TOURISM AND THE CURRENT ACCOUNT POSITION IN KENYA

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OCTOBER 2014

DECLARATION

I hereby declare that this is my original work and that to the best of my knowledge has never been presented for the award of any degree in any other university or institution.

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DEDICATION

I dedicate this work to my family for their firm support in encouraging and reminding me of the value of time for period I was undertaking my studies. There positive advice and commitment ensured my accomplishing of this work. They are much appreciated.

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Thank you

LIST OF FIGURES

Figure 1: Trend of current account in Kenya (Kshs Billion) (1980-2013) 4

Figure 2: Trend of tourism earnings in Kenya (Kshs Billion) (1980-2013) 8

LIST OF TABLES

Table 1: Summary of descriptive Statistics 34

Table 2: Stationarity test at Level and first difference 35

Table 3: Unrestricted cointergrating rank Test (Trace Test).....36

Table 4: Lag length Selection Criterion.....37

Table 5: Vector error correction model (VECM) 38

Table 6: Granger causality.....39

Table 7: Regression Analysis 40

LIST OF APPENDICIES

Appendix 1 : Unit Root Test at Level 49

Appendix 2 : Unit Root Test at First Difference 49

Appendix 3 : Cointergration test 50

Appendix 4 : Selection Order Criteria 50

Appendix 5 : Vector Error Correction Model 51

Appendix 6 : Johansen Normalization Restriction 52

Appendix 7 : Granger Causality Test 53

Appendix 8 : Regression Analysis 54

Appendix 9 : Serial Correlation Test 54

LIST OF ACRONYMS AND ABBREVIATIONS

ADF - Augmented Dickey –Fuller

BOM - Balance on Merchandise

BOT - Balance of Trade

CAD - Current Account Deficit

CT - Current Transfer

FEX - Foreign Exchange Rate

GDP -Gross Domestic Product

KNBS - Kenya National Bureau of Statistics

OLS -Ordinary Least Squares

TOURE - Tourism Earnings

UNWTO - United Nations World Tourism Organization

VAR - Vector Autoregressive Regression

VECM - Vector Error Correction Model

WTO -World Tourism Organization

Y - Income Per Capita

TABLE OF CONTENTS

DECLARATION ii

DEDICATION iii

LIST OF FIGURES v

LIST OF TABLES vi

LIST OF APPENDICIES vii

LIST OF ACRONYMS AND ABBREVIATIONS viii

TABLE OF CONTENTS ix

ABSTRACT xii

CHAPTER ONE : INTRODUCTION 1

1.1 Background 1

1.1.1 Kenya Current Account Position 4

1.2.1 Tourism in Kenya 7

1.2 Statement of the Problem 10

1.3 General Objective 11

1.3.1 Specific Objective 11

1.4 Research Questions 11

1.5 Justification and Significance of the Study 12

CHAPTER TWO : LITERATURE REVIEW 13

2.0 Introduction 13

2.1 Theoretical Literature Review 13

2.2.1 Elasticity Approach to Current Account 13

2.2.2 Marshall – Lerner Condition 14

2.2.4 Absorption Approach to Current Account 15

2.2.5 Inter-Temporal Approach to Current Account 15

2.2.6 Monetary Approach to Current Account 16
2.3 Empirical Literature Review 16
2.4 Overview of the Literature 21
CHAPTER THREE : METHODOLOGY 24
3.0 Introduction 24
3.2.1 Model Specification 24
3.2.2 Theoretical Framework 24
3.3 Definition, Measurement of Variables and Expected Results 27
3.3.1 Current Account 27
3.3.2 International Tourism Earnings (Balance on Service) 27
3.3.3 Balance on Merchandise Trade 28
3.3.4 Foreign Exchange Rate 28
3.3.5 Current Transfers 29
3.3.7 Income Per-Capita 29
3.4 Data Type and Source 30
3.5 Estimation Techniques 30
3.6 Statistical Tests 31
3.6.1 Unit Root and Stationarity Test 31
3.6.2 Cointergration Test 31
3.6.3 Vector Error Correction Model 31
3.6.4 Granger Causality 32
3.6.5 Diagnostics Tests For Normality And Serial Correlation 32
CHAPTER FOUR : EMPIRICAL FINDINGS AND DISCUSSION 34
4.1 Descriptive Statistics 34
4.2 Unit root test and results 35
4.2 Cointergraton Test Results and Vector Error Correction Model 36

4.3 Granger Causality 39
4.4 Regression Results 40
4.5 Discussion of the Estimation Results 41
CHAPTER FIVE : CONCLUSION AND POLICY OPTIONS 43
5.1 Conclusion 43
5.2 Policy Options 44
5.3 Area for future research 45
6.0 REFERENCES 46
APPENDICIES 49

ABSTRACT

This study aimed at investigating the existence of a long run relationship between tourism earnings and current account position by examining the effect of tourism earnings on current account deficit in Kenya. The study further determined factors that affect current account in Kenya. The study employed cointergration and vector error correction model and regression analysis. The findings of the study revealed that tourism earnings had a positive coefficient as predicted and was in conformity with previous related studies conducted on relationship between tourism and current account balance. It was also revealed that tourism earnings were not statistically significant to explain changes in the current account even though it exhibited characteristics of a long run relationship with current account deficit. The possible reason for tourism not being statistically significant is due to the data used in the analysis. The study further established that balance on merchandise was the major contributor to the persistent deficit and was statistically significant to explain variation in the current account deficit in Kenya. The study concluded that for Kenya government to control and reduce the persistent current account deficit there is needed to apply fiscal policies and vision 2030 strategies and this was driven by the fact that the imports in Kenya are higher than export creating the huge gap which contribute to the deficit in balance on merchandise.

CHAPTER ONE

INTRODUCTION

1.1 Background

Trade between countries is an essential ingredient in the economic prosperity of any country. With increasing globalization, countries become more and more intertwined in their economic lives. This trade takes different forms but with the intended purpose of allowing each trading nation the benefit of accessing goods and services from trading partners. One of the products that are increasingly traded at the international market is tourism. It has gained considerable importance in the global economy, both for developed and developing countries like Kenya. From direct and indirect combined activities, the travel and tourism sector accounted for a remarkable 4.8% of world export and 9.2% of world's investment UNWTO (2010).

All these economic activities traded among countries are recorded in an official account known as balance of payment. Balance of payment is a statistical statement that aggregates up all transactions that occur between residents and non-residents of a nation. These transactions incorporates things such as stock of exports and imports, tourism earnings, government securities and purchase of financial and real assets abroad, stock, real estates and government bonds. These transactions are recorded within a specific period of time. It is this transactions that offer ascent to sets of accounts that demonstrates all the stream of worth between inhabitant of one nation and inhabitants of different nations when they enter into financial transactions. The balance of payment comprise three accounts, the current account which contains the visible and invisible transactions,

the capital account which outlines the purchasing and selling of assets among nations and the financial account which records the foreign reserve of a nation. Balance of payment thus is a bookkeeping framework that economist apply to break down the net impact of exchanging values between nations. It is an account which is critical in showing the strength of an economy and as a source of intelligence for foreign creditors on the credit worthiness of a country.

Transactions recorded in the statement of account follow a systematic manner of double entry rule, where it gives an overall net balance of zero since each transaction within the system requires an offsetting of credit and debit entry. In other words the transactions of a country signify if a country is a creditor or a debtor. Many developing countries including Kenya have faced the challenges of being regarded as a debtor due to the impact of huge and persistent current account deficit they are having. This has posed a threat to the economic well-being of their nations.

The current account can be defined as the sum of trade balance , income balance and transfer balance, when current account is divided by the gross domestic product of a country and expressed in percentage is referred to as the current account as a percentage of GDP. Over the last three decades developing countries have experienced current account imbalances which have prompted economist and policy makers to center their attention to the dynamics of current account balance. The current account can be further measured as the difference between the value of exports of goods and services and the total value of imports of goods and services. Current account imbalances can either be two folds: surplus or deficit, A deficit means that the country is importing more goods

and services than it is exporting and vice versa for surplus. For a capital – poor developing countries which is regarded as a market for more investment opportunities, the current account can be termed as the difference between national savings and investment where a deficit in this case reflects a low level of national savings relative to investment or vice versa for surplus.

For Kenya as one of the developing nations has experienced a high export import gap due to inelasticity of demand for its primary products from foreign markets, attraction to foreign goods than locally produced and processed goods .This has aggravated the pressure on the current account creating huge deficits.

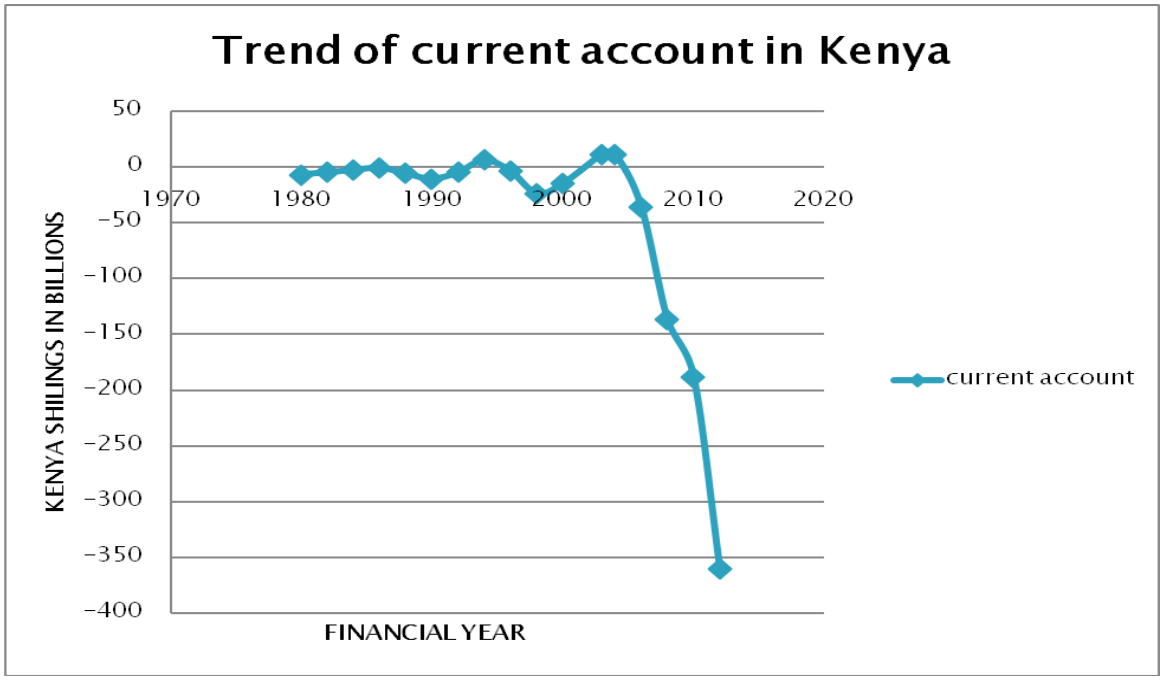
One of the significant macroeconomic objectives of a nation is the attainment of the external balance in an economy. This can be reflected by the current account position. For a nation that experience current account deficit is an indication of poor performance especially when it is in the form of large deficit (Fisher 1988). Kenya's history of current account deficit has shown persistent deficit hitting a record of 18.7% of GDP in 1998 and a decade high of 13.1% of GDP in 2012 (KNBS 2013). Attention has been focused on current account since last surplus was recorded in 2003, because of the upward trend in growth of the deficit which has continued unabated.

While current account deficit can be used as a barometer for measuring the underlying investment finance gap that requires to be filled, it can paint a bad picture when it comes to credit worthiness of a nation .This therefore necessitates an inquiry into the trend of current account position in Kenya.

1.1.1 Kenya Current Account Position

Kenya's current account has been in deficit for many years except in 1993, 1994 and 2003, for the period 1980-2012. The chart in figure 1 shows the trend of current account deficit in Kenya over the period between 1980 and 2013.

Figure 1



Source: Kenya National Bureau of Statistics: Economic survey various

The first highest current account deficit occurred in 1980 of Kshs 6.66 Billion and was caused by a severe drought combined with an oil shock which widened the Current account deficit (KNBS 1981). In 1981-1985 the current account deficit improved from a deficit of Kshs 5.06 Billion to Kshs 1.58 Billion which was attributed to the inflow of capital from the rest of the world and to the invisible transaction improvement which recorded a surplus of Kshs 5.52 Billion compared to Kshs 4.54 Billion in 1984 representing an increase of 22% (KNBS 1986). In the year 1986 there was a remarkable improvement of Current account deficit due to large inflow of foreign exchange through

embassies, international bodies which led the external account to record a deficit of Kshs 0.62 Billion (KNBS 1987). The current account worsened to Kshs 8.13 Billion during 1987 and it was attributed to net earnings on services and the inflow of grants declining (KNBS 1988). In the year 1988 there was improvement in the deficit which was brought about by the invisible subsector where the earnings from tourism improved from a surplus of Kshs 3.56 Billion to Kshs 5.86 Billion in 1988 and further boosted by inflow of grants which doubled during the period (KNBS 1989). In 1989 current account deficit worsened to Kshs 12.08 Billion compared to 1988 and this was due to deterioration in adjusted merchandise transactions which came about due to the continued liberalization of import licensing and weakening of Kenya shilling against the currencies of major trading partners and export grew relatively slow (KNBS 1990). In the year 1990 to 1992 the current account realized an improvement which was attributed to good performance by the transport and tourism sector of the economy and a remarkable increase in private grants, where it moved from Kshs 10.88 Billion to Kshs 5.79 Billion in 1991 and further improved due to the high earnings realized in the tourism sector (KNBS 1993).

The first surplus in current account was seen in 1993 where there was a record of Kshs 5.75 Billion. This surplus was due to good performance in the export and tourism sector, improved inflow of short term capital and grants in addition to arrears on foreign debt servicing (KNBS 1994). The surplus continued to be realized in the subsequent year where there was a record of Kshs 5.82 Billion realized compared with what was realized in 1993. There was a boost in surplus from the export of coffee, pyrethrum, horticultural products and cement (KNBS 1995). While in 1995 to 1998 the deficit trend was back

again with a record of Kshs 20.61 Billion, Kshs 4.19 Billion, Kshs 22.15 Billion and Kshs 24.50 Billion respectively in the years 1995, 1996, 1997 and 1998. This was associated with widening trade deficit brought about by substantial increase in import payment and a sluggish export performance (KNBS 1999).

Resumption of aid in the year 2000 improved the current account to a deficit of Kshs 15.18 Billion, which continued building up towards a surplus of Kshs 11.10 Billion in 2003 (KNBS 2004). After this surplus, the account continued to tumble to a point where it hit 8% of the GDP in the subsequent years moving from a deficit of Kshs 10.85, Kshs 19.06, Kshs 36.80, Kshs 69.46 and Kshs 137.14 Billion in 2008. This was attributed to the violence after the 2007 disputed elections which disrupted the production of food crops. This was also followed by drought and world economic recession in 2008. As a result the current account deficits increased, exchange rates depreciated and terms of trade deteriorated. This affected the cost of production, and food imports thereby leading to a drop in GDP (KNBS 2009). In 2009-2010 Kenya recorded a deficit of Kshs 124.44 Billion in the current account which was attributed to the effects of the world economic slowdown and the depreciation of the shilling against the dollar.

On the other hand, the years 2011 was regarded as the most challenging in Kenya. The country was faced with heavy expenditures in carrying out referendum, passing of the new constitution and the implementation challenges, weather changes and the aftermath of global economic recession of 2008. The current account faced therefore the challenges of world economic slowdown, and Net official reserves declined due to growth in import bill and there was unmatched growth in exports of goods and services. As a result Kenya

recorded a current account deficits of Kshs 359.67 Billion in 2012. A report by the Kenya National Bureau of Statistics (KNBS 2014) showed the total current account deficit worsened as a result of faster growth in the merchandise import bill to a deficit of Kshs 412.37 Billion in 2013 (KNBS 2014).

1.2.1 Tourism in Kenya

The tourism industry is one of the fastest developing sectors and adopted by many developing countries as one of the most net worth source of economic prosperity. Tourism earnings makes an important contribution to economies resulting to positive effects such as job creation, additional income for private and public sector, foreign currency receipt , higher investment and growth. (WTO 1994).

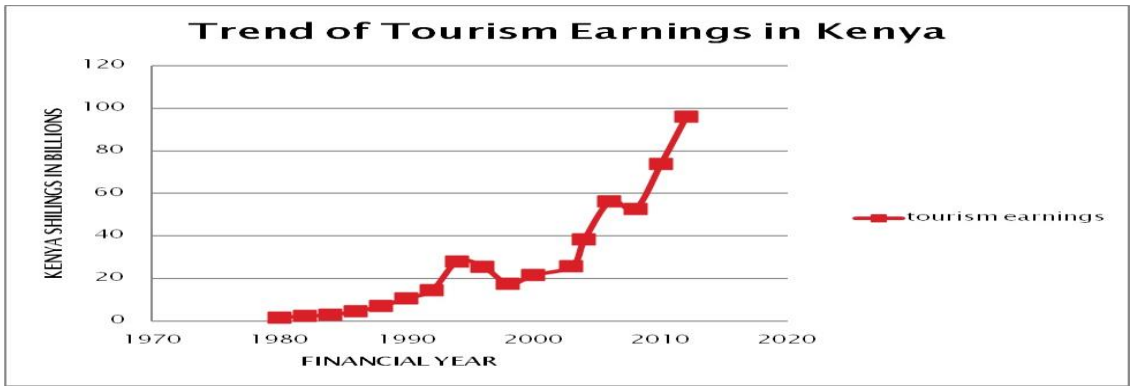
International tourism is treated to be a key source of export earnings where the consumer moves instead of the product. Sinclair (2002) indicated in his study that tourism is a complex product involving capital-intensive investments such as air transport, infrastructure, accommodation, catering, entertainment and services such as curio shops and currency exchange.

Powerful links exist between tourism and key economic sectors. It starts with Visitor arrivals which has multiplier effects on the economy, in that it boosts economic activity generated through the increase in visitor arrivals and expenditure. The immediate change is seen in the increased revenues of firms involved in the tourism sector. It is this firms who then purchase goods and services from other suppliers domestically and internationally, thus causing an indirect effect. According to Sinclair, it is at the aggregate level that the effect of visitor arrivals occurs on the current account. Revenue from

tourism on the other hand form a major item in the current account. Schubert and Brida (2009) on the other hand linked tourism to current account through increase in arrival of tourist. Their findings indicated a positive effect of visitor's arrival on current account deficit caused by increased foreign exchange reserves, increased exports and availability of capital to imports.

Tourism over the last six decades has developed and diversified to becoming one of the largest and fastest growing economic sector in the world. According to UNWTO tourism barometer 2011, tourism arrival has grown tremendously by a growth rate of 5 percent per annum, this consolidated trend has been seen in 2010, where the demand for international tourism maintained a momentum. Arrivals grew from 943 million tourists in 2010 to 983 million tourist in 2011 and international receipt also increasing from 928 billion US dollars in 2010 to 1,030 billion US dollars in 2011 .Within Kenya, the success of tourism was evident when the sector became the fastest growing and most important sector of the Kenyan economy. The figure 2 shows the trend of international tourism earnings over the period between 1980-2013.

Figure 2



Source World Tourism Organisation and UNWTO data (1980-2013)

From 1980 to 1988, international tourist arrivals in Kenya increased at an average of 10 % annually .Tourist arrivals expanded from 393,300 in 1980 to 781,600 in 1991. The number of arrivals peaked in 1994, rose to 1,008,300 before declining to 973, 614 in 1995. Contrary to this downward trend, tourist arrivals world-wide totaled 561 million in 1995 reflecting a growth rate of 5.5% (WTO 1990). Tourism earnings increased more than three times from Kshs 2.40 Billion in 1983 to Kshs 8.60 Billion in 1989, before rising to Kshs 28.02 Billion Million in 1994. This was attributed to a number of factors that included inflation and the fall in the value of Kenya shilling in relation to the US dollar. From 1995 to 2000 tourism earnings dropped from Kshs 25.60 Billion to as low as Kshs 17.50 Billion then regained to Kshs 21.60 Billion due to low tourist arrivals and travel advisory. (KNBS 2001)

The tourism sector maintained an upward trend in 2001-2007, realizing a 13.6% growth in 2007 in tourist arrivals compared with 8.2% in 2006. Earnings also maintained an upward trend and increased by 28.9% in 2007 to record Kshs 65.40 Billion from Kshs 56.9 Billion the previous year (WTO 2008). In 2008-2010, net tourism earnings declined and then shot up to a record of Kshs 73.70 Billion from Kshs 52.70 Billion in the year 2008. However, in 2008, the sector suffered a major blow as a result of the post-election violence, increased oil prices and, the world economic crisis. (KNBS 2009). In 2009, tourist arrivals declined by 33.9% and dollar earnings declined by 19.9% to record an entry of Kshs 53.30 Billion. There was a big recovery in 2011, which suggested that the tourism effect was owed to the post-election violence rather than the crisis where the earning shot up to Kshs 97.90 Billion (WTO 2012).

During the year 2012 tourism earnings decreased from Kshs 97.90 Billion in 2011 to Kshs 96.00 Billion in 2012. International visitors' arrival decreased by 6.1 % from 1.8 million in 2011 to 1.70 million in 2012. This decline in performance was attributed by slowdown in the global economy especially in the euro zone coupled with travel advisories over securities concerns (WTO 2013). This dealt a major blow to tourism sector and further deteriorated tourism earnings in 2013 to Kshs 94.00 Billion (KNBS 2014).

According to the World Bank (2012), Kenya's current account deficit had hit a record of 13.7% of Gross Domestic Product (GDP), while its export import gap has widened to a record of 20% of Import growth and 10% of export growth. The widening of this gap brought about by import has been due to oil import which amounted to 27.6% of total import bill in 2011, an increase by 2.7 from the previous year of 2010 which recorded 8.9% of GDP. Further the rise in world crude oil by 33%, increase in consumption volume by 12% has further worsened the gap. That aside, the constant status of factors such as Net factor income and Current transfer also have contributed to the worsening of the current account deficit

1.2 Statement of the Problem

Tourism earnings play a significant role in enhancing current account position in the balance of payment. It is a service that generates significant foreign exchange earnings through tourism receipt from spending by tourists visiting the country. Kenya's tourism sector in general has recorded tremendous growth, where there has been an increase in foreign exchange earnings from as low as Kshs 2.24 Billion in 1980s to as high as Kshs

94.00 Billion in 2013. Despite this undisputed growth of the sector, the current account has persistently recorded huge deficits. Tourism being the second largest foreign exchange earner after horticulture, then why is there a persistent current account deficit?

Understanding the link between tourism earnings and Current account deficit is therefore critical in highlighting the direct effect of tourism earnings on Current account deficit and in determining policy options that can improve outcomes relating to this linkage.

1.3 General Objective

- The main objective of this research was to investigate the existence of a long run relationship between tourism earnings and current account imbalances that have occurred between 1980 and 2013 in Kenya using time series regression model.

1.3.1 Specific Objective

- To determine the factors affecting Current account in Kenya.
- To model the relationship between tourism earnings and Current account in Kenya
- To offer policy options based on research findings.

1.4 Research Questions

- What are the factors affecting Current account in Kenya?
- What is the relationship between tourism earnings and Current account in Kenya?
- What is the policy option drawn from the study?

1.5 Justification and Significance of the Study

Studies on current account have to be undertaken since they assist in identification of key components which affect the economy. However, most studies that have been undertaken regarding current account have concentrated on key determinants in current account. This has prompted this study in investigating the effect of tourism on current account, since tourism is regarded as a factor that can trigger growth in the economy and has been embraced by many developing countries.

However, very little has been done to establish the link between current account and tourism given that this is a variable that contribute foreign exchange earnings in terms of export of service

I believe this research can be helpful to the nation and development of the low income countries such as Kenya which aims to be industrialized by the year 2030 through its blue print Vision 2030 where tourism has been factored as a sector responsible for boosting economic performance.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The persistent current account deficit is a major challenge in developing nations that is hindering economic improvement, and there exist no single solution that can solve the problem of current account deficit. This has further been aggravated by the different and unique structure that developing countries pursue and moreover the causes of the persistent current account deficit. The first section of this chapter shows various theories that have been developed on ways of correcting the current account deficit problem, while the second section entails, studies that have been conducted by various authors on current account and tourism, methods they have adopted and conclusion of their findings, while the last section of the chapter looks at the overview of the entire chapter

2.1 Theoretical Literature Review

2.2.1 Elasticity Approach to Current Account

This is an approach proposed by (Metzler 1948). Elasticity Approach suggests that current account deficit arise due to excess demand for foreign exchange. It is an approach that assumes prices are flexible and that income is fixed. It explains Current account deficit in terms of prices and that prices are responsible in creation of a trade balance. The authors regard prices to be the exchange rate. According to this approach, where there is excess demand, producers in the economy tend to increase prices to get rid of the excess demand. So the approach defines current account deficit as a deficit which arise due to excess demand of foreign currency. To correct this, the approach proposes that

devaluation needs to be carried out since it is responsible for causing demand for foreign currency to reduce and supply to increase. So in case of a current account deficit brought about by exchange rate dropping below the required rate, then devaluation can play a part in reducing the deficit by turning it into a surplus.

2.2.2 Marshall – Lerner Condition

This is a condition that says a devaluation of countries currency will improve the current account when the sum of export elasticity of demand and import elasticity of demand is greater than one. For this condition to hold, the domestic and foreign prices should remain constant so that real exchange rate is similar to nominal exchange rate, balance of trade is only affected by change in demand and at the point of devaluation the balance of trade should be equal to zero. According to Marshall – Lerner condition, there are two effects which are likely to affect the current account, the price effect which contributes to worsening the current account by imports prices increasing thus making them expensive and volume effect which is brought about by export becoming cheaper from the foreign residents perspective thus improving the current account. Devaluation leads to J. curve, where the J. Curve effect is the pattern of the balance of trade following devaluation. It is assumed that in the short run the Marshall – Lerner condition might not hold, since in the short run exports and imports volumes do not change much, price effect brought about by devaluation might worsens the current account, in that balance of trade continue to fall for a certain period of time, before finally turning upwards. The initial fall is brought about due to low elasticity's where quantities do not respond to price changes in the short run. But over the long run elasticity's increase so that balance of trade improves. This is what referred to a J. Curve shape.

2.2.4 Absorption Approach to Current Account

The absorption approach (Alexander 1952) focuses on the fact that current account imbalances can be viewed as the difference between domestic output and domestic spending (absorption). This is an advancement of the elasticity approach. Understanding how devaluation affects both income and absorption is therefore central to the absorption approach to the current account balance. Devaluation as a process under this situation is assumed as an expenditure switching technique since it is not possible to attain Current account deficit as well as price stability with the use of devaluation alone. According to the approach, to correct the current account deficit the process of devaluation has to be accompanied by either of the two adjustment policy that is income increase or domestic spending decreasing policies. To absorption approach, it is crucial therefore for absorption reduction to be undertaken on the domestic side through reduction of expenditure made by the government in order to improve on current account deficit.

2.2.5 Inter-Temporal Approach to Current Account

This approach to Current account deficit is an advancement of absorption approach; it is an approach that checks the Current account deficit from the savings – investment perspective. It relies on the assumption about future expectation of various economic agents' optimization decision. It assumes that economic agent's behavior is affected by expected values of various macroeconomic factors regarding inter-temporal budget constraint. In this approach, current account deficit is caused by low national income or savings and high investment in the economy. To correct current account deficit the approach suggest that savings and national income needs to be higher than investment.

2.2.6 Monetary Approach to Current Account

The monetary approach to the balance of payments (IMF 1977, Johnson 1972) is a theory under a fixed exchange rate regime. The approach argues that a sufficient contraction of the money stock will always restore the external balance by the central bank raising the interest rate and the government reducing spending. In order to correct imbalances in balance of payment brought about by current account deficit, a country may have to sell foreign exchange and in return receive high powered money, thereby reducing the money stock. On the other hand when it buys foreign exchange, expanding the money stock, a surplus in the current account increases the outstanding stock of high powered money.

Therefore the first four approaches to Current account take different views to current account improvement as compared to the last two namely inter-temporal and monetary approaches. This study will be anchored on the first three approaches namely; elasticity, Marshall – Lerner condition and absorption approach to Current account in its explanation of the relationship between Current account and international tourism earnings. The control variables will be balance of trade, exchange rate, current transfer and Income per- capita.

2.3 Empirical Literature Review

Osoro (2013) investigated the long run determinants of balance of payment dynamics in Kenya using cointergration, where the results obtained indicated that variables that exhibited non stationarity were considered not significant in the determination of the balance of payment in the long run. They identified in their study that balance of payments fluctuations could be caused by the level of trade balance, exchange rate

movement and foreign direct investment inflow. Their study further revealed that foreign direct investment and exchange rates are the main determinants of balance of payments and that balance of payment is both a monetary and real phenomenon.

Ali Kemal Celik, et al. (2013) investigated the contribution of tourism to economic performance through its effect on the balance of payment from the study conducted in Turkey using regression model and time series analysis. It was established that tourism plays a key role in reducing the current account deficit indicating that tourism revenue generation has an inverse relationship with the current account deficit. The study was conducted on a period of 1984-2012 data of tourism revenue and balance of payment.

Kumhof, et al. (2012) in their study of income inequality and current account imbalance studied the empirical and theoretical link between increases in current account deficits. From their study it was observed that by use of crossectional econometric evidence they ascertained that higher top income shares and financial liberalization are associated with substantially large external deficit. They developed a model that featured workers whose income share declined at the expense of investors. Their findings suggested that loans to workers from domestic and foreign investors supported aggregated demand and resulted in current account deficit. They concluded that it is the financial liberalization that can help workers smooth consumption, but they were quick to caution that this will happen at the cost of higher household debt and larger current account deficits. It was also observed in their study that in emerging markets workers cannot borrow from investors who

instead deploy their surplus funds abroad leading to current account surpluses instead of deficit

Yol (2009) analyzed the long-run sustainability of current account deficits of three African countries—Egypt, Morocco and Tunisia—using the bounds testing approach to cointergration. He utilized a sample from 1972-2005 for each country and found cointergrating relationships existing between exports and imports in all cases. The author found that the cointergrating factors for Egypt and Morocco were statistically different from one, while that of Tunisia was statistically equal to unity. Without reference to the strong and weak conditions of sustainability, they concluded that in the long run, current account deficits in Egypt and Morocco were unsustainable, but were sustainable in Tunisia's case.

Brida, et al, (2008) used cointergration and error correction model in investigation of existence of long run relationship of current account in Mexican economy during 1980-2007. Their study established that there is positive uni-directional causality from tourism expenditure to real GDP.

Ogus and Sohrabji (2008) in their analysis of Intertemporal Solvency between actual and optimal net external liabilities from 1992-2004, used time series stationarity test and cointergration and based their study on Intertemporal approach. They found nonexistence of long run association between actual and optimal net external liabilities. This was after realizing that there were structural breaks in his data. The authors later changed their conclusion and acknowledged an existence of a long run association.

Ongan (2008) investigated the contribution of tourism to the sustainability of current account, he utilized the tourism led growth hypothesis approach and established that despite tourism increasing influence to the external balance, persistent current account deficit were still unsustainable in the long run.

Muwanga and Katamba (2005) conducted a study in Uganda over the period 1994-2004, where they analyzed the trend of current account deficit; their findings indicated that grants was the key variable that proved not to be consistent and large. To them current account in Uganda will continue to be unsustainable in the long-term since the gap between import and export was widening with time and this was responsible in causing the persistent current account deficit .

Matsubayashi (2005) used time series analysis in reexamining if the current account deficit of the United States was sustainable. This was a study that captured a few decades. They incorporated various variables including macroeconomic, structural and financial that makes up current account and used intertemporal approach. Their findings indicated that a sustainable current account can be obtained if the ratio of private sector financing to GDP is included in his model specification.

Baharumshah, et al. (2003) on the sustainability of current account imbalances for four Asian Countries (Indonesia, Malaysia, Philippines and Thailand) over the 1961-1999 periods, using intertemporal approach in modeling the current account of these countries, time series analysis of stationarity, cointergration in the analysis and estimation and

structural breaks to deal with error and shortcomings. Their findings suggested that all the countries except Malaysia did not have a long run characteristic. They concluded that current account in these three countries was not sustainable. They further stated that most of these countries were affected by macroeconomic performance since the onset of the Asian Crisis in Mid-1997.

Sinclair and Stabler (2002) found that tourism plays a big role in economic growth and development in that it creates employment opportunities and income generation through foreign exchange earnings. This was later referred to as the tourism led growth hypothesis. To them tourism led growth hypothesis states that international tourism is a panacea to economic growth in that its expenditure leads to foreign exchange earnings which further leads to the importation of capital goods thus production of goods and services.

Greenidge et al. (2011) used different approaches in explaining the current account deficit sustainability in Barbados, coppin et al, used signal approach in estimation of current account crises for 24 months in advance, while Greenidge used intertemporal budget constraints approach by Hakkio and Rush (1991) and Husted (1992). Both of the studies found that Barbados current account deficit is sustainable. The study utilized cointergration and concluded that their finding suggested a strong form of sustainability; this was after both authors normalized the variable import which was cointergrating vector rather than exports.

Bodman (1997) in their study of Australian Trade balance and current account used cointergration and error correction techniques in establishing the dynamic relationship between imports and exports in the long run. They concluded by suggesting that there exist a long run equilibrium relationship between the two variables. It is from this argument that he concluded by saying that Australian current account deficit is sustainable.

2.4 Overview of the Literature

Most studies conducted on Current account deficit in relation to key variables that cause imbalances in the current account have adopted cointergration and time series analysis. Their findings have indicated that Tourism earnings have an effect on Current account deficit in the long run. These studies have put forward policies implications geared on boosting the tourism sector through development and marketing that will attract earnings from tourism sector. It has also been established that out of the studies which have been reviewed most have used inter –temporal approach to current account position. This is an approach which rely on investment and savings to determine the current account deficit, more over it is the reason why few studies have been conducted in Africa since Africa is a continent characterized by low investment and low savings. Most developing countries face the challenge of import export gap. This study tend to differ from other studies in that it used a combination of absorption approach , elasticity approach and Marshall Lerner condition to anchor the study and try to answer the research questions. Moreover many case studies are specific to some countries and therefore they are not immediately applicable to other countries. Additionally there are several possible explanations for the difference existing in the level of tourism receipts and current

account deficit like investment opportunities, economic, difference in natural recourses, tourism infrastructure, safety, security and socio cultural futures. In conclusion there are few studies that linked Tourism earnings to current account balance in Kenya given that tourism is one of the key sectors that generates revenue in Kenyan economy. The current account deficit has continued to increase over a period of time, making it a significant variable in economic decision making. Studies on current account and links to key variables in the economy are significant for policy makers and economic agents. This study was intended to add to existing literature and in filling the gap by exploring the effect tourism earnings have on current account in Kenyan economy. This was the contribution this study intends to give.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the theoretical framework which the econometric model will be generated from, time series econometric model that the study intends to use in its analysis (Johannes and Juselius cointergration, vector error correction model and multiple regression analysis) and diagnostic tests to be conducted. It also defines the economic variables that affect the current account (explanatory) versus the dependent variable the current account.

3.2.1 Model Specification

3.2.2 Theoretical Framework

This study adopts a combination of elasticity, Marshall- Lerner condition and absorption approach in modeling the behavior of current account. The elasticity approach and Marshall-learner condition works in the form of price change in goods and services imported and exported, while the absorption approach provides a more inclusive and potentially less misleading framework in analyzing the current account dynamics. According to Marshall-Lerner condition if the sum of elasticity's of demand for exports and import is greater than one, devaluation of local currency leads to a current account improvement. Ahearn (2002) derived the Marshall – Lerner condition is as follows:

$$BOT = (XV).(PD) - (IV).(PF).(E) \quad 1$$

Where BOT = Trade balance, XV= Volume of Exports, PD= Price of Domestic Goods, IV= Volume of Imports, PF= Price of Foreign goods and E= Exchange Rate. If the assumptions of Marshall Lerner conditions are put into consideration, then assumption one which states that domestic and foreign prices remain constant, such that there is no difference between nominal and real exchange rate we get

$$BOT = X - M.(E) \quad (2)$$

Where X and M are nominal prices of exports and imports respectively.

Differentiating with respect to E, we get

$$\frac{dBOT}{dE} = \frac{dX}{dE}.E - M.dE/dE \quad (3)$$

Now if a devaluation in the local currency occurs e.g. like an increase in E, this should lead to an increase in the balance of trade, therefore

$$\frac{dBOT}{dE} > 0 \quad (4)$$

That is the slope of the function is positive and BOT and E are positively related.

$$\frac{dX}{dE} - \{\frac{dM}{dE}\}.(E) - (M).(1) > 0 \quad (5)$$

This implies

$$\frac{dX}{dE}.\left\{\frac{E}{X}.\frac{X}{E}\right\} - \{\frac{dM}{dE}\}.(E).\frac{M}{M} - (M).(1) > 0 \quad (6)$$

Then

$$\frac{dX}{dp}.\left\{\frac{E}{X}.\frac{X}{E}\right\}-\left\{\frac{dM}{dE}\right\}.\frac{E}{M}.(M)-(M)>0 \quad 7$$

The elasticity's of export and import can be defined as:

$$Ex=\left(\frac{dX}{dE}\right).\left(\frac{E}{X}\right) \quad , \qquad Em=\left(\frac{dM}{dE}\right).\left(\frac{E}{M}\right) \quad 8$$

Then substituting EX and Em into equation 7 implies:

$$Ex.\left(\frac{X}{E}\right)-(Em).(M)-M>0 \quad 9$$

By dividing by M gives:

$$Ex.\left(\frac{X}{ME}\right)-(Em)-1>0 \quad 10$$

If assumption three is then considered which states that at the time of devaluation the trade balance should be equal to zero we have:

BOT= 0

Therefore $X-(M).(E)=0\ thus\ X=(M).(E)$ 11

Therefore equation 10 becomes

$$Ex-Em-1>0\ \ or\ \ Ex-Em>1 \quad 12$$

It is from this argument that this study adopts the elasticity approach, Marshall Lerner condition and absorption approach model to form a linear functional model.

The linear functional form is:

$$CAD=\beta_0+\beta_1 TourEt+\beta_2 Bomt+\beta_3 Fext+\beta_4 CTt+\beta_5 Yt+\mu t$$

Where CAD= Current account deficit, TourE = Tourism Earnings, Bom = balance of merchandise, Fex = Foreign Exchange rate, CT= current transfer, Y = Income per capita,

and μt is stochastic error term. The model uses natural logarithms in estimating the contribution of tourism earnings to correction of current account deficit in percentage and it also take care of large figures. The coefficient of tourism earnings in this model is known as elasticity of tourism to current account balance.

$$CAD = \beta_0 + \beta_1 lnTourEt + \beta_2 lnBom + \beta_3 Fext + \beta_4 lnCTt + \beta_5 Yt + \mu t$$

3.3 Definition, Measurement of Variables and Expected Results

3.3.1 Current Account

This is the total sum of balance of trade, current transfers, and net factor income and government services. It is the measure of how an economy is performing in the eye of the foreigners. They are usually recorded in the balance of payment account. The major components in this account are goods and services, income and current transfers. Data representing current account is expressed as percentage of GDP of the country.

3.3.2 International Tourism Earnings (Balance on Service)

This is the earnings from international tourism and is expressed in the form of foreign exchange earnings. They are recorded in the international service subsector; they are regarded as intangible goods and in the invisible export part of the current account, international tourism is the largest component in the invisible export part of the current account. International tourism earnings are regarded as the receipts. Data on tourism earnings are expressed in national currency in billions of Kenya shillings and are derived by subtracting tourism gross revenue from tourism expenditure. The expected result is an inverse relationship between tourism earnings and current account deficit with a positive coefficient.

3.3.3 Balance on Merchandise Trade

This are the tangible goods which are otherwise referred to as tradable tangible goods in export and imports, they are the one that contribute to merchandise tradable account, they include trade in major components of the economy e.g. agricultural products, imports of equipment, import of petroleum products, consumer goods and others. It is the difference between payment received for export of goods to other nations and the payment for the import of goods from other nations. Balance on merchandise trade is the largest component of a country's balance of payments. It is sometimes referred to as the visible part of the current account. The volume of import is regarded as the aggregate change in quantities of imports of goods whose features are unchangeable. Here the merchandise and their prices are regarded to be constant and thus changes are due to quantities only. While volume of exports are referred to the aggregate change in quantities of exports of goods whose features are unchangeable. The merchandise and their prices are regarded to be constant and any change will be only on quantities. The unit of measurement is percentage change. It is expected that balance of merchandise to be with a positive coefficient indicating a direct relationship with current account deficit.

3.3.4 Foreign Exchange Rate

This is the price of a nation’s currency compared to another currency. An exchange rate can be divided into two components, the domestic currency and foreign currency. When foreign currency is expressed in the form of domestic currency, the exchange rate is regarded as a direct quotation, while if domestic currency is expressed in terms of foreign currency it is referred to as indirect. This is a variable which play a crucial role in the determination of current account balance, it is responsible in the elasticity effect of

exports and imports. It is expected that foreign exchange rate to have a negative coefficient indicating an increase in exchange rate would lead to more revenue inflow thus export becoming more than import thus reducing current account deficit. Data representing foreign exchange rate is expressed in percentage form.

3.3.5 Current Transfers

This is unilateral funds transfers that are non-refundable. The transfer in question here can be regarded as donation aids grants pensions, foreign remittances in terms of salaries and official assistance. Current transfers are regarded to occur when there is a bilateral of multilateral agreement between countries and country is offered funds in form of donations in exchange of nothing. The current transfers are considered as minor component of current account balance. Data representing current account is expressed as national currency in billions.

3.3.7 Income Per-Capita

Income Per-capita is often used as average income, a measure of the wealth of the population of a nation, particularly in comparison to other nations. It is usually useful statistic for comparison of wealth between sovereign territories. Income per capita is the income expressed as a ratio of the population for a country. Income per-capita is usually used to measure the living standard of the people of a country. It can be calculated for a country by dividing the country's national income by its population. It is expected that income per-capita to have a positive coefficient indicating that an increase in income would lead to increase in import thus creating a gap between imports and export thus is

widening the current account deficit. Data representing income per capita is expressed as percentage of GDP of the country.

3.4 Data Type and Source

This study was based on annual time series data of the economic variables: current account deficit, tourism earnings, balance on merchandise, foreign exchange rate, current transfer and income per-capita for the period 1980-2013 for Kenya. It should be noted that data for current account deficit was converted to percentage of GDP, while balance of merchandise was measured as the difference between exports and imports, foreign exchange rate was measured as Kenya shillings verses US dollar. The data was chosen from 1980s since it was the time when Kenya experienced acute followed by persistent current account deficit. All data was gathered from various issues of World Bank online data base and from relevant government and tourism related agencies.

3.5 Estimation Techniques

The study will use ordinary least square (OLS) method to estimate the link between tourism earnings, balance of merchandise, foreign exchange rate, current transfer, income per-capita and current account deficit. The study choose OLS since its estimators are expressed solely in terms of the observable quantities or sample and once the OLS estimates are obtained from the sample data, the sample regression line can be easily obtained.

3.6 Statistical Tests

3.6.1 Unit Root and Stationarity Test

The variables involved in this study are regarded as macro-economic time series data which contains unit root characteristics by existence of stochastic trends. Unit root test is essential for the existence of stationarity of time series data that is used to avoid spurious regression. This study will examine the stationarity of the data using Augmented Dickey Fuller (ADF) Test. ADF test will be conducted by comparing the absolute value of the test value versus the critical value.

3.6.2 Cointergration Test

Cointergration simply refers to long run association between economic variables that have unit root. These are economic variables that drift together although individually they exhibit non stationarity and are time invariant. If the economic variables in this study have unit root, the study will proceed to test for cointergration test using the cointergration test of Johansen (1988) and Johansen and Juselius (1990) Maximum Likelihood estimator). This involved two tests to be conducted, (Trace statistic and maximum Eigen value test) to determine the number of cointergrating vectors. The study will then proceed to determine sufficient lag length required for the model estimation and then determine the number of cointergration relations. After unit root (ADF) test, we shall proceed therefore to run a cointergration test.

3.6.3 Vector Error Correction Model

The vector error correction model (VECM) is a model that checks if the error correction term has a long run causality effect. It is a model that ensures the economic variables are

stationary when first differenced. For it to be developed the economic variables must have cointergrating vectors. This study will check for presence of cointergrating vector and develop vector error correction model. VECM is essential in checking whether an individual lagged economic variable has any significant effect on the dependent variable. We shall run this test to find out if there exist a long run causality effect between the lagged variables of the economic variables and current account deficit. This shall be guided by the sign of the coefficient of error correction term.

3.6.4 Granger Causality

The study will then test for existence of short run causality between the economic variables using the granger causality test. This is a test which will check if one time series could be used to predict another time series. That is whether the tourism earnings in the study can be used to forecast current account deficit in Kenya in future. Here the test will be conducted by checking if the lagged variables combined have significant influence on the dependent variable and whether there is a causal relationship between current account deficit and tourism either in a bi direction or unidirectional causality.

3.6.5 Diagnostics Tests For Normality And Serial Correlation

The Jarque-Bera test will be conducted to test normality of the error term. This is a test that involves computing standard deviation, skewness, probability and kurtosis. This test is important in helping with the identification of presence of outliers. In case there is presence of outliers, additional variables can be added to act as control variables. To test for the credibility of the estimated OLS parameters, the degree of multicollinearity will

be measured. Breush-Godfrey test will also be conducted to test for serial correlation and heteroscedasticity.

CHAPTER FOUR

4.0 EMPIRICAL FINDINGS AND DISCUSSION

This chapter presents a summary of the results that have been obtained from empirical econometric testing and analysis. The meanings of the results are also discussed based on the figures obtained from the test that the data has been subjected to. This chapter begins with the descriptive statistics, statistical test results and the regression results.

4.1 Descriptive Statistics

This study analyses the relationship of the following variables; current account deficit, tourism earnings, balance on merchandise, foreign exchange rate, current transfer and income per capita. These variables have been analyzed as per their mean, standard deviation, minimum and maximum.

Table 1 Summary Statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
Current account deficit	34	-55.66265	108.2462	-412.37	11.1
Tourism Earnings	34	31.63824	29.52554	1.6	97.9
Balance on Merchandise	34	-158.6517	245.3452	-882.17	-7.3
Foreign exchange Rate	34	50.76088	28.32332	7.42009	88.81
Current Transfer	34	64.22006	78.03017	0.74	275.49
Income per capita	34	29.95608	24.21991	4.39539	95.0173

Table 1, above shows current account ranging between a deficit of Kshs 412.37 billion and a surplus of Kshs 11.1 billion as it maintains a mean deficit of Kshs 55.66265 billion. While tourism earnings results indicated a minimum earnings of Kshs 1.60 billion and a maximum earnings of Kshs 97.9 billion as it maintains a mean earnings of Kshs 31.63824

billion. This huge gap in the variables may be due to changing economic condition between 1980 and 2013 such as insecurity in the country, post-election violence and higher imports of consumer good. It was also noted that with the exception of current account deficit and balance on merchandise, tourism earnings, foreign exchange rate, current transfer and income per-capita had standard deviations clustering around their respective mean values.

4.2 Unit root test and results

The unit root test is conducted to detect non stationarity in all the variables under the study to avoid spurious estimates. The Augmented Dickey Fuller test was applied to test whether the collected time series was stationary or non-stationary. The test was measured by comparing the ADF test value and Mackinnon Critical value at 5 percent level. Table 2 shows the results of unit root test.

Table 2 Stationarity Test at Level and First Difference

LEVEL				FIRST DIFFERENCE		
Variable	ADF test statistics	ADF critical value	P Value	ADF test statistics	ADF critical value	P Value
Current account deficit	1.199	3.568	1.0000	5.260	3.572	0.0001
Tourism Earnings	1.114	3.568	0.9267	6.143	3.572	0.0000
Balance on Merchandise	1.529	3.568	1.0000	4.077	3.572	0.0068
Foreign exchange Rate	1.608	3.568	0.7895	5.298	3.572	0.0001
Current Transfer	2.173	3.568	0.5049	14.030	3.572	0.0000
Income per capita	5.630	3.568	0.0000			

From table 2 above, the computed test statistics was at lag zero. The results of stationarity test using ADF showed that current account deficit, tourism earnings, balance on

merchandise, foreign exchange rate and current transfer had an absolute value of ADF test less than the critical value, which indicated presence of unit root and non stationarity at 5 percent level. When the variables are first differenced they became stationary meaning they are integrated at order one *I(1).* The results of stationarity test using ADF also indicated that income per-capita was stationary at level *I(0*). The study then proceeded to conduct cointergration test.

4.2 Cointergraton Test Results and Vector Error Correction Model

This involved establishment of long run relationship between variables that were stationary at first difference. Having established that current account deficit, tourism earnings, balance on merchandise, foreign exchange rate and current transfer had unit root at level. The study proceeded to conduct cointergration test using Johansen and Juselius cointergration test. This is a test which assisted to check presence of multiple cointergrating relationship. The table below shows the results of cointergration test.

Table 3 Unrestricted Cointergrating Rank Test (Trace Test)

Johansen test for cointergration				
Trend: constant			**Number of Obs = 32**	
Sample: 1982-2013			**Lag = 2**	
Hypothesized			**Trace**	**0.05**
Maximum rank	**parm**	**Eigen Value**	**Statistics**	**Critical value**
0	30		93.0266	68.52
1	39	0.80472	**40.7602***	**47.21**
2	46	0.45429	21.3787	29.68
3	51	0.31796	9.1335	15.41
4	54	0.19911	2.0287	3.76
5	55	0.06143		

Trace test indicates four cointergration at the 0.05 level

From the results in Table 3 above, the trace statistics value at maximum rank 1 was less than the critical value indicating there existed a long run relationship between variables in the study. Both the trace and maximum test value were less than the critical value at 5 percent significant level, hence showing presence of cointergrating vectors. This meant that the variables tend to move together in the long run.

Due to presence of cointergrating vectors, a vector error correction model was conducted to check if there existed long run causality between the first differenced current account deficit and the individual lagged variables (explanatory). To check on this the coefficient of the error correction term was expected to have a negative sign and the p value of the error correction term coefficient was expected to be less than 0.05. A lag selection criterion was conducted to determine the number of lags to be used in vector error correction model. Table 4 shows the results of lag selection.

Table 4: Selection-Order Criteria

selection-order criteria								
sample:1984-2013								
							Number of obs=30	
lag	LL	LR	df	p	FPE	**AIC**	HQIC	SBIC
0	-686.728				7.3e+13	46.1152	46.1899	46.3487
1	-541.949	289.56	25	0	2.6e+10	38.1299	38.5782	39.5311
2	-504.085	75.728	25	0	1.3e+10	37.2723	38.0941	39.8412
3	-439.343	129.48	25	0	1.4e+09	34.6229	35.8182	38.3594
4	-322.275	234..14*	25	0	18.6e+06*	**28.485***	30.0539*	33.3892*
Endogenous: current account deficit, tourism earnings, balance on merchandise, foreign exchange rate, current transfer.								

The study allowed for a maximum of up to four lags. The optimal number of lags for each Vector error correction model was selected based on the lag selection criteria. The study selected Akaike Information Criterion (AIC). From the table 4 the maximum lag length selected for (AIC) was lag four. The study proceeded to conduct the vector error correction model.

Table 5 Vector Error Correction Model (VECM)

Dependent	**Description**	**Coef.**	**Std.Err.**	**Z**	**p>[Z]**
First differenced Current account deficit	**_Cel L1**	**-0.2778**	**0.24093**	**-1.15**	*0.049
First differenced Tourism earnings	Lag one	-4.44441	2.23918	-1.98	**0.047
	Lag two	1.798818	2.943257	0.61	0.541
	Lag three	-6.14219	3.411888	-1.8	*0.072
First differenced Balance on merchandise	Lag one	-0.23241	0.588722	-0.39	0.693
	Lag two	-1.24251	0.745562	-1.67	*0.096
	Lag three	0.817996	0.743375	1.1	0.271
First differenced Foreign exchange rate	Lag one	0.637416	0.811811	0.79	0.432
	Lag two	0.28549	0.861247	0.33	0.74
	Lag three	-0.46252	0.79394	-0.58	0.56
First differenced Current transfer	Lag one	-1.55756	1.137263	-1.37	0.171
	Lag two	-2.88497	1.420759	-2.03	*0.042
	Lag three	-1.21177	1.714851	0.71	0.48

Negative coefficient indicates presence of long run causality with prob < 0.05

*** indicate significance at 0.05 and * indicates significance at 0.10*

Table 5, shows that there is long run causality running from individual lagged variables of tourism earnings, balance on merchandise, foreign exchange rate, current transfer to current account deficit. This is because the coefficient of the error correction term is negative **(-0.277528**) with a standard error of (**0.2409286)** and a z value of (**-1.15)**. The

lagged variable indicated presence of short run causality. The study proceeded to conduct granger causality test.

4.3 Granger Causality

This is a test conducted to check if one time series could be used to predict another time series. Granger causality test can be used to forecast current account deficit in Kenya. This can be done by checking presence of either bidirectional or unidirectional relationships between the dependent variable and the independent variables. To check on this, both t test and F test in lagged values were included. The results of granger test are reported in Table 6.

Table 6 Granger Causality

Equation	Excluded	F	df	df_r	Prob>F
Current account Deficit	Tourism Earnings	0.90997	4	9	0.0581
Tourism Earnings	**Current account Deficit**	**5.8270**	**4**	**9**	**0.0135**
Current account Deficit	Balance on merchandise	2.9488	4	9	0.0820
Balance on merchandise	Current account Deficit	0.93342	4	9	0.4866
Current account Deficit	Foreign exchange rate	0.95485	4	9	0.4765
Foreign exchange rate	Current account Deficit	0.6378	4	9	0.6486
Current account Deficit	**Current Transfer**	**5.6368**	**4**	**9**	**0.0149**
Current Transfer	Current account Deficit	2.9408	4	9	0.0825

The results from the analysis shows that after lagging the values four times, there was statistical evidence of a unidirectional granger causality relationship running from tourism earnings to current account deficit with a F test probability value of 0.0135 which is below 5 percent significance level. While current transfer had a unidirectional granger causality relationship running from current account deficit to current transfer with a F test of 0.0149 which is below 5 percent significant level. After the granger causality test, the study proceeded to run the regression line using the first differenced variables.

4.4 Regression Results

One of the key objective of the study was to determine the factor that affects the current account in Kenya and establish the link between tourism earnings and current account deficit in Kenya. Ordinary least square method was used to examine the linkage. The estimation of the model is show in the table below.

Table 7 Regression Analyses

Variable	Coef.	Std.Err	t	P>[t]
Differenced Tourism earnings	0.33387	0.71428	0.47	0.644
Differenced balance on Merchandise	0.557	0.05776	9.64	0.000
Differenced Foreign exchange rate	-0.12619	0.39589	-0.32	0.752
Differenced Current transfer	-0.33574	0.07443	-4.51	0.000
Constant	-3.97427	2.6097	-1.52	0.139

Number of observations	**33**
Adjusted R-Squared	**0.8775**
Durbin Watson	**2.05491**

The results from the regression analysis indicated that adjusted R squared is 87.75 percent. This means that the explanatory variable explains approximately 88 percent of the variation in current account deficit. It was also established that the value of Durbin Watson at 2.054907 confirms that the coefficient are statistically different from zero. The study also indicated that there was no serial correlation.

4.5 Discussion of the Estimation Results

The result obtained from the regression shows that the main independent variable (tourism earnings) had a positive impact on current account deficit with a coefficient 0.333871. This coefficient was not statistically significant as revealed by its corresponding standard error and p value of 0.644 which was above the significant value of 0.05. This may partly be attributed to use of deflated data. While the positivity in the coefficient of tourism earnings was in conformity to prior expected sign, it was also observed that this contradicted findings from previous studies conducted by Ali Kemal Celik, et al. (2013) ,Baharumshah, et al. (2003) and Greenidge, et al. (2011) who established that tourism earnings has a significant relationship with current account balance.

On the other hand, Balance on merchandise had a positive coefficient from the results of the analysis. This was in conformity with the expected sign of positivity in relation to current account deficit. Balance on merchandise was statistically significant to explain variation in current account deficit with a probability value of less than 5 percent level. In the results estimated, one percentage change in merchandise trade leads to approximately 0.5569 percent increase in current account deficit. This is to say that merchandise trade

balance has been the major cause of current account deficit. This results of balance on merchandise was in conformity with Muwanga and Katamba (2005) who established in their study that Uganda current account imbalances was due to high import export gap. It must be noted that unlike tourism data, balance on merchandise statistics are properly captured in Kenya, this could explain the robust regression outputs.

The results from the regression analysis also indicated that foreign exchange rate was in conformity with the expected sign as its coefficient had a negative sign (-0.126). Foreign exchange rate was not statistically significant to explain variation in the current account deficit in Kenya since its probability value was above 5 percent significant level (0.752). This contradicted previous studies conducted by other authors. According to Osoro (2013) study of determinants of balance of payment, they established that real exchange rate affects current account by causing a deficit when they decrease. They also found out that real exchange rate had a significant relationship with current account balance in Kenya though the impact was small.

The results from the analysis in the study showed that Current transfer had a negative sign on its coefficient. Current transfer was also statistically significant to explain variation in current account deficit in Kenya. This is in conformity with expectation, in that one percent increase in current transfer will reduce current account deficit by 0.3357. This is an indication that as more money come from net salary transfers and grants, then current account moves from a deficit to a balance.

CHAPTER FIVE

5.0 CONCLUSION AND POLICY OPTIONS

This chapter presents the study conclusion and policy options. It also highlights the limitation of the study and suggests areas for further research.

5.1 Conclusion

The aim of the study was to investigate the link between tourism earnings and current account deficit and further determine factors that affect current account deficit in Kenya. This was done by examining the behavior of each variable on current account deficit in Kenya. From the findings it was established that the main independent variable (tourism earnings) was not significant to explain variation in current account deficit. This was expected since the study used proxy data.

Balance on merchandise and current transfer were found to be statistically significant to explain variation in current account deficit and therefore the major contributor of the current account deficit by the difference it creates in the account between exports and imports of goods. The relationship it creates between current account deficits appeared to be positive. This supports the ongoing trend on the persistent deficit which appear in the current account in Kenya. Current transfer though statistically significant, is the smallest component in current account explaining the change in current account imbalances.

5.2 Policy Options

The findings of this study indicates that balance on merchandise is the key factors that affects current account in Kenya. This is the net balance between import of goods and export of goods. Currently the balance on merchandise has been in a deficit and the import export gap has expanded tremendously. This gap has been attributed to higher consumption of imported goods and lower exports of raw agricultural products. To improve on balance on merchandise, the government should control the amount of imports that comes into the country through the use of expenditure switching policies. This are policies which the government may use to switch consumers (local citizens) away from imports and towards home produced goods. The government can do this by using imports control such as tariffs and devaluating the exchange rate. The government needs to offer more abroad than it has done so far by besides everything else, enhancing the competiveness of her exports so as to augment her shares in the world market. Policies ought to be prioritized on value addition activities in Kenya's export sector since this can improve the total volume of Kenyan export thus reduction of the gap between imports and exports .

The governments ought to bear on empowering and creating the tourism industry. This can be done by ensuring that there is proper infrastructure in place. Recent advances in airline transportation can play a real part in breaking down transportation obstructions. Kenya being an extensive nation ought to recognize the significance of tourism, and raising the level of public awareness is likely to prompt further revenue generations in the future. Kenya for the most part should focus on conference tourism as this is an area which has not been exploited yet.

Enhancing vision 2030 strategies is key since tourism has been encompassed in the blue print as one of the key pillar that can boost growth in the economy. Though the findings suggest that tourism was not statistically significant to explain change in current account deficit, tourism is important since it is the second largest contributor of foreign exchange earnings and if properly marketed may boost economic growth in the economy. More over focus need to be placed on the improvement of security within the country, and development of infrastructure.

5.3 Area for future research

It was clear from the study conducted that data on tourism earnings was not properly captured hence the use of proxy data. There is a need to research on a robust tourism data capture mechanism that will reflect the true position of tourism earnings in Kenya. There is also a need for proper research to be undertaken on the analysis of determinant of tourism sector growth in Kenya.

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APPENDICIES

APPENDIX 1 UNIT ROOT TEST AT LEVEL

LEVEL					Number of Obs=33
Variable	Test Statistics	1% Critical Value	5% Critical value	10% Critical value	P-Value
Current account Deficit	1.199	-4.306	-3.568	-3.221	1.0000
Tourism Earnings	-1.114	-4.306	-3.568	-3.221	0.9267
Balance on merchandise	1.529	-4.306	-3.568	-3.221	1.0000
Foreign exchange rate	-1.608	-4.306	-3.568	-3.221	0.7895
Current transfer	-2.173	-4.306	-3.568	-3.221	0.5049
Income per-capita	-5.630	-4.306	-3.568	-3.221	0.0000

APPENDIX 2 UNIT ROOT TEST AT FIRST DIFFERENCE

FIRST DIFFERENCE					Number of Obs=32
Variable	Test Statistics	1% Critical Value	5% Critical value	10% Critical value	P-Value
Current account Deficit	-5.260	-4.316	-3.572	-3.223	0.0001
Tourism Earnings	-6.143	-4.316	-3.572	-3.223	0.0000
Balance on merchandise	-4.077	-4.316	-3.572	-3.223	0.0068
Foreign exchange rate	-5.298	-4.316	-3.572	-3.223	0.0001
Current transfer	-14.03	-4.316	-3.572	-3.223	0.0000

APPENDIX 3 COINTERGRATION TEST

Current account Deficit, Tourism Earnings ,Balance on merchandise ,Foreign exchange rate, Current transfer, trend(constant) max					
	Johansen tests for cointergration				
Trend: constant					Number of obs=32
sample:1982-2013					Lags=2
maximum rank	parms	LL	eigenvalue	trace statistics	5% critical value
0	30	-580.21819	.	93.0266	68.52
1	39	-554.08503	0.80472	40.7602*	47.21
2	46	-544.39425	0.45429	21.3787	29.68
3	51	-538.27168	0.31796	9.1335	15.41
4	54	-534.71924	0.19911	2.0287	3.76
5	55	-533.70491	0.06143		
maximum rank	parms	LL	eigenvalue	max statistics	5% critical value
0	30	-580.21819	.	52.2663	33.46
1	39	-554.08503	0.80472	19.3816	27.07
2	46	-544.39425	0.45429	12.2451	20.97
3	51	-538.27168	0.31796	7.1049	14.07
4	54	-534.71924	0.19911	2.0287	3.76
5	55	-533.70491	0.06143		

APPENDIX 4 SELECTION ORDER CRITERIA

Current account Deficit Tourism Earnings Balance on merchandise Foreign exchange rate Current transfer								
selection-order criteria								
sample:1984-2013								
							Number of obs=30	
lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-686.728				7.3e+13	46.1152	46.1899	46.3487
1	-541.949	289.56	25	0	2.6e+10	38.1299	38.5782	39.5311
2	-504.085	75.728	25	0	1.3e+10	37.2723	38.0941	39.8412
3	-439.343	129.48	25	0	1.4e+09	34.6229	35.8182	38.3594
4	-322.275	234..14*	25	0	18.6e+06*	28.485*	30.0539*	33.3892*
Endogenous: Current account Deficit Tourism Earnings Balance on merchandise Foreign exchange rate Current transfer								
Exogenous: _cons								

APPENDIX 5 VECTOR ERROR CORRECTION MODEL

Current account Deficit Tourism Earnings Balance on merchandise Foreign exchange rate Current transfer , trend (constant) lags (4)						
vector error - correction model					NO. of obs=30	
sample:1984-2013					AIC=33.1885	
log likelihood=-408.8275					HQIC=34.51833	
Det(sigma_m1)= 472495.8					SBIC=37.34539	
Equation	parms	RMSE	R-sq	chi2	p>chi2	
First differenced Current account deficit	17	18.1643	0.9010	118.3714	0.0000	
First differenced Tourism earnings	17	3.35691	0.8452	70.97676	0.0000	
First differenced Balance on merchandise	17	31.2902	0.8866	101.6444	0.0000	
First differenced Foreign exchange rate	17	6.95734	0.4678	11.42908	0.8334	
First differenced Current transfer	17	12.2927	0.9465	203.1949	0.0000	
	coef	std.Err.	z	p>z	95% conf . Interval	
First differenced Current account deficit						
Cointergrating equation 1	-0.2777528	0.240986	-1.15	0.049	-.1944585	0.7499641
Current account deficit						
Lag one	-1.155947	0.796712	-1.45	0.147	-2.71747	0.405580
Lag two	-0.117503	0.639299	-0.18	0.854	-1.370507	1.135501
Lag three	0.0088057	0.4953525	0.02	0.986	-.9620674	0.9796787
Tourism earnings						
Lag one	-4.444412	2.239218	-1.98	0.047	-8.833198	-.0556264
Lag two	1.798818	2.943257	0.61	0.541	-3.969861	7.567496
Lag three	-6.142164	3.411888	-1.80	0.072	-12.82937	0.5449833
Balance on Merchandise						
Lag one	-.2324139	.5887221	-.39	.0693	-1.386288	.9214603

Lag two	-1.242505	0745562	-1.67	0.096	-2.70378	.2187697
Lag three	.8179963	.743375	1.10	0.271	-.6389919	2.274984
Foreign exchange rate						
Lag one	.6374164	.8118107	0.79	0.432	-.9537033	2.228536
Lag two	.2854902	.8612466	0.33	0.740	-1.402522	1.973503
Lag three	-.4625175	.7939401	-0.58	0.560	-2.018612	1.093576
Current Transfer						
Lag one	-1.55756	1.137263	-1.37	0.171	-3.786555	.6714356
Lag two	-2.884971	1.420759	-2.03	0.042	-5.669607	-.1003349
Lag three	1.211769	1.714851	0.71	0.480	-2.149277	4.572816
Constant	5.428013	8.367028	0.65	0.517	-10.97106	21.82709

APPENDIX 6 JOHNSEN NORMALIZATION RESTRICTION IMPOSE

Equation	parms	chi2	p>chi2			
Cointergrating equation	4	689.8285	0.0000			
identification: beta is exactly identified						
Johnsen normalization restriction impose						
beta	coef.	std.Err.	z	p>z	95% conf. Interval	
Cointergrating equation						
Current account deficit	1					
Tourism earnings	5.26521	.3914146	13.45	0.0000	4.498051	6.032368
Balance on merchandise	1.885318	.3707915	5.08	0.0000	1.15858	2.612056
Foreign exchange rate	-1.305232	.2723488	-4.79	0.0000	-1.839026	-.7714384
Current transfer	2.674492	.8710112	3.07	0.002	.9673415	4.381643
constant	27.7245					

APPENDIX 7 GRANGER CAUSALITY TEST

Equation	**Excluded**	**F**	**df**	**df_r**	**Prob>F**
Current account Deficit	Tourism Earnings	0.90997	4	9	0.0581
Tourism Earnings	Current account Deficit	**5.6368**	**4**	**9**	**0.0149**
Current account Deficit	Balance on merchandise	2.9488	4	9	0.082
Balance on merchandise	Current account Deficit	0.93342	4	9	0.4866
Current account Deficit	Foreign exchange rate	0.95485	4	9	0.4765
Foreign exchange rate	Current account Deficit	0.6378	4	9	0.6486
Current account Deficit	**Current Transfer**	**5.6368**	**4**	**9**	**0.0149**
Current Transfer	Current account Deficit	2.9408	4	9	0.0825

APPENDIX 8 REGRESSION ANALYSIS

					Number of obs=33	
regress current account deficit, tourism earnings, balance on merchandise, foreign exchange rate and current transfer					F(4, 28)= 58.30	
source	ss	df	ms		prob>F=0.0000	
Model	34252.18	4	8563.045		R-squared=0.8928	
Residual	4112.883	28	146.8887		Adj R-squared=0.8775	
Total	38365.06	32	1198.908		Root MSE=12.12	
First differenced Current account deficit	coef.	std.Err.	t	p>t	95% conf. Interval	
First differenced Tourism earnings	0.333871	0.714279	0.47	0.644	-1.12926	1.797005
First differenced Balance on merchandise	0.556998	0.057765	9.64	0.000	0.438672	0.675324
First differenced Foreign exchange rate	-0.12619	0.395889	-0.32	0.752	-0.68475	9371349
First differenced Current transfer	-0.33574	0.074431	-4.51	0.000	-0.4882	-0.18327
constant	-3.97427	2.6097	-1.52	0.139	-9.32	1.371456

Durbin-Watson d-statistics (5, 33) = 2.054907

APPENDIX 9 SERIAL CORRELATION TEST

estat bdodfrey			
Breusch-Godfrey LM test for auto correlation			
lag(p)	chi2	df	prob>chi2
1	0.040	1	0.8421
H0: no serial correlation			