial Statistics (2009), Central Bank of Namibia (2010), Central Bank of Lesotho (2010) and African Economic Indicators (2010).

Appendix F

Data

Exports Concentration Index, 1995 - 2008

Year	Botswana	Lesotho	Namibia	South Africa	Swaziland
1995	0.5048	0.3231	0.2988	0.2180	0.2248
1996	0.5361	0.3201	0.2908	0.2026	0.2202
1997	0.2452	0.3410	0.2580	0.3460	0.2217
1998	0.2882	0.3210	0.2705	0.3249	0.2198
1999	0.4059	0.3740	0.2900	0.1374	0.1902
2000	0.8096	0.4794	0.4025	0.1407	0.2289
2001	0.8289	0.2954	0.3697	0.1423	0.2663
2002	0.7863	0.4177	0.3633	0.1133	0.3510
2003	0.7703	0.6344	0.2558	0.1266	0.3020
2004	0.7424	0.4420	0.2936	0.1369	0.2528
2005	0.7362	0.5297	0.2977	0.1379	0.2308
2006	0.7227	0.4934	0.2983	0.1557	0.2180
2007	0.6261	0.4963	0.2499	0.1558	0.2158
2008	0.6423	0.4942	0.2712	0.1544	0.2299

Source: UNCTAD (2009)

Real Gross Domestic Product (Millions of US dollars, constant 2005 prices), 1970 - 2008

Year	Countries				
	Botswana	Lesotho	Namibia	South Africa	Swaziland
1970	1251.319396	629.5358569	14030.96043	479751.4379	2660.654164
1971	1464.692269	404.4491869	11520.65245	500931.1314	2497.250564
1972	2044.040022	374.0391202	11437.74548	547302.8747	3162.966295
1973	2301.569461	330.1949655	12439.33844	516676.6967	3481.504586
1974	2799.119647	300.5238096	11411.13679	536808.3695	2924.331408
1975	3006.747727	306.2705776	11697.58871	594141.2568	3970.224118
1976	4207.107403	339.7710782	10279.46108	714350.968	4822.264809
1977	4218.097408	388.1204216	10716.52172	713679.238	4083.391554
1978	4956.891971	459.4393179	9618.750699	735194.1105	4487.0822
1979	5362.800827	424.5477507	11142.71035	738891.1563	4974.675056
1980	5845.323494	433.4531402	11956.58796	728689.7842	4398.275611
1981	6891.221496	493.1452989	10848.99886	865093.2498	5289.429293
1982	9112.553555	632.0944224	11733.7746	1066265.073	6628.539224
1983	11264.07204	592.821124	11410.40694	1073837.208	6879.636995
1984	14869.0654	851.3775581	11117.23453	1494467.838	9678.047189
1985	23350.94139	1331.106691	28101.99898	2230300.557	15131.30402
1986	24791.29034	1391.79001	29869.49627	2287129.037	17475.00353
1987	24121.89269	8492.62064	27217.25828	2080710.098	17848.69983
1988	30126.14762	10617.00135	33081.95538	2420931.916	21245.22700
1989	40702.9578	13263.25671	38978.72236	2859677.246	26748.7846
1990	39970.59229	13923.33211	41504.73187	2812165.189	28740.84526
1991	47247.6626	15445.1657	46825.4722	2970718.531	31212.10645
1992	52384.62816	16684.9836	51925.74076	3002720.951	33241.21736
1993	60038.97863	19781.56622	58300.59728	3482859.547	39240.09752
1994	69211.51384	22226.68028	67985.49371	3906947.042	43661.5009
1995	73774.81315	23700.23957	72302.70162	4115220.248	46790.95155
1996	93369.08003	30893.36545	88442.22578	5088037.166	57372.19686
1997	108293.056	35680.48637	98788.58363	5597600.605	63513.1162
1998	135460.6428	40870.55196	122422.0313	6750333.204	78281.31165
1999	168242.3666	45250.07258	139854.9203	7635921.461	88890.18239
2000	207289.1518	52716.42151	164404.5332	9034074.723	103021.1874
2001	245624.1578	66558.91004	208840.4484	11513802.535	129100.6372
2002	289916.7368	83820.22591	272762.5727	14614065.825	160939.1964
2003	241088.1633	61771.62389	202577.5019	10797302.291	119971.9461
2004	242172.4905	54952.30706	183270.6306	9640000.902	105035.9952
2005	268029.9135	55644.12292	22984.76733	9991013.558	105670.4152
2006	321798.1291	6610.401311	23416.86991	11234765.91	115712.5709
2007	353469.7549	32770.43343	25016.644	12330336.250	102487.4391
2008	404466.0546	7188.459576	26430.96433	14990106.046	113341.7932

Source: IMF-International Financial Statistics (2009).

Real GDP, annual average of growth rate – percentage, 1971- 2008

Year	Countries					
	Botswana	Lesotho	Namibia	South Africa	Swaziland	Average
1971	25.8	-9.3	5.2	4.3	4.3	6.06
1972	26.4	19.1	2	1.7	20.7	13.98
1973	21.3	26.1	3.9	4.6	-10.9	9
1974	8.8	6	7.1	6.1	52.8	16.16
1975	1.8	-8.2	2.2	1.7	20.3	3.56
1976	19	16.5	1.5	2.2	7.2	9.28
1977	3.6	17.6	0	-0.1	1	4.42
1978	19.5	19.7	2.9	3	2.6	9.54
1979	9.9	-10.9	3.8	3.8	1.8	1.68
1980	14.3	-2.7	6.7	6.6	2.9	5.56
1981	9.5	1	1.2	5.4	7.5	4.92
1982	7.5	3.6	-1.1	-0.4	-1	1.72
1983	16	-8.6	-2.5	-1.8	0.7	0.76
1984	11.5	2.6	-0.5	5.1	8	5.34
1985	7.2	9.4	0.2	-1.2	-8.3	1.46
1986	7.5	2	5.5	0	2.3	3.46
1987	8.9	5.1	14.3	2.1	14.6	9
1988	15.3	10.6	0.2	4.2	6.6	7.38
1989	21.1	8.1	0.9	2.4	9.1	8.32
1990	5.5	6.4	2	-0.3	8.6	4.44
1991	8.7	4.1	8.2	-1	2.6	4.52
1992	6.3	4.5	7.1	-2.1	1.4	3.44
1993	-0.2	3.6	-1.7	1.2	3.5	1.28
1994	4	3.3	7.3	3.2	3.3	4.22
1995	3.2	4.6	4.1	3.1	3.8	3.76
1996	5.5	9.8	3.2	4.3	3.9	5.34
1997	5.5	8.1	4.2	2.6	-3.6	3.36
1998	14.5	0.3	3.3	0.5	-2.5	3.22
1999	7.1	1.3	3.4	2.4	3	3.44
2000	7.4	4.5	3.5	4.2	1.8	4.28
2001	9.1	3	1.2	2.7	1	3.4
2002	1.1	1.6	4.8	3.7	1.7	2.58
2003	9.5	3.9	4.2	3.1	4.1	4.96
2004	3.5	4.6	12.3	4.9	3.1	5.68
2005	9.4	0.7	2.5	5	2.3	3.98
2006	0.6	8.1	7.1	5.3	3.2	4.86
2007	5.3	5.1	5.5	5.1	4	5
2008	3.3	3.5	2.9	3.1	2.6	3.08

Source: United Nations Statistics (2009).

Consumer Price Index (CPI), 1975 - 2008

Year	Countries					
	Botswana	Lesotho	Namibia	South Africa	Swaziland	Average
1975	5.29	5.41	5.73	4.78	4.00	5.04
1976	5.91	6.03	7.53	5.31	4.26	5.81
1977	6.69	7.04	7.97	5.90	5.15	6.55
1978	7.30	7.99	8.34	6.56	5.59	7.15
1979	8.15	9.26	8.97	7.43	6.51	8.07
1980	9.26	10.77	10.93	8.45	7.72	9.43
1981	*10.79*	12.11	13.23	9.74	9.27	11.03
1982	11.99	13.58	15.28	11.16	10.28	12.46
1983	13.24	15.96	17.12	12.54	11.47	14.07
1984	14.38	17.71	18.67	13.98	12.95	15.54
1985	15.54	20.07	20.91	16.26	15.60	17.68
1986	17.10	23.68	23.71	19.30	17.74	20.31
1987	18.78	26.46	26.70	22.41	20.11	22.89
1988	20.34	29.49	30.13	25.28	24.22	25.89
1989	22.70	33.84	34.68	29.00	26.04	29.25
1990	25.28	37.77	38.85	33.16	29.45	32.90
1991	*28.26*	44.45	43.48	38.24	32.09	37.30
1992	32.83	52.10	51.19	43.55	34.51	42.83
1993	37.53	58.95	55.55	47.78	38.66	47.69
1994	41.49	63.79	61.53	52.05	43.98	52.57
1995	45.85	69.70	67.70	56.57	49.39	57.84
1996	*50.47*	76.21	73.10	60.73	52.56	62.61
1997	54.88	84.25	79.54	65.95	56.31	68.18
1998	58.53	91.56	84.45	70.48	60.87	73.18
1999	63.07	67.23	84.92	74.14	64.58	70.79
2000	68.49	71.35	86.65	78.09	72.46	75.41
2001	72.98	64.49	86.73	82.55	76.77	76.70
2002	78.85	86.30	87.63	90.11	86.00	85.78
2003	86.09	92.06	93.90	95.39	92.26	91.94
2004	*92.07*	96.68	97.79	96.71	95.44	95.74
2005	100	100	100	100	100	100
2006	111.56	106.05	105.05	104.64	105.23	106.50
2007	119.45	114.56	112.12	112.07	114.28	114.50
2008	134.63	126.85	123.73	125.00	129.92	128.02

Sources: IMF-International Financial Statistics (2009).

Inflation rates, 1980 - 2008

Year	Countries					
	Botswana	Lesotho	Namibia	South Africa	Swaziland	Average
1980	12.13	10.48	11.23	10.80	11.16	11.16
1981	16.30	11.76	12.60	12.50	13.40	13.31
1982	11.20	13.22	13.71	14.30	14.85	13.45
1983	10.50	15.53	15.63	16.10	16.56	14.87
1984	16.67	17.21	17.74	17.90	18.71	17.65
1985	19.74	19.49	20.87	20.80	22.53	20.69
1986	23.18	23.03	23.33	24.70	25.63	23.97
1987	25.25	25.71	27.73	28.70	29.06	27.29
1988	28.84	28.69	31.36	32.40	34.98	31.25
1989	32.44	32.95	33.82	37.10	37.62	34.79
1990	34.95	36.73	38.76	42.40	42.55	39.08
1991	42.00	43.28	43.37	49.00	46.35	44.80
1992	48.18	50.66	51.06	55.70	49.85	51.09
1993	54.88	57.64	55.42	61.20	55.85	57.00
1994	60.13	61.82	61.38	66.60	63.54	62.69
1995	67.50	67.97	67.52	72.40	71.35	69.35
1996	74.10	74.13	72.93	77.70	75.93	74.96
1997	80.13	80.47	79.36	84.40	81.96	81.26
1998	85.51	86.73	84.29	90.20	88.12	86.97
1999	90.82	94.22	91.52	94.90	93.28	92.95
2000	100	100	100	100	100	100
2001	106.57	106.92	109.27	105.70	107.49	107.19
2002	114.57	120.26	121.59	115.40	120.07	118.38
2003	121.19	129.00	130.29	122.10	128.95	126.30
2004	123.99	135.49	135.69	123.80	133.33	130.46
2005	126.61	140.15	138.76	128.00	139.73	134.65
2006	133.55	148.67	145.77	134.00	147.17	141.83
2007	138.08	160.56	155.58	143.50	159.18	151.38
2008	158.62	177.78	166.62	160.01	180.05	168.61

Sources: IMF-International Financial Statistics (2009), Central Bank of Namibia (2010), Central Bank of Lesotho (2010) and African Economic Indicators (2010).

Real interest rates, 1991 - 2008

Year	Countries				
	Botswana	Swaziland	Lesotho	Namibia	South Africa
1991	19.75	20.1	20.1	20.1	20.1
1992	18.25	18.3	18.3	18.3	18.3
1993	15.75	15.8	15.8	15.8	15.8
1994	16.25	16.3	16.3	16.3	16.3
1995	18	18	18	18	18
1996	19.8	18.9	19.8	19.8	19.8
1997	19.3	19.3	19.3	19.3	19.3
1998	22.7	21.7	22.7	22.7	22.7
1999	16.5	18.7	18.7	18.7	18.7
2000	14.5	10.5	14.5	14.5	14.5
2001	13.4	13.5	13.4	13.4	13.4
2002	15.5	13.5	15.5	15.5	15.5
2003	13.4	13.5	13.4	13.4	13.4
2004	11	10.5	11	11	11
2005	10.5	10.5	10.5	10.5	10.5
2006	11.8	11.5	11.8	11.8	11.8
2007	16.2	12.9	12.88	12.88	13.8
2008	16.5	13.7	13.7	13.7	15.2

Source: -African Development Indicators (2009), the Central Bank of Botswana, (2010), the Central Bank of Lesotho (2010), the Central Bank of Namibia (2010), the South African Reserved Bank (2010), and the Central Bank of Swaziland (2010).

Real exchange rates (in US dollars), 1970 - 2008

Year	Countries					
	Botswana	Lesotho	Namibia	South Africa	Swaziland	Average
1970	0.7164	0.7143	0.7164	0.7143	0.7143	0.7151
1971	0.7152	0.7152	0.7130	0.7152	0.7152	0.7148
1972	0.7691	0.7687	0.7728	0.7687	0.7687	0.7696
1973	0.6941	0.6940	0.6941	0.6940	0.6940	0.6940
1974	0.6795	0.6795	0.6795	0.6795	0.6795	0.6795
1975	0.7395	0.7395	0.7395	0.7395	0.7395	0.7395
1976	0.8696	0.8696	0.8696	0.8696	0.8696	0.8696
1977	0.8420	0.8696	0.8696	0.8696	0.8696	0.8640
1978	0.8282	0.8696	0.8696	0.8696	0.8696	0.8613
1979	0.8150	0.8420	0.8420	0.8420	0.8418	0.8366
1980	0.7772	0.7788	0.7788	0.7788	0.7788	0.7785
1981	0.8367	0.8775	0.8776	0.8776	0.8764	0.8692
1982	1.0297	1.0858	1.0858	1.0858	1.0858	1.0746
1983	1.0969	1.1141	1.1141	1.1141	1.1141	1.1107
1984	1.2984	1.4753	1.4753	1.4753	1.4753	1.4399
1985	1.9026	2.2287	2.2287	2.2287	2.2229	2.1623
1986	1.8791	2.2850	2.2850	2.2850	2.2850	2.2039
1987	1.6789	2.0360	2.0360	2.0360	2.0360	1.9646
1988	1.8286	2.2735	2.2735	2.2735	2.2735	2.1845
1989	2.0149	2.6227	2.6227	2.6227	2.6227	2.5011
1990	1.8605	2.5873	2.5873	2.5873	2.5873	2.4419
1991	2.0216	2.7613	2.7613	2.7613	2.7613	2.6134
1992	2.1097	2.8520	2.8520	2.8520	2.8520	2.7036
1993	2.4231	3.2677	3.2677	3.2677	3.2677	3.0988
1994	2.6846	3.5508	3.5508	3.5508	3.5508	3.3776
1995	2.7722	3.6271	3.6271	3.6271	3.6271	3.4561
1996	3.3242	4.2993	4.2993	4.2993	4.2993	4.1043
1997	3.6508	4.6080	4.6080	4.6080	4.6080	4.4165
1998	4.2259	5.5283	5.5283	5.5283	5.5283	5.2678
1999	4.6244	6.1095	6.1095	6.1095	6.1095	5.8125
2000	5.1018	6.9398	6.9398	6.9398	6.9398	6.5722
2001	5.8412	8.6092	8.6092	8.6092	8.6092	8.0556
2002	6.3278	10.5407	10.5407	10.5407	10.5407	9.6982
2003	4.9499	7.5647	7.5647	7.5647	7.5647	7.0418
2004	4.6929	6.4597	6.4597	6.4597	6.4597	6.1063
2005	5.1104	6.3593	6.3593	6.3593	6.3593	6.1095
2006	5.8366	6.7715	6.7715	6.7715	6.7715	6.5846
2007	6.1388	7.0454	7.0454	7.0454	7.0454	6.8641
2008	6.8269	8.2612	8.2612	8.2612	8.2612	7.9743

Source: - Own calculations from IMF-International Financial Statistics (2009).

Real exports (Millions of US dollars, constant 1990 prices), 1970-2008

Year	Countries				
	Botswana	Lesotho	Namibia	South Africa	Swaziland
1970	77805113.01	22119998.97	905515861.61	21932627911.48	120611330.29
1971	131621752.68	26776840.89	953508985.51	22608623320.02	116181523.88
1972	194625161.14	31433682.82	972344079.07	23286906658.87	145117107.02
1973	236330522.11	32597893.37	1009128330.58	22080287413.63	150411317.42
1974	295440493.76	31821752.96	1084467431.70	21000208313.86	230045680.05
1975	303729718.80	24060349.79	1106924932.93	20756807728.07	248550944.02
1976	408233026.67	32597893.37	1116528653.45	21649100547.99	278829216.36
1977	506216197.86	23284209.51	1136093693.11	22645406199.58	242249848.03
1978	575854884.27	52777541.51	1149823337.60	23392151453.01	239311471.21
1979	654911546.01	68300347.86	1171261184.93	23822634340.10	243137672.17
1980	655545448.49	74466090.31	1358939413.60	23821930361.54	275725879.13
1981	764486072.19	63809735.99	1224452413.20	22546673207.08	321609748.56
1982	707344315.08	64451685.00	1178106123.88	21950403370.02	278889520.51
1983	1103442642.33	44936433.74	1042377704.89	21658780253.14	263232676.43
1984	1341246530.78	48788128.10	1051067634.13	22236218663.82	254078021.36
1985	1294790553.96	49943636.46	1368043149.04	24476982408.04	56513314.42
1986	1573435856.49	52383042.85	1540600315.72	23573777920.50	383489533.16
1987	1565647915.24	70486006.15	1449562961.62	24669696537.79	519636543.18
1988	2130183116.75	88156435.77	1391630099.95	26685187144.04	518961714.64
1989	2126470261.06	94109448.23	1570580582.17	27267201415.34	621258882.23
1990	1966335492.14	87380693.99	1397104225.90	27148933017.91	620039087.28
1991	2090390517.25	94142559.14	1799817195.74	26729361798.44	674021075.37
1992	2098022387.84	114220677.59	1913550419.11	21466510706.50	660095927.96
1993	1895543528.21	131317348.94	2118447237.83	31123595945.93	689216394.16
1994	2062205653.17	137938468.90	1926628642.22	31897092384.50	687280962.61
1995	2166531418.63	141767104.56	2146670397.16	35386010108.77	729844866.14
1996	2364841081.18	174826868.07	1734265289.25	37935116460.59	730125986.22
1997	2634597849.84	206667212.61	1687560110.42	39943919270.56	921654328.13
1998	2803472983.00	221853041.00	1675749605.44	41240647770.99	903780132.82
1999	2278275698.97	198810515.39	1750102102.67	41760711929.35	899911259.00
2000	3165883729.56	247903076.42	1542948904.89	45232558173.64	1040076334.95
2001	3280505822.81	295439919.24	1501706189.40	46314925203.72	1201622224.57
2002	2790924592.67	423723649.80	1745509556.14	46773039249.13	1374741198.63
2003	3163024326.46	499190474.19	1899992984.76	46824253689.09	1509493521.07
2004	2894817304.48	606485016.36	2002157082.86	48168676736.70	1308807589.96
2005	3420976007.58	574096211.98	1985542160.34	52020495406.67	1370604010.29
2006	3739506499.69	628112348.99	2289442055.38	55166223584.82	1245654704.31
2007	4183494526.70	719442184.33	2310181249.46	59312481285.90	1277085149.71
2008	4269850523.51	729871245.86	2622045639.83	60348385731.28	1196002542.09

Source: United Nations Statistics (2009).

Real imports (Millions of US dollars, constant 1990 prices), 1970-2008

Year	Countries				
	Botswana	Lesotho	Namibia	South Africa	Swaziland
1970	173641038.09	162218345.45	1081172575.97	19693679929.10	128939051.75
1971	220809038.87	199653348.25	1137284632.90	21680159130.65	116354423.31
1972	290218536.68	263179413.49	1160496319.76	18958477998.97	156941321.69
1973	340664661.63	302883204.38	1206633386.90	21088678463.21	148458945.07
1974	413270689.23	347691768.30	1289428233.23	25097889426.95	190795394.26
1975	420508354.66	477012687.01	1323668534.01	24272781146.38	239974023.33
1976	462653721.53	579108149.10	1342517277.84	21844826317.28	307976359.33
1977	519215167.46	583078528.20	1328185084.47	18857131951.62	314728037.75
1978	559233572.15	605766408.63	1398621166.25	18874210935.75	407645363.24
1979	675743848.82	677233232.22	1432066673.47	18693109254.96	474402974.85
1980	711271999.39	628417742.89	1461563340.10	22258911121.23	457979852.95
1981	764997495.54	673637980.26	1675087316.16	25316371525.84	528849196.93
1982	782249524.40	711680402.18	1464459983.10	20919660969.30	453416945.75
1983	756804751.05	695350872.08	1234797567.03	17553167625.39	453572247.86
1984	772244922.97	714730973.79	1235211373.22	21028579773.76	443206548.00
1985	916957146.29	696965880.56	1299351327.21	18076976846.27	104699351.34
1986	901044316.19	634698331.47	1367629342.77	17633728871.30	526346101.52
1987	953115508.01	679200787.34	1473149912.34	18249861279.98	589310310.88
1988	1150923015.99	823746031.70	1415217050.67	22248115914.28	650907548.53
1989	1482414053.03	858525425.25	1831680199.84	22319009810.68	774856759.49
1990	1748970575.92	855183719.58	1813978530.82	21016334464.38	758670198.03
1991	1818860609.80	936607055.78	1865755912.72	28196981093.37	858674092.13
1992	1546596711.71	971176749.09	1966212884.21	22614508460.66	894726782.84
1993	1355535191.55	1033869534.52	1946741048.38	24201403882.51	936073800.48
1994	1466330910.05	1005432725.26	1962803171.57	28096217877.06	865672900.35
1995	1499992982.96	1107060191.39	2241719295.15	32813723314.80	797374989.75
1996	1515332642.27	1192046066.16	2196753927.55	35671875197.04	1004482031.22
1997	1891702546.58	1204874671.87	2272180107.12	37592938666.91	989743006.35
1998	2354623773.16	1166703163.16	2446116635.11	38349892133.44	1140617402.84
1999	2550146316.85	1113299681.51	2480206047.29	35143232301.41	1125120753.11
2000	2451809823.34	1091406951.13	1753168917.51	37019020351.08	1231618178.50
2001	2374050589.12	1150193706.07	2003335446.06	37111504661.38	1384977575.27
2002	2226758909.64	1315097966.69	2126474410.90	39093794678.13	1451131787.88
2003	2371645159.00	1295529319.25	2349892092.55	42254373477.50	1523726684.11
2004	2517611621.53	1349632489.17	2116104813.86	48383634188.49	1347953847.20
2005	2598289184.34	1386714145.81	2135783480.96	53389710009.07	1435524182.20
2006	2401153034.04	1388214738.87	2484343345.06	63504013310.02	1284561816.08
2007	2769949151.96	1508475290.69	3074939030.94	69875924493.68	1298868667.00
2008	3384769175.29	1718023523.31	3169346644.53	71433495622.02	1412720590.09

Source: United Nations Statistics (2009).