An Empirical Analysis of the Structure of Imports in Sub-Sahara Africa

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ABSTRACT

The economy of most developing countries, especially those in the Sub-Saharan Africa (SSA) has been subjected to periodic fluctuations in the world market since the implementation of structural adjustment program (SAP) due to the impact of trade liberalization. This has no doubt affected the structure of imports in this sub region since then. This paper provides an empirical study of the structure of imports in Sub-Saharan Africa from 1995 to 2012. In its methodology, trend analysis is used to profile the structure of imports in SSA. Evidence from the analysis showed that the description of the trend of imports and its determinants in the Sub-Saharan Africa has particularly enabled policy makers to be conversant with the structure of imports for better policy decision that will drive domestic production and trade efficiency. The study among others thus recommends a stabilization policy that will reduce the dependence on imports and reduce import demand in SSA.
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Keywords: Imports; Relative Prices; Total Income; Import Structure, Sub-Sahara Africa

1. INTRODUCTION

One of the direct effects of the implementation of Structural Adjustment Programmes (SAPs) by the International Monetary Fund (IMF) in most developing countries, particularly Africa was to encourage trade liberalization. Among others, these programmes and policy measures sought to reduce external disequilibrium while strengthening production capacity, bring about external balance, and most especially influence imports. The authorities in these countries also became more preoccupied with mobilizing external financial assistance, thereby incurring debt. The debt burden, however, has engendered a decrease in public investment spending and an increase in budgetary deficits. Some countries have also undergone real devaluation and undertaken substantial trade liberalization in an effort to improve their balance-of-payments situation. A

general consensus in public finance is that income from external trade dominates government revenue in developing countries especially the ones in Africa. (Harvey, 2011; Egwaikhide, 1999). Since both exports and imports of developing countries are subject to periodic fluctuations in the world market, revenue from this source tends to fluctuate accordingly. Thus, it was not surprising that the collapse of commodity export prices in the early 1980s engendered fiscal crises in most African countries, as reflected in their huge budget deficits. Also, this led to the adoption of economic reform programmes. Economic reform is expected to affect imports being part of the strategies to restore external balance. According to Moran (1989), this policy decision is significantly harmful to investment and output in developing countries as there is much reliance on imports for domestic production in these economies. More so, it reveals the role played by foreign exchange availability in the growth process.

However, unless policy makers know what the major components of imports are and how they are determined, such a policy decision can be harmful to investment and output if domestic production relies on imports. The objective of this study is to provide an empirical analysis of the structure of import demand in Sub-Saharan Africa.

The rest of the paper is structured as flows: section 2 presents the literature review which provides both the historical and current perspectives of the Sub-Saharan African economy. Section 3 provides the empirical analysis while the last section 4 presents the conclusion and policy recommendation.

2. LITERATURE REVIEW

This section captures the stylized facts about the SSA. It presents both the historical and current perspectives on the SSA, a description of the trend of import and its determinants in the SSA.

2.1 Stylized Facts about Sub-Saharan Africa

Sub-Saharan Africa comprises of 48 countries, most of which income level is low and are largely agrarian communities. It has about 15% of the world's population (author's computation from WDI, 2012). The region's dependency ratio is 83.5% as at 2011, which is relatively higher than that of other regions (HDR, 2011). Its GDP per capita in 2009 measured by Purchasing Power Parity is $2,181, which is the least in the world (see HDR, 2011). The region is made up of countries within Eastern Africa, Middle Africa, Southern Africa and Western Africa (UN, 2011).

The recent growth performance in sub-Saharan Africa has been remarkable given that, for over four decades since 1960, real GDP per capita growth had been dismal, averaging less than 0.5% per annum. According to data from the Penn World Table 7.0 (Heston et al. 2011), average annual real GDP per capita growth from 2005-9 has been over 2.5% (3.5% when excluding 2008 and 2009). Sub-Saharan African countries in recent years have also made significant progress in terms of poverty reduction (Chen and Ravallion 2010). By casual empiricism, it is interesting to note that the average sub-Saharan African country is today over 30% more open to international trade than in1960 (as measured by the ratio of exports plus imports over GDP). (Brukner and Lederman, 2012).

2.2 Historical Perspective

The historical pattern of contemporary Africa's economic growth provides insights to help understand Africa's current economic situation and policy options. Between 1960 and 1973, which is the period immediately following independence in most African countries, economic growth was reasonably strong in many SSA countries. Most African countries experienced a sharp decline in their growth trends at some point between 1973 and 1980, followed by persistent stagnation until the early 1990s[1]. Average SSA per-capita GDP (PPP data) reached its minimum point in the mid-1990s, and still had not recovered to 1970s levels in 2005[2]. Another factor that characterized growth in many African countries—and in many cases continues to affect economic development patterns—is high economic growth volatility, a common feature in SSA countries' historical trends.

A 2007 World Bank study found that SSA has experienced more growth volatility than other regions, resulting in dampened investments and obscuring periods of good performance for some countries. The report found that this volatility has been caused by conflict, poor governance, and fluctuating world commodity prices. The authors of the study contend that reducing volatility is at least as important as promoting growth. In the 1990s, many African countries made a modest recovery until about 1994, but the growth rates for the remainder of the period tended to remain far below the first post-colonial phase[3].

The causes of this period of slow economic growth in the region have been a source of debate among development economists. Analysts have cited poor governance, political instability, geographic features, and historical conditions such as colonialism as different reasons for Africa's

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[1] See A. Hoeffler, "The Augmented Solow Model and the African Growth Debate," CSAE, University of Oxford, March 2000

[2] See "Jorge Saba Arbache and John Page, "Patterns of Long Term Growth in Sub-Saharan Africa." World Bank, November 2007

[3] See Goerge Sarba Arbache and John Pa2ge, "Patterns of Long Term Growth in SSA." World Bank November, 2007

economic malaise. Other factors cited included slow accumulation of both human and physical capital, dependence on single commodity exports, low productivity growth and pressures from high population growth rates, and high dependence on foreign aid.

Following this period of stagnation, the past decade has seen considerable improvements in governance and economic growth in many parts of Africa, although many countries continue to experience political instability, poor economic performance, and lack of progress in improving social welfare indicators. Poverty and inequitable income distribution also remain common in many countries. Despite these challenges, many countries are experiencing rapid economic growth.

2.3. **Current Perspectives**

The International Monetary Fund (IMF) projects that the SSA region will grow in terms of real GDP by 5.3% in 2012 and 2013 (see Table 2.1). These projections, however, mask significant disparities among the 44 countries the IMF considers in its regional analysis. For example, in its *Regional Economic Outlook*, released in October 2012, the IMF projected that oil-exporting countries in SSA would experience average real GDP growth of 6.7% in 2012, and 6.0% in 2013. Relatively stable, low-income, non-energy-producing countries (such as Ethiopia, Burkina Faso, and Kenya) are expected to grow on average by 5.9% in 2012 and 6.1% in 2013, while middle income countries (such as South Africa) are projected to grow by 3.4% in 2012 and 3.8% in 2013. The IMF also projects that more than half of the 12 SSA countries identified as "fragile" countries, due to prolonged institutional weakness or conflict (such as the Democratic Republic of Congo, Guinea, and Liberia), are expected to see stronger or stable growth in 2012 (6.6%) and 2013 (5.8%). This improved economic performance may reflect many factors, including better governance, increased trade flows, strong commodity prices, rising aid flows, and debt forgiveness. Rising incomes and expanding urban middle classes in some countries, economic diversification, increased access to communications technologies, and multiple other factors could also contribute to such trends.

U.S. foreign direct investment (FDI) flows to the region in 2011 amounted to about $3.1 billion, with South Africa ($722 million), Angola ($707 million), Ghana ($250 million), and Liberia ($113 million) as the major destinations of those investment flows.11 According to United Nations (UN) data, total world FDI to SSA amounted to about $35 billion in 2011.12 Leading SSA country destinations for worldwide direct investment in 2011 included Nigeria ($8.9 billion), South Africa ($5.8 billion), and Ghana ($3.2 billion).

A series of works has been carried out on import demand determinants. Most of the works that avail have been done for one unit using time series data. An instance is the work by Egwaikhide (1999) who estimated a dynamic specification of an import demand function for Nigeria and found among other things that, short-run changes in industrial output, foreign exchange availability and movements in relative prices had significant influence on the import of raw materials. Moreso, various methodologies have been used including cointegration and Error Correction Mechanism (Egwaikhide, 1999), bound testing and Ordinary Least Square method (Babatunde, 2006). However, a few have employed a panel approach in estimating import demand for a pooled data.

A few who have done this kind of work for pooled data. An example is Mohammed and Othman (2001) who did it for five ASEAN countries; Bahamani and Kara (1998) did it for nine industrial countries; Shahe and Forhad (2007) in their work focused on only India and Sri Lanka; and Yoichi and Shigeyuk (2009) focused on least developed countries (LDC). Amongst the few works of this kind existing, one with a particular focus on the SSA is yet to emerge. This is the major motivation for this piece of enquiry.

3. EMPRICAL ANALYSIS

The Sub-Sahara Africa is grouped by IMF into four categories which are Oil Exporting, Middle Income, Non-fragile Low income and fragile countries. Import trends for SSA shall be described as it applies these four categories. However in order for a robust study, the empirical analysis is predicated on the selected determinants of import demand in the Sub-Sahara Africa which include; total import expenditure, GDP, foreign exchange reserve, relative import prices and the index of openness. It is on the basis of these determinants that the study empirically examines the structure of import demand in SSA using IMF categorization as the framework.

3.1. Total Import Trend in SSA
3.1.1. Total Imports for Oil Exporting Countries.

This category is made up of Nigeria, Angola, Congo, Cameroon, Chad, Gabon, The Republic of Congo and Equatorial Guinea. Nigeria happens to be the highest exporter of crude oil which accounts majorly for the GDP of countries in this category. As revealed in figure 3.1, total import expenditure in this category was relatively stable over the period of 1995 to 2002 which averaged about $20 million. Total import for this group fluctuated mildly between the years 1995-2002 after which it began to rise gradually from 2003 up till year 2008. The highest leap occurred between

2007 and year 2008 from 60 million to about 90 million. This performance witnessed a decline the following year but rose gradually immediately after with another leap in year 2011 and stabilized thereafter.

Figure 3.1: Total import for Oil Exporting Countries from 1995-2012
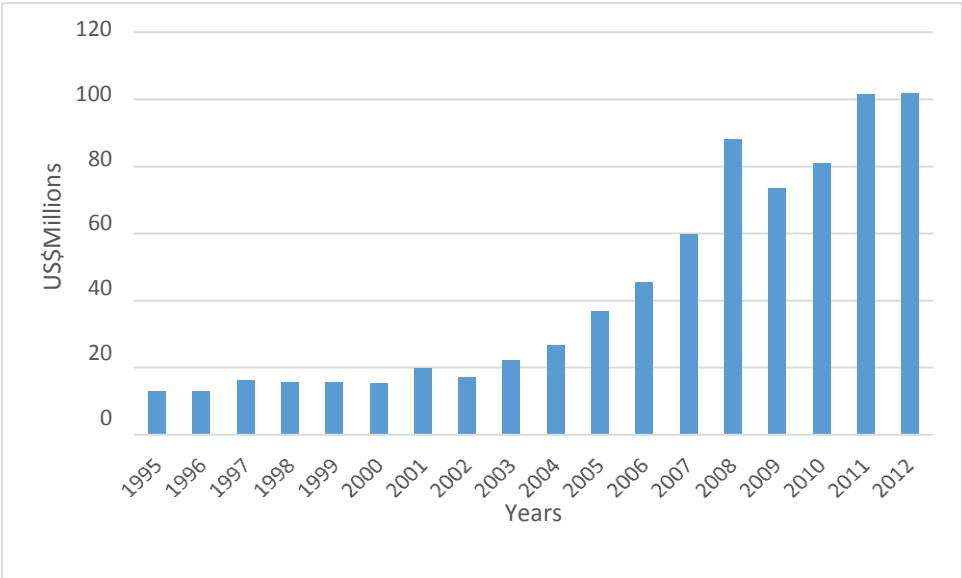
Source: *Drawn with data from UNCTAD*

The magnitudes of import trade of individual oil exporting countries are revealed in figure 3.2. Nigeria happens to be the highest importer among this group. This may be in tandem with the fact that it is the largest economy in this group in terms of population and output. By the reason of high population, Nigeria has needed to embark on high level of import to sustain about 250 million residents. Moreover, the Nigerian economy happens to be the sixth largest crude oil producing economy in the world placing her at a vantage position income wise although still bedevilled with a low level of technological development. Most of her manufactured consumptions are therefore majorly imported as she has become a large market for imports from China and the United States of America. Monumental proportion of Nigeria's income goes into the importation of refined oil. Although, Nigeria has always tried to maintain some import substitution-indusrialisation strategy over the years, coming up with some import prohibition list in 1978 (Oyejide et al, managing WTO participation challenges, case study 32) as a trade policy instrument, the success of this policy has rarely seen the light of the day as there was a sustained general reduction trend in number of items whose importation was prohibited. Hence, by 1998, only 127 (out of 5,147 tariff lines, or 5.2%) remained on the import prohibition list for trade. Despite another upsurge in the number of items on this list between 2001 and early 2004, external complaints by trade partners at the WTO about Nigeria and internal criticisms by import traders coupled with high level smuggling activities have restrained Nigeria's ablility to successfully lowered her level of import trade.

Figure 3.2: Total Imports for individual Oil Exporting Countries in SSA from 1995-2012.
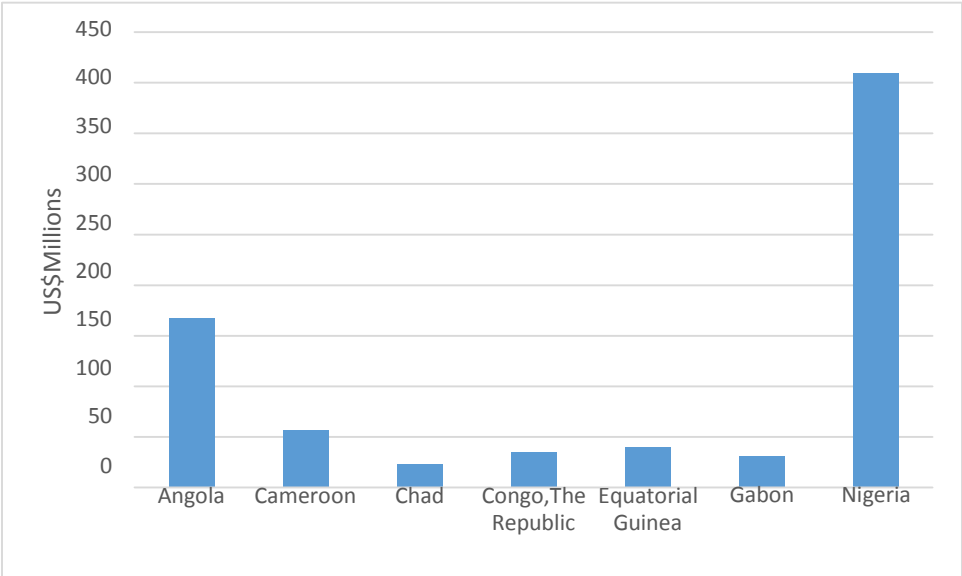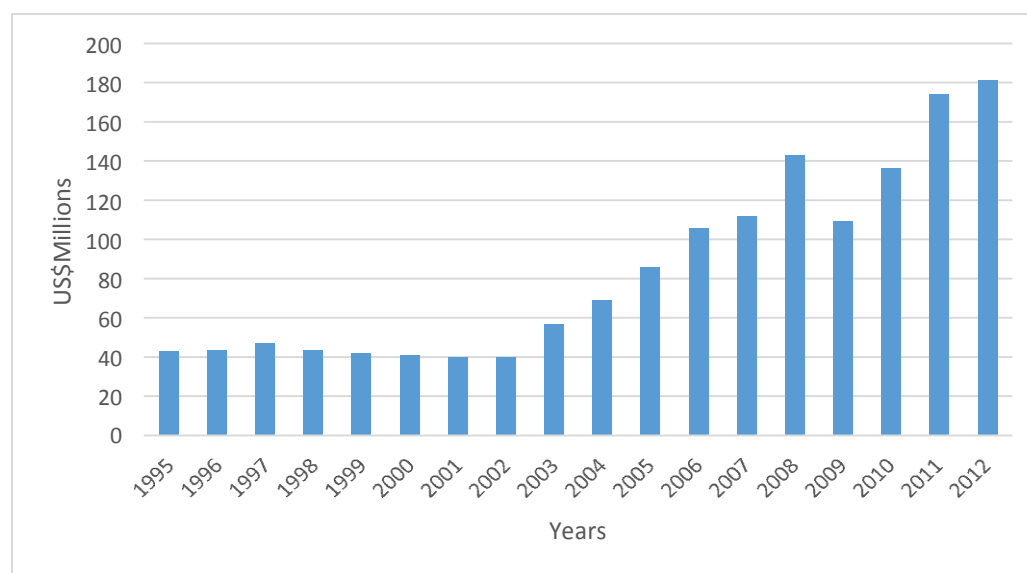

Source: *Drawn with data from UNCTAD*

Angola emerged the second highest importer among this group. The country is second only to Nigeria as Africa's top oil producer, producing 4 % less than Nigeria in 2008. (World Bank. 2010. "Angola Trade Brief." *World Trade Indicators 2009/10: Country Trade Briefs*. Washington, DC). Since the end, in 2002, of a civil war that spanned more than two decades, Angola has focused on revising its trade-related policies. The country has considerably liberalized its trade regime in recent years as reflected in its average MFN (Most Favoured Nation) applied tariff of 7.3%, which is below that of both an average Sub-Saharan Africa (SSA) country (12.5 %) and an average lower-middle-income country (11.4%). Based on the MFN applied tariff, Angola ranks 75 [th] out of 181 countries (where 1 [st] is least restrictive).

Chad records the lowest level of import among this group. As a member of the Economic and Monetary Community of Central Africa (CEMAC), Chad adopted the group's Common External Tariff (CET) in 1993. The CEMAC CET rates are generally higher than those of other countries in the Sub-Saharan Africa (SSA) region as reflected by Chad's 2007 average MFN applied tariff of 17.9 percent, which is above both the SSA and low-income country group averages of 12.2 percent and 12.5 percent, respectively. Based on the MFN applied tariff, it ranks 165 [th] out of 181 countries (where 1 [st] is least restrictive), World Bank. 2010. "Chad Trade Brief." *World Trade Indicators 2009/10: Country Trade Briefs*.)

3.1.2. Middle Income Countries

Middle income countries according to IMF classification include Bostwana, Cape Verde, Ghana, Lesotho, Mauritus, Namibia, Senegal, Seychelles, South Afica, Swaziland and Zambia. The trend depicts an inertia struggle but eventually picked up in the year 2003 but experienced a decline in 2009. This could have been accounted for by the economic downturn that developed that period. There was however a persistent recovery the following year that took the import trade performance to $180million in 2012. In a comparative perspective, the total import trade by the middle income countries overshoots the figure obtained for the oil exporting countries in 2012.

Figure 3.3: Total Import of good for Middle Income Countries in SSA

*Source***:** *Drawn with data from UNCTAD*

Figure 3.4 portrays South Africa as a prominent importer among the middle income countries in the Sub sahara Africa. About 70% of the trade carried out in this group was done by south Africa alone while the remaining 30% was shared among the remaining countries. This is in accord with the fact that South Africa is the country with the highest income among this group and a big economy within both the Sub saharan africa and Africa scope (Jekins 1995). Trade policies reform that took place over this period was born by the IDC (a parastata development bank) report which recommended among others the lowering on ad-valorem tariff to the maximum of 30%. Although, this was adopted, it was not implemented until change of government. Later, Industrial Strategy Project (ISP, 1993) and the framework for macroeconomic policy comissioned by the African National Congress (MERG, 1993) recongnised the need for South Africa to become more internationally competitive and therefore recommended more neutral trade regime: a simpler transparent tariff structure, with tariffs reduced in line with GATT requirements.

South Africa's offer in the Uruguay round for market access further led to significant reduction in number of tariff lines and bound closely to WTO building levels. Tariffs lines were cut back from the 80 different levels of the past to 8 levels ranging from 0 to 30% with a few exceptions-notably clothing, textile and motor cars.

Next to South Africa in this group is the Ghanaian import which is quite low compared to what was witnessed by South Africa. Ghana has undergone several trade regimes but has since 1989 on wards maintained a liberalised trade regime (Harvey and Sedegah, 2011). In Janurary 1989, import licencing was completely abolished. This resulted in the elimination of the special development levy that accompanied it. Consequently, the cost of importing was reduced for most categories of commodities. On average, there was a decrease of between 5 and 10 percentage points in the tax rate for all importing categories, except luxury goods. Following a removal of the 17.5% "special import tax" in 1999, and the lowering of the highest tariff rate of 25% to 20% in 2000, mainly on consumer goods, the simple average applied most-favoured-nation (MFN) tariff rate was 13% in early 2000.

 Ghana has a four-tier tariff structure, with rates of zero, 5%, 10% and 20%. However, the "temporary" introduction of another "special import tax" of 20% in April 2000, mainly on consumer goods and covering 7% of tariff lines, effectively added a fifth tariff rate of 40% and raised the average applied MFN tariff to its current rate of almost 15%. Ghana applies MFN tariffs to all trading partners, except for duty-free imports from ECOWAS members (WTO, 2001). With the sharp reduction in tax rates, the abolishment of import licences, and the outflow of foreign exchange liberalized under the Economic Reform Programme (ERP), the government began to appreciate the critical importance of facilitating a rapid expansion of foreign exchange earnings through the pursuit of a vigorous export drive. Government introduced a more generous foreign exchange retention scheme, as well as a duty drawback on imported inputs.

Cape Verde is the lowest importer in the group. It is a small archipelagic economy that lacks resources and has experienced severe droughts. Agriculture is made difficult by lack of rain and is restricted to four Islands for most of the year. 75% of food is therefore imported (World Bank Trade Brief 2009/10). Most of the nation's GDP comes from the service industry. Despite the extent of the economy's dependence on import, her level of import compared to the rest in this group   remains   very   low.

Figure 3.4: Import of individual Middle Income countries from 1995-2012
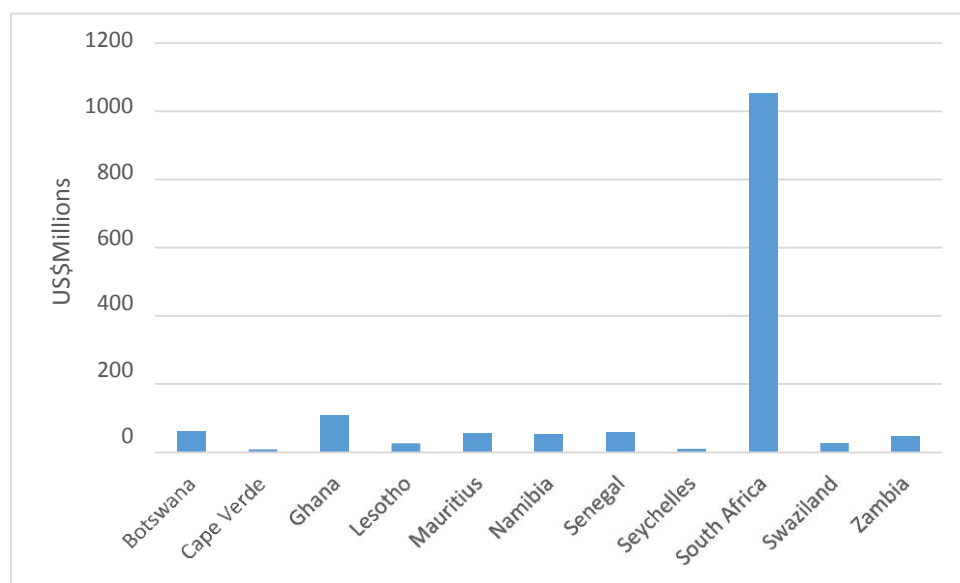
Source*: Drawn with data from UNCTAD*

3.1.3 Non Fragile Low Income Countries

Countries in this category include Benin, Burkina Faso, Ethiopia, The Gambia, Kenya, Mali, Madagascar, Mozambique, Niger, Rwanda, Serra Leone, Tanzania and Uganda. The trend shows an initial fluctuation up till year 2002 after which it began to rise. As observed in the trend of other SSA countries categories, the rising trend was interrupted in year 2008 which coincided with the world economic recession period.

Figure 3.5: Total Import of goods for Non fragile Low Income Countries in SSA
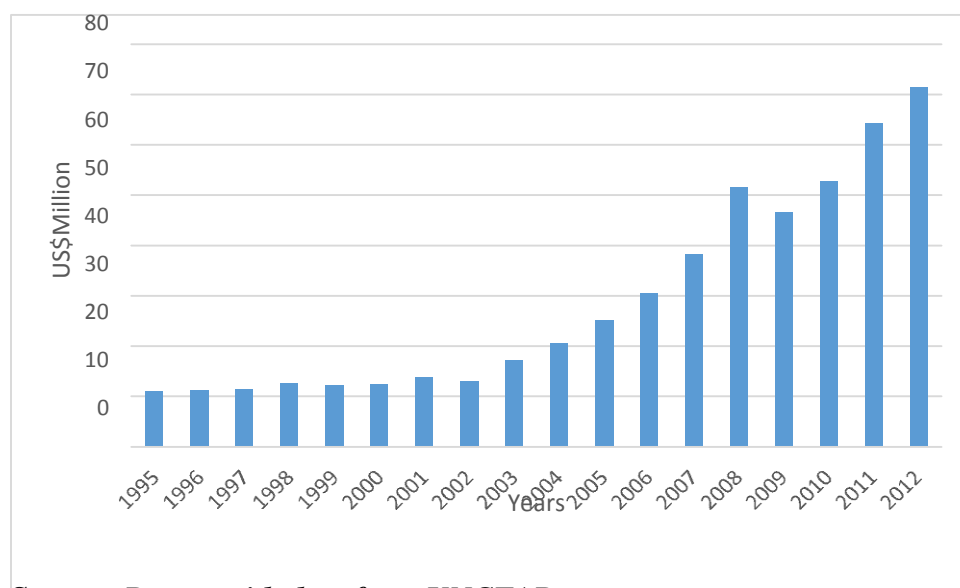
Source*: Drawn with data from UNCTAD*

Figure 3.6: Total Import by Non-Fragile Low Income Countries
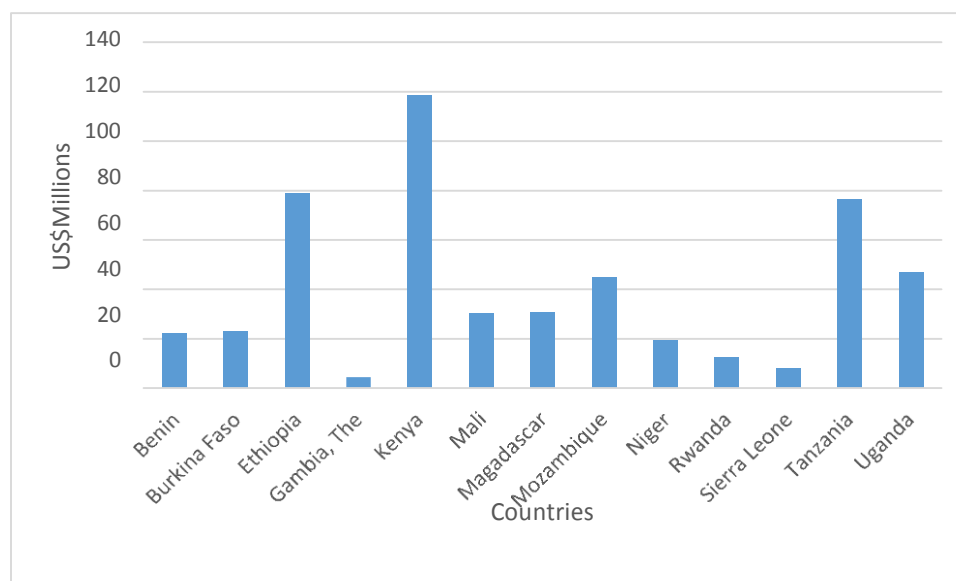
Source: *Drawn with data from UNCTAD*

Kenya emerged the most prominent importer among the non fragile middle income countries (Figure 3.6). According to world band trade brief 2009/10, Kenya has progressively liberalized it's trade regime since the mid 1980s. Kenya's Most Favoured Nations tariff trade restrictiveness index is 8.2% indicating a more open economy that that of an Average SSA or low income country (11.3% and 11.6 % respectively). Ethiopia's import exceeded that of Tanzania only by a small margin. Similarly, the Mozambique import trade fell short of that witnessed in Uganda by an insignificant margin. Some closeness is observed in the figures recorded by Mali and Madagascar as well as Burkina Faso and Benin. The lowest level of import among this group was carried out by The Gambia. Following the ECOWAS revision of it's four-band Commom External Tariff, The Gambia's average MFN applied tariff is 19% exceeding the average of 12.5% for SSA and for low-income countries.(Worldbank Trade brief 2010).

3.1.4. Fragile Countries

Members of the low income category in the IMF classification of the SSA include Burundi, Central Africa Republic, Comoros, Democratic Republic of Congo, Cote d'voire, Eritrea, Guinea, Guinea Bissau, Liberia, Sao Tome and Principe, and Togo. The import trend for this category is quite similar   to   the   one   observed   in   the   other   categories.

Figure 3.7: Total import of fragile countries in the SSA.

Source: *Drawn with data from UNCTAD*

Figure 3.8: Import of individual Fragile Countries in SSA in (1995-2012)
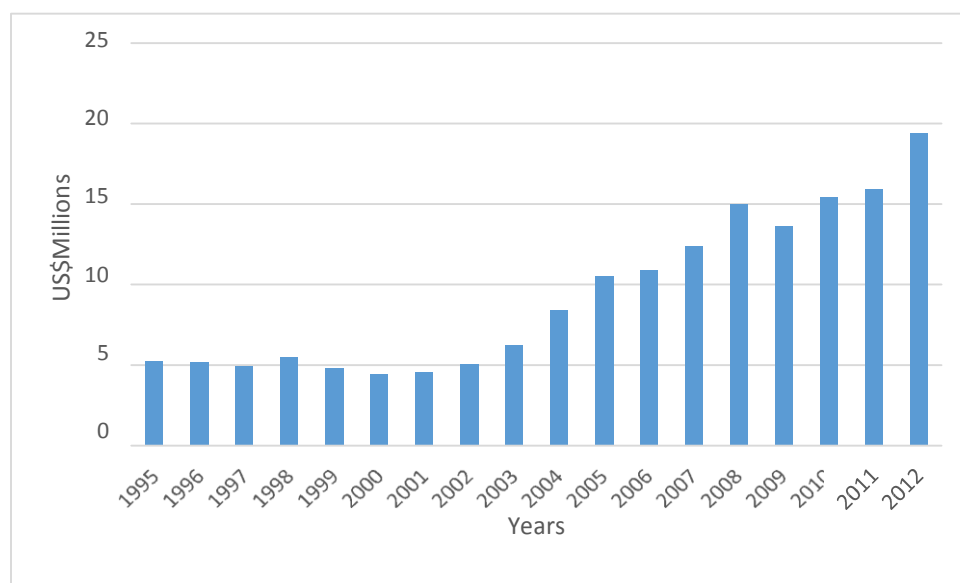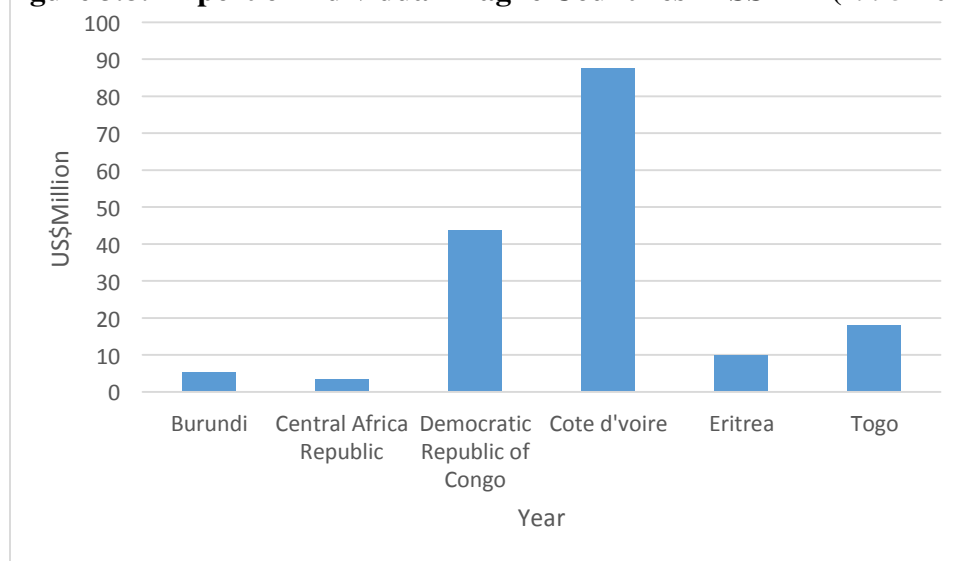

Source: *Drawn with data from UNCTAD*

Figure 3.8 reveals that Cote d'voire records the highest import among this group.According to World bank trade brief 2010, the country after three decades of industrial protection, initiated a trade librelization program in 1994, leading to the abolishment of most quantitive restrictions on import. Its Most Favoured Nation Trade Tariff Index is currently 8.4% in line with that of an average lower income country (8.6%) but below that of an average SSA countries (11.3%).

Democratic republic of Congo maintains her tarrif in line with the avergae of SSA countries ranking second highest importer among this group. Sao Tome and Principe also recorded a very low import.

3.2. GDP Trend in the Sub Saharan Africa

The trend of GDP is discussed for the four groups according to the IMF classification of the SSA countries in this section. For brevity, the average and total GDP for all the countries in the various groups shall be examined.

3.2.1 GDP trend in the Oil Exporting Countries

Figure 3.9: GDP for Oil Exporting Countries in SSA (US$ billions)
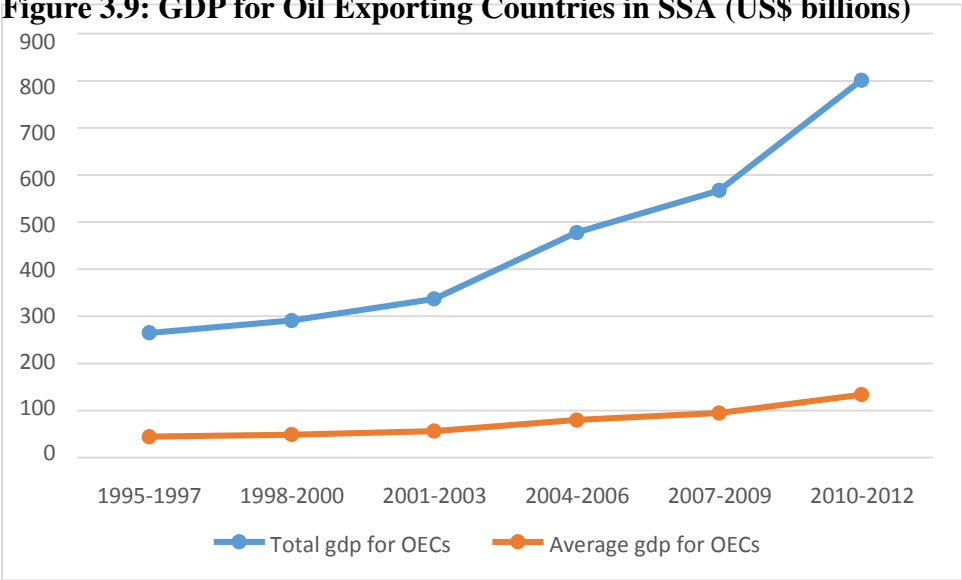
Source*: Drawn with data from UNCTAD*

The total and average GDP figures showed that the oil exporting countries experienced continuous growth over the period of study. The growth was highest in the period between 2008 and 2012. Oil-exporting countries, such as Nigeria, benefitted from a rebound of oil prices and improved their fiscal positions significantly. They are again recording budget surpluses. The Nigerian government attempted to cut the fuel subsidy, which had caused high fiscal costs, distorted markets and favoured smuggling. However, prices more than doubled without the subsidy and a nationwide strike forced the government to re- introduce part of the subsidy so that fuel prices declined again by 30%. The high oil price in 2011 also provided terms of trade gains for African oil exporters, such as Nigeria and the new producer Ghana that started oil production in commercial quantities

in December 2010[5]. Nigeria's oil industry and large consumer market made it the continent's top investment recipient. Nigeria's 'Petroleum Industry Bill' should enhance transparency and governance of the country's oil industry. Nigeria's Ministry of Trade and Investment announced expected investments from three major Oil companies in 2012 of over USD 4.5 billion. Around 70% of investment in the region goes into oil and gas, while most of the remaining sum is captured by the real estate and telecommunication sectors[6].

Table 3.1: GDP for Oil Exporting Countries (OECs) between 1995 – 2012 in billions of US$

Year	Cameroon	Chad	Congo, The Republic	Equatorial Guinea	Gabon	Nigeria	Total gdp for OECs	Average gdp for OECs
1995-1997	34.58	8.32	13.63	2.56	24.58	180.98	264.67	44.11
1998-2000	39.80	9.23	14.38	6.14	24.95	196.40	290.91	48.49
2001-2003	45.12	11.34	16.05	14.17	24.52	225.50	336.71	56.12
2004-2006	49.93	19.00	18.20	22.59	25.85	342.22	477.79	79.63
2007-2009	54.44	21.45	20.30	28.09	27.68	415.11	567.08	94.51
2010-2012	149.48	26.04	54.56	30.37	31.01	509.74	801.21	133.54

Source: Authors' computation from *WDI* 2013

3.2.2 GDP Trend In The Middle Income Countries

Table 3.2: GDP for Middle Income Countries in billions of US$

Year	Botswana	Lesotho	Mauritius	Senegal	South Africa	Swaziland	Total	Average
1995-1997	20.66	3.18	12.95	17.42	555.53	6.29	616.03	102.67
1998-2000	23.90	3.44	15.20	19.97	593.25	6.84	662.59	110.43
2001-2003	26.42	3.78	17.08	22.34	652.76	7.20	729.58	121.59
2004-2006	30.15	4.13	19.02	25.87	742.62	7.78	829.56	138.26
2007-2009	34.92	4.71	21.73	29.01	841.70	8.45	940.528	156.75
2010-2012	38.37	5.50	24.34	31.89	896.65	8.73	1005.48	167.58

Source: Authors' computation from *WDI* 2013

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[5] Subsequent regrouping by IMF might include Ghana in the oil exporting group of companies

[6] As cited in African Economic Outlook 2012

GDP in the middle income countries also showed a continuous rising trend. Botswana's economy remains one of Africa's success stories, having transformed itself from a Least Developed Country at the time of independence in 1966 to a Middle Income Country within three decades. Sound macroeconomic policies, good governance, well-functioning institutions and judicious management of diamond resources are the hallmarks of Botswana's remarkable economic performance. The per capita income which stood at around USD 70 in 1966 is currently at about USD 6 500, bolstered by the discovery of diamonds.

The performance of South Africa is worth mentioning as she has the lion share in the GDP of the middle income countries. She is universally believed to be the economic hub of southern Africa. The South African economy has close linkages with the world economy. Although the suffered from worsening global economic conditions, particularly that of 2008/09, it was still able to surpass the previous period performance with some US$99.1 billion.

3.2.3. GDP In The Fragile Countries

On the average, the GDP in the fragile countries was on a rise over the period of study. Cote d'voire recorded the highest figures while Eritrea had the lowest figures. The post-electoral crisis negatively affected the Ivorian economy as the GDP growth rate fell 4.7% in 2011[7].On the supply side, only the primary sector demonstrated its resilience through positive growth (1.7% versus 0.5% in 2010), thanks to a good performance in agricultural food production following excellent rainfall and the revival of food-production projects[8].

Eritrea in history had possessed a far more sophisticated urban and industrial infrastructure than Ethiopia to whom it was awarded in the 1950. However, a protracted civil war dismantled its industrial sector making her dependent on income from ports and its small agricultural base. Her

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[7] See World Development Indicator 2013

[8] As cited in African Economic Outlook 2012

Table 3.3: GDP for Fragile Countries in billions of US$

Year	Burundi	Central Africa Republic	Democratic Republic of Congo	Cote d'voire	Eritrea	Togo	Total	Average
1995-1997	3.05	3.43	20.84	45.09	2.72	5.39	80.52	13.42
1998-2000	3.04	3.72	18.66	50.08	2.97	5.99	84.45	14.07
2001-2003	3.15	3.88	17.88	48.36	3.19	5.97	82.43	13.73
2004-2006	3.40	4.14	21.45	48.10	3.26	6.41	87.66	14.61
2007-2009	3.87	4.98	25.44	51.70	3.13	6.93	96.05	16.01
2010-2012	4.35	6.03	30.34	54.58	3.43	7.82	106.53	17.76

Source: Authors' computation from *WDI* 2013

GDP growth fell to zero in 1999 and went negative in the year 2000. However, Eritrea experienced considerable growth in recent years indicated by an improvement in GDP as Eritrea GDP grew by 8.7% in 2011 making it one of the fastest growing economies in the world[9].

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[9] See World Development Indicator 2013 and Wikipedia.

3.2.4. GDP in the Non-Fragile Low Income Countries

Table 3.4: GDP For Non-Fragile Low Income Countries In Billions of US$

Year	Benin	Burkina Faso	Ethiopia	Gambia	Kenya	Mali	Madagascar	Mozambique	Rwanda	Sierralonne	Uganda	Total
1995-1997	8.85	9.46	23.46	1.34	43.51	9.50	11.49	9.80	3.71	3.34	15.74	140.19
1998-2000	10.19	11.53	25.32	1.53	46.48	11.22	12.91	12.52	1.92	3.31	18.68	155.62
2001-2003	11.85	13.52	29.06	1.71	49.45	13.82	13.52	15.64	6.32	3.87	22.25	181.01
2004-2006	13.12	16.32	36.59	1.89	56.35	16.07	15.15	19.63	7.75	4.91	27.48	215.24
2007-2009	14.80	19.02	49.87	2.08	65.20	18.90	17.42	24.04	9.93	5.84	35.22	262.32
2010-2012	16.35	22.66	64.56	2.33	73.74	21.21	17.81	29.44	12.42	6.99	42.34	309.86

Source: Authors' computation from WDI

The average GDP as summed continued on a rising trend for this category of countries over the period of consideration. However, Kenya emerged a top performer among this group of countries with the highest GDP figures (Table 3.4). After independence, Kenya like most African countries tended to emulate the development strategies of the western industrialized countries. The policy outturns stressed the role of the major agents of change: entrepreneurship and capital accumulation. In a sense, the role of the market mechanism was believed to work in order to transfer entrepreneurial talent or attributes from the developed countries to the Kenyan entrepreneurs. Second, the emphasis was on massive injection of capital into the economy to accelerate the formation of strong market links both in the product and financial markets and would then accelerate the pace of economic development. These have been the driving force behind the remarkable growth performance of the economy[10].
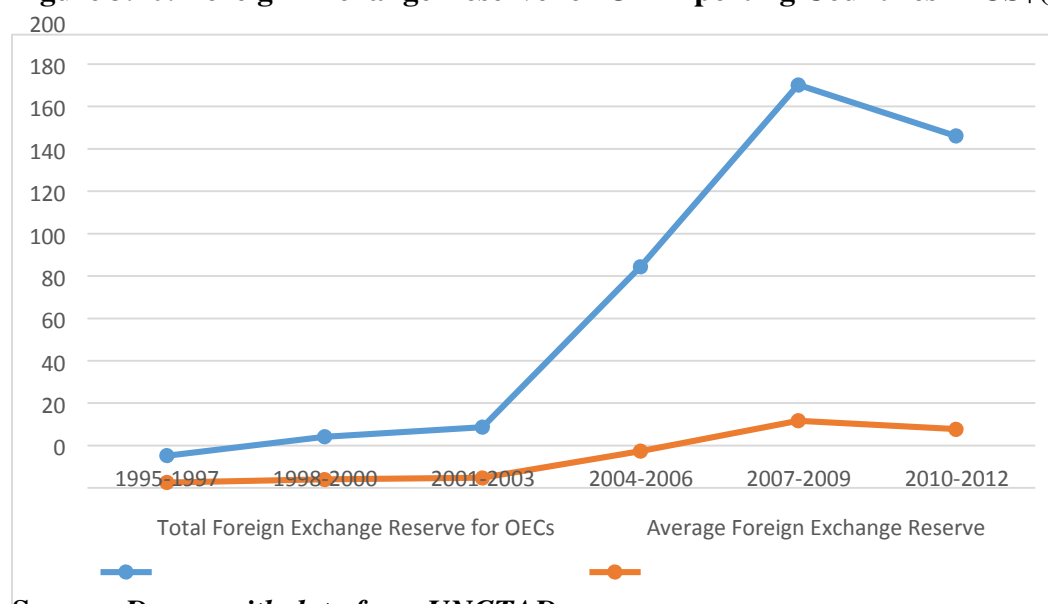
3.3.   Foreign Exchange Reserve in the SSA

Foreign exchange reserve is the stock of foreign currencies holding in an economy which countries maintain to finance their balance of payments deficit and to control their exchange rate. This is also considered to be a vital determinant of import. The foreign exchange reserves in the four in the four categories of SSA countries shall therefore be considered subsequently.

3.3.1. Foreign Exchange Reserves in the Oil Exporting Countries
As revealed in Figure 3.10, the foreign exchange reserves in the oil exporting countries witnessed a somewhat steady growth from a time within the period of 1995-97 up till the period 2001-2003 after which there was a sharp rise up till 2007-2009. A decline followed immediately after this period. This could be attributable to the credit crunch witnessed globally during this period. Among this group, Nigeria was an outlier with the highest foreign exchange reserves figures. Chad recorded the lowest foreign exchange figures among this group.

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[10] As cited in Francis and Njugunna 2002." Explaining Africa Economic Growth Performance: The Case of Kenya." AERC Working Paper No. 3.

Figure 3.10: Foreign Exchange Reserve for Oil Exporting Countries in US$(billions)

Source*: Drawn with data from UNCTAD*

Table 3.5: Foreign Exchange Reserves in the Oil Exporting Countries in the SSA in US$billion

Year	Cameroon	Chad	Congo, The Republic	Equatorial Guinea	Gabon	Nigeria	Total	Average
1995-1997	0.04	0.45	0.22	0.01	0.69	13.82	15.23	2.54
1998-2000	0.24	0.33	0.27	0.03	0.23	23.05	24.16	4.03
2001-2003	1.63	0.54	0.15	0.40	0.36	25.63	28.70	4.78
2004-2006	3.54	1.09	2.71	6.11	2.25	88.62	104.32	17.39
2007-2009	9.72	2.93	9.87	11.53	5.17	151.02	190.24	31.71
2010-2012	14.89	2.73	12.73	9.80	6.24	119.70	166.10	27.68

Source: Authors' computation from *WDI* 2013

3.3.2. Foreign Exchange Reserves in Middle Income Countries

The foreign exchange reserves in the middle income countries were on a rising trend. South Africa had the highest figures followed by Botswana. It is not surprising as these are larger economies compared to other members of the group. Hence, their level of trade and other forms of economic interaction with the rest of the world is quite significant which in turn calls for the maintenance of large foreign exchange reserve. Swaziland's foreign exchange reserves were the lowest during the

period of consideration. Other members of the group such as Senegal, Mauritius and Lesotho also witnessed low foreign exchange reserves.

Table 3.6: Foreign Exchange Reserves for Middle Income Countries in US$billion

Year	Botswana	Lesotho	Mauritius	Senegal	South Africa	Swaziland	Total	Average
1995-1997	15.40	1.49	2.52	0.95	12.76	0.85	33.96	5.66
1998-2000	18.49	1.49	2.24	1.22	20.71	1.09	45.23	7.54
2001-2003	16.71	1.25	3.70	2.21	23.60	0.82	48.30	8.05
2004-2006	19.96	1.68	4.31	3.89	61.10	0.94	91.89	15.31
2007-2009	27.61	3.15	5.94	5.39	106.60	2.48	151.17	25.20
2010-2012	23.60	3.02	8.45	6.07	143.26	2.10	186.49	31.08

Source*: Drawn with data from UNCTAD*

Figure 3.11: Foreign Exchange Reserves for Middle Income Countries in US$(billions)

Source*: Drawn with data from UNCTAD*

24
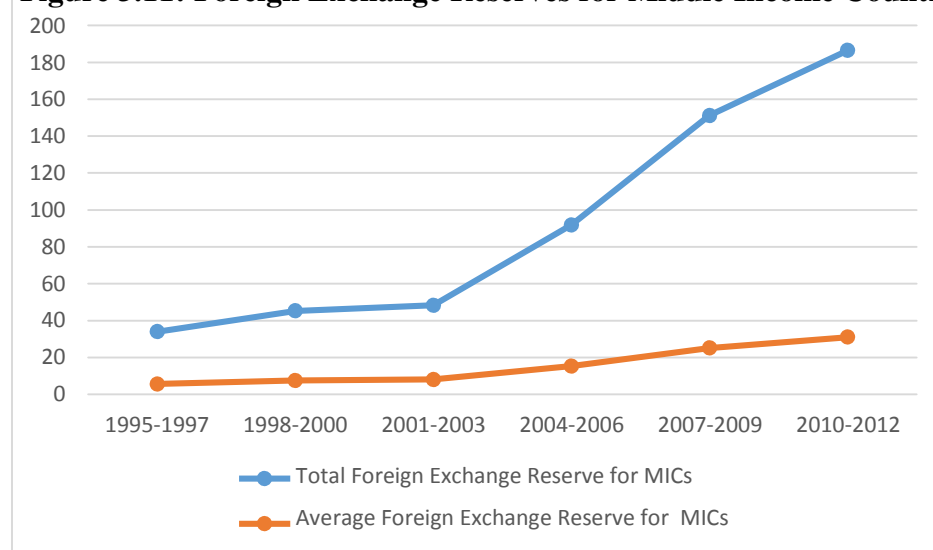
3.3. Foreign Exchange Reserves in Non-Fragile Low Income Countries

The trend of foreign exchange reserves in the non-fragile low income countries of the SSA is shown in Figure **3.12**[11] and Table 3.7. Sierra lone recorded the lowest foreign exchange reserves during this period while Kenya's was the highest. Uganda and Mozambique also have some reasonably high figures. As summed, the foreign exchange reserves in these countries were on a rising trend over the period of study. The rate of increase was fastest between the period of 2004-2006 and 2007-2009. However, the ensuing decline is attributable to recession that swept across the globe in the succeeding period.

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[11] Source: Author's computation from WDI

Table 3.7: Foreign Exchange Reserves for Non Fragile Low Income Countries in US$(billions)

Year	Benin	Burkina Faso	Ethiopia	Gambia	Kenya	Mali	Madagascar	Mozambique	Rwanda	Sierra-lonne	Uganda	Total	Average
1995-1997	0.71	1.03	2.25	0.30	1.97	1.18	0.63	1.07	0.35	0.10	1.62	11.23	1.02
1998-2000	1.12	0.91	1.51	0.33	2.47	1.13	0.68	2.04	0.53	0.13	2.30	13.16	1.19
2001-2003	1.88	1.32	2.41	0.27	3.61	1.89	1.18	2.50	0.67	0.20	2.99	18.94	1.72
2004-2006	2.20	1.65	3.41	0.30	5.73	2.67	1.57	3.48	1.16	0.48	4.46	27.12	2.46
2007-2009	3.70	3.25	3.94	0.48	10.08	3.76	2.96	5.36	1.89	0.84	7.85	44.15	4.01
2010-2012	2.80	3.05	3.63	0.66	14.29	4.06	3.64	7.82	2.71	1.33	8.49	52.48	4.77

Authors' computation from WDI

Figure 3.12: Foreign Exchange Reserves for non-fragile low income countries (US$billion)
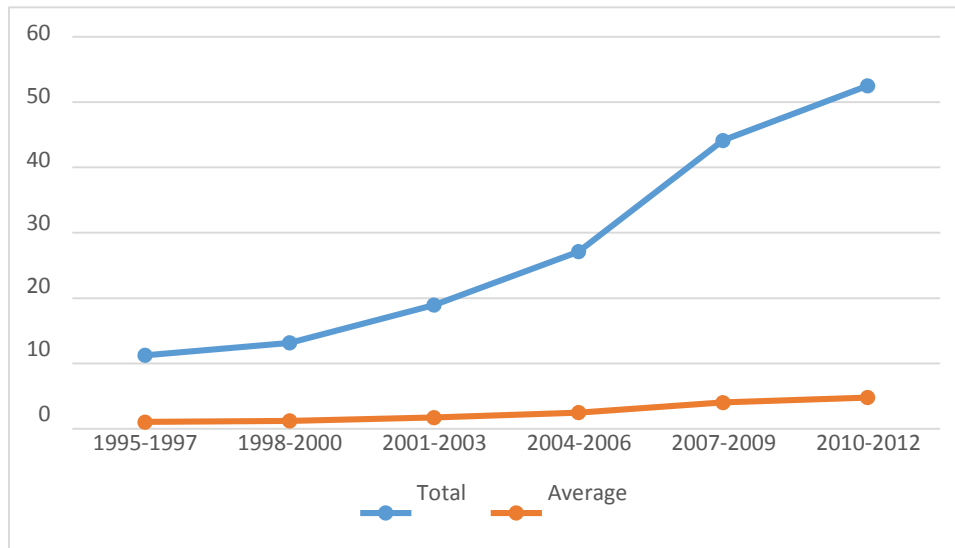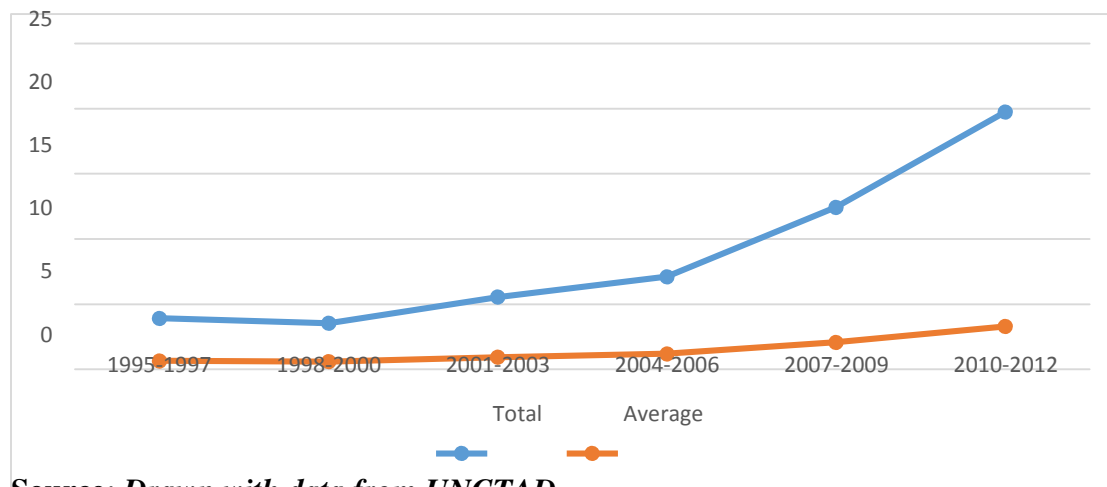
3.3.4   Foreign Exchange Reserves in the Fragile Countries

Figure 3.13 and Table 3.8 depict the trend of foreign exchange reserves for the fragile countries in the SSA. As summed, the foreign exchange reserves fell between 1995-1997 and 1998-2000 but started increasing steadily thereafter up till the period between 2004 and 2006. The increase in the foreign exchange reserves for this group became rapid from that period up till 2010-2012. In the group, Cote d'voire had the highest foreign exchange reserves while Central Africa Republic had the least.

Figure 3.13: Foreign Exchange Reserves for Fragile countries in US$ billion

Table 3.8: Foreign Exchange Reserves For Fragile Countries In Billions of US$

Year	Burundi	Central Africa Republic	Democratic Republic of Congo	Cote d'voire	Eritrea	Togo	Total	Average
1995-1997	0.48	0.66	0.34	1.75	0.35	0.34	3.92	0.65
1998-2000	0.16	0.42	0.25	2.16	0.16	0.38	3.54	0.59
2001-2003	0.14	0.39	0.25	4.16	0.11	0.50	5.55	0.93
2004-2006	0.30	0.43	0.52	4.84	0.09	0.92	7.11	1.18
2007-2009	0.77	0.43	1.29	8.04	0.18	1.72	12.43	2.07
2010-2012	0.94	0.49	4.20	11.87	0.31	1.93	19.74	3.29

Source: Authors' computation from *WDI* 2013

3.4.   Relative Import Prices in the SSA

Relative import prices are the prices of import relative to domestic prices. It is a vital determinant of import demand as established in the literatures. In subsequent sections, the trend of relative import prices is discussed for the various groups of countries in the SSA following the IMF classification.

3.4.1.   Relative Import Prices in the Oil Exporting Countries

Considering the six period time horizons depicted in the Table 3.9, the average import prices in the oil exporting countries dropped between the first and the second period. It later stabilised from 2003 till 2006. A significant increase followed thereafter. Relative import prices were lowest in Nigeria while the highest relative import prices occurred in Chad. Among the group, only Cameroon and Equatorial Guinea witnessed a persistent rise in import prices over the period spanning from 1995-2012. The other members of the group experienced an initial fall followed   by   a   rise   in   import   prices.

Table 3.9: Relative import prices in the Oil Exporting Countries in the SSA

Year	Cameroon	Chad	Congo, The Republic	Equatorial Guinea	Gabon	Nigeria	Total	Average
1995-1997	2.85	8.15	4.21	2.80	1.91	0.33	20.25	3.37
1998-2000	2.97	6.89	2.41	3.54	1.83	0.29	17.93	2.99
2001-2003	3.79	13.84	2.15	5.05	1.76	0.20	26.80	4.47
2004-2006	5.03	10.72	2.96	6.38	1.97	0.27	27.33	4.55
2007-2009	7.97	15.66	4.59	14.78	2.47	0.38	45.84	7.64
2010-2012	16.78	15.34	9.70	16.00	2.45	0.36	60.65	10.11

Source: Authors' computation from *WDI* 2013

Figure 3. 14: Relative Import Prices in the Oil Exporting Countries from 1995 -2012
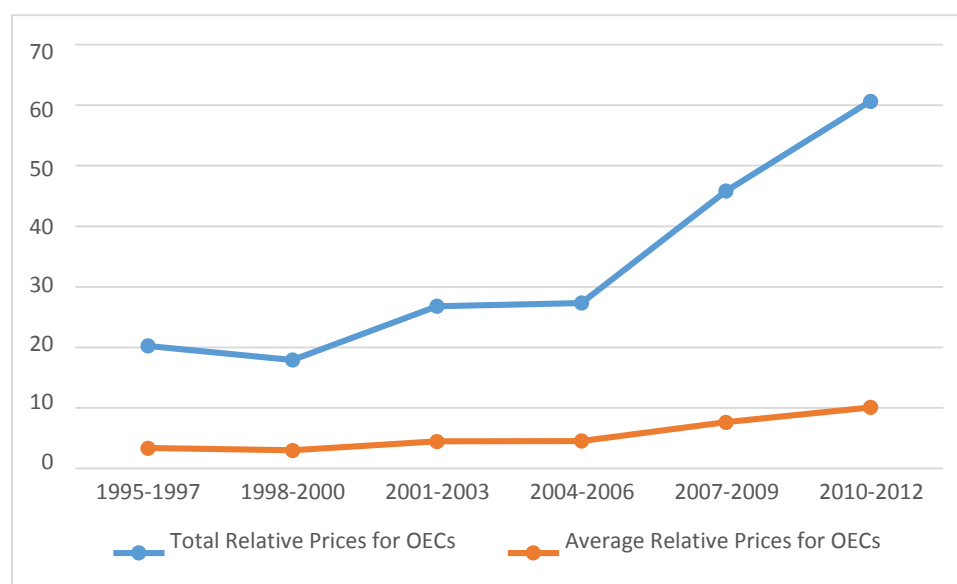
Source*: Drawn with data from UNCTAD*

3.4.2. Relative Import Prices in Middle Income Countries

Figure 3.15 and Table 3.10 capture the trend in relative import prices for the middle income countries. Average relative import prices in this category did not fluctuate much. In this group, only Swaziland witnessed a persistent fall over the period of study as revealed by Table 2.11. In

their cases, Botswana, Lesotho and Mauritius witnessed a fall up till 2001-2003 followed by a persistent rise after this period.

Table 3.10: Relative Import Prices for Middle Income Countries in the SSA

Year	Botswana	Lesotho	Mauritius	Senegal	South Africa	Swaziland	Total	Average
1995-1997	6.80	7.52	5.22	2.86	6.06	4.09	32.55	5.43
1998-2000	5.67	4.56	4.48	2.95	4.47	3.32	25.45	4.24
2001-2003	4.51	3.70	3.81	3.69	3.99	2.86	22.57	3.76
2004-2006	5.07	5.06	4.68	5.72	6.56	3.76	30.85	5.14
2007-2009	5.98	5.12	4.94	8.12	7.04	2.70	33.89	5.65
2010-2012	6.02	5.12	5.20	7.62	6.83	2.57	33.35	5.56

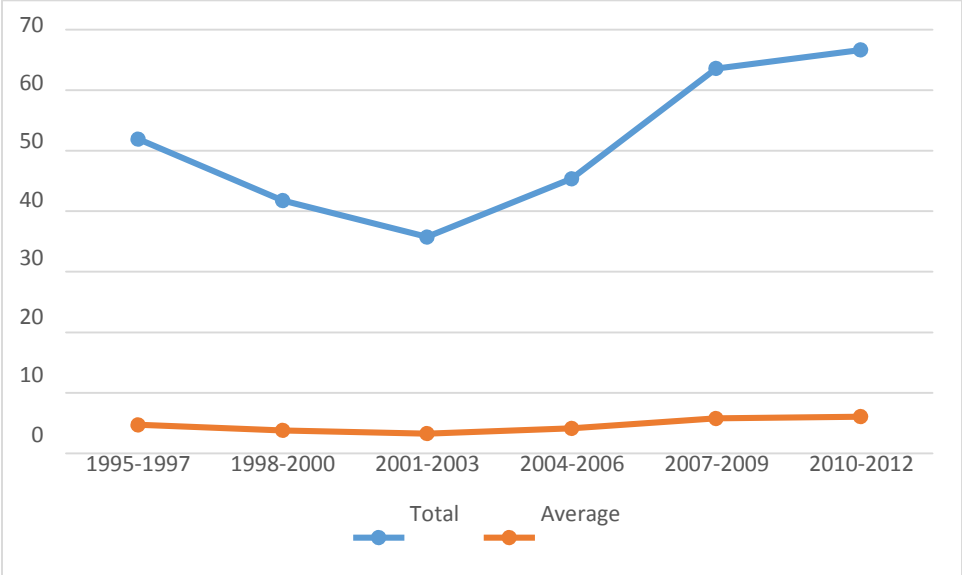Source: Authors' computation from *WDI* 2013

Figure 3.15: Relative import prices for Middle Income Countries from 1995 -2012
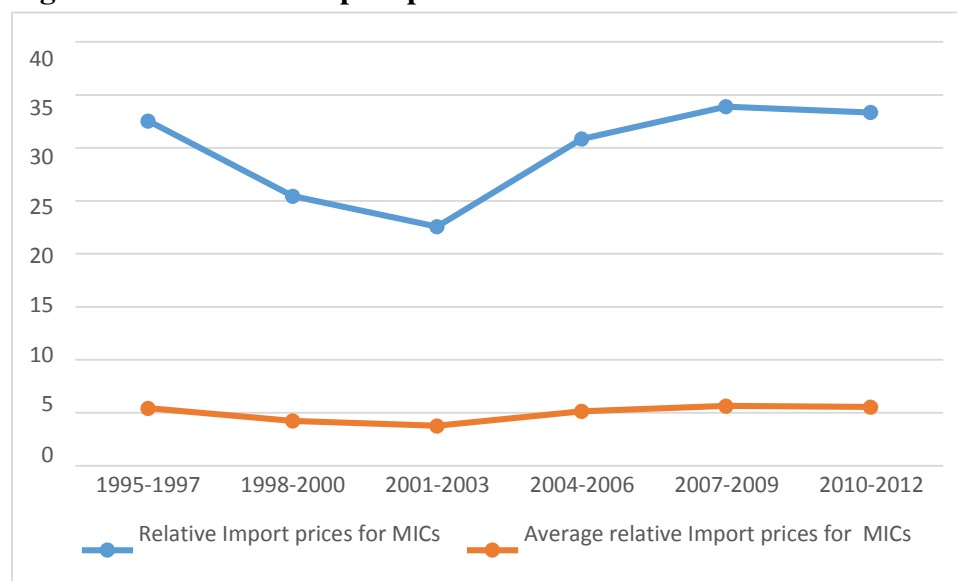
Source*: Drawn with data from UNCTAD*

3.4.3.   Relative Import Prices in Non-Fragile Low Income Countries

Figure 3.16: Trend of Relative Prices for Non-Fragile Low Income Countries 1995 -2012

Source*: Drawn with data from UNCTAD*

Table 3.11: Relative Import Prices for Non Fragile Low Income Countries

Year	Benin	Burkina Faso	Ethiopia	Gambia	Kenya	Mali	Mada-gascar	Mozam bique	Rwanda	Sierra lone	Uganda	Total	Average
1995-1997	1.89	3.15	10.15	5.88	4.37	1.65	0.25	3.93	6.45	19.35	3.10	60.18	5.47
1998-2000	1.69	3.38	11.41	4.84	3.15	1.69	0.23	3.79	5.56	12.52	3.20	51.49	4.68
2001-2003	1.68	3.61	15.95	3.10	3.18	1.99	0.23	3.95	5.71	7.95	2.68	50.02	4.55
2004-2006	2.20	6.01	25.82	3.88	4.73	2.70	0.27	5.34	6.80	7.71	3.51	68.98	6.27
2007-2009	4.01	7.80	28.82	4.47	6.34	3.97	0.37	6.25	11.99	8.60	5.75	88.37	8.03
2010-2012	4.08	8.0	20.25	3.93	6.43	3.83	0.26	7.07	13.92	10.29	4.76	82.82	7.53

Source: Authors' computation from *WDI* 2013

3.4.3. Relative Import Prices in the Non-Fragile Low Income Countries

In Figure 3.16 and Table 3.11, the trend of relative import prices of the non-fragile low income countries is shown. Average relative prices fell up till 2003 and began to rise from 2004 till the end of the period, peaking at 6.06. Among this group, Madagascar witnessed the lowest relative import prices. This implies that domestic price level were relatively high[12]. Relative import prices were highest in Ethiopia, followed by Rwanda and Sierra lone.

3.4.4. Relative Import Prices in fragile countries

As shown in Figure 3.17 and Table 3.12, the average relative import prices in the fragile countries nosedived between 1995 and 2000. This is as a result of very low level of domestic prices in the Democratic Republic of Congo within this period. Subsequent years witnessed a minimal fluctuation in the level of relative import prices on the average.

Figure 3.17: Relative Import Prices in the Fragile Countries
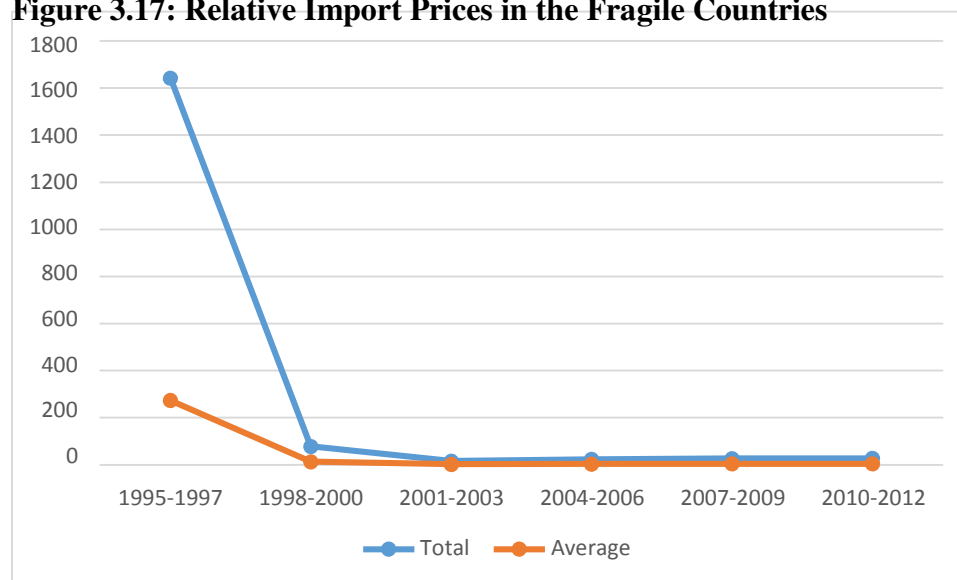
Source*: Drawn with data from UNCTAD*

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[12] Relative import prices were computed as the ratio of import prices to domestic prices

Table 3.12: Relative Import Prices for Fragile Countries in the SSA

Year	Burundi	Central Africa Republic	Democratic Republic of Congo	Cote d'voire	Eritrea	Togo	Total	Average
1995-1997	13.42	4.35	1613.4	3.45	4.78	3.70	1643.11	273.85
1998-2000	6.59	3.63	58.76	3.06	3.73	3.03	78.80	13.13
2001-2003	4.17	2.98	0.77	2.84	2.20	3.17	16.15	2.69
2004-2006	6.05	4.57	1.19	5.13	1.41	4.81	23.16	3.86
2007-2009	5.80	6.98	1.07	5.98	1.15	5.87	26.84	4.47
2010-2012	6.24	8.53	0.74	5.59	0.97	5.73	27.81	4.63

Source: Authors' computation from *WDI* 2013
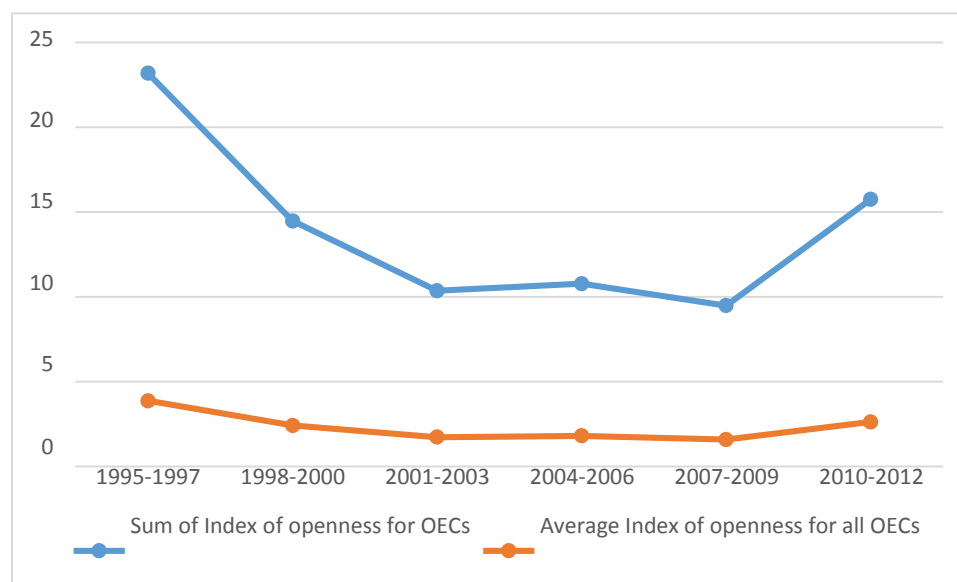
3.5. Index of Openness in the SSA

Index of openness is a measure of the degree of openness of an economy. The openness so measured connotes the extent to which an economy is involved in external economic interactions with the rest of the world, hence an assessment of trade liberalisation policy of an economy. In literatures, it is commonly computed as export plus import all over GDP of an economy multiplied by 100. This measure is quite popular as a result of readily available data for many countries which enhances comparability across studies[13]. A benchmark of 30% is used to classify an economy either as open or closed. This section therefore examines the trend of trade openness among the SSA countries following the IMF classification.

3.5.1. Index of Openness in the Oil Export Countries

Figure 3.18 and Table 3.13 reveal the trend of index of openness of oil exporting countries in the SSA. The degree of openness to trade among these countries tightened up over the period of study but was relaxed towards the end of the period specifically, between 2007 and 2012. Equatorial Guinea and Congo, the Republic relatively witnessed high degree of trade openness. The degree of trade openness in Nigeria was relatively maintained over the period of study.

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[13] As cited in A Guide to Measure of Trade Openness and Policy (2007). H Lane David

Figure 3.18: Index of Openness for the Oil Exporting Countries

Source: *Drawn with data from WDI*

Table 3.13: Index of Openness in the Oil Exporting Countries in the SSA

Year	Cameroon	Chad	Congo, The Republic	Equatorial Guinea	Gabon	Nigeria	Total	Average
1995-1997	0.73	1.04	2.81	14.65	2.84	1.11	23.18	3.86
1998-2000	0.84	0.96	3.21	5.71	2.51	1.25	14.47	2.41
2001-2003	0.74	0.93	2.71	2.88	2.07	1.03	10.36	1.73
2004-2006	0.73	1.76	2.50	2.77	1.94	1.08	10.78	1.80
2007-2009	0.70	1.27	2.21	2.49	1.73	1.08	9.49	1.58
2010-2012	2.17	1.02	7.42	2.13	1.62	1.39	15.75	2.63

Source: Authors' computation from *WDI* 2013

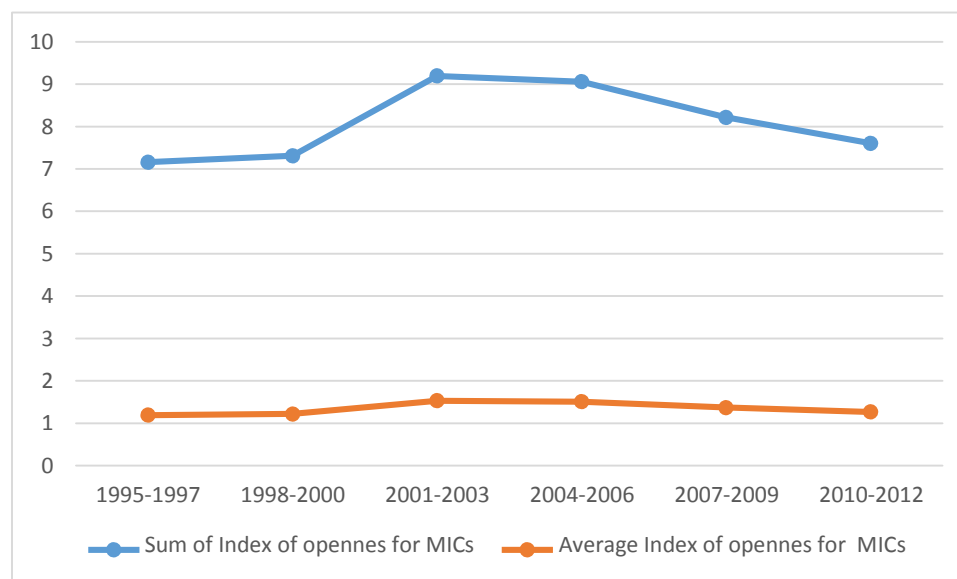### 3.5.2. Index of Openness in the Middle Income Countries

Figure 3.19 and Table 3.14 show the trend of trade openness in the middle income countries of the SSA. Average degree of trade openness in this group was maintained over the period of study. South Africa and Senegal were least open among these groups of countries over the period of study. From the data depicted in table 2.14, Swaziland is the most open among these groups over the study period.

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Table 3.14: Index of Openness for Middle Income Countries

Year	Botswana	Lesotho	Mauritius	Senegal	South Africa	Swaziland	Total	Average
1995-1997	**1.59**	**0.68**	**2.01**	**0.90**	**0.79**	**1.18**	7.16	1.19
1998-2000	**1.50**	**0.77**	**2.01**	**0.87**	**0.84**	**1.33**	7.31	1.23
2001-2003	**1.45**	**1.36**	**1.94**	**0.83**	**0.83**	**2.79**	9.20	1.54
2004-2006	**1.50**	**1.57**	**1.77**	**0.81**	**0.82**	**2.60**	9.06	1.51
2007-2009	**1.30**	**1.59**	**1.74**	**0.73**	**0.78**	**2.08**	8.22	1.37
2010-2012	**1.12**	**1.49**	**1.86**	**0.70**	**0.69**	**1.73**	7.61	1.27

Source*: Drawn with data from UNCTAD*

Figure 3.19: Index of Openness for Middle Income Countries in the SSA

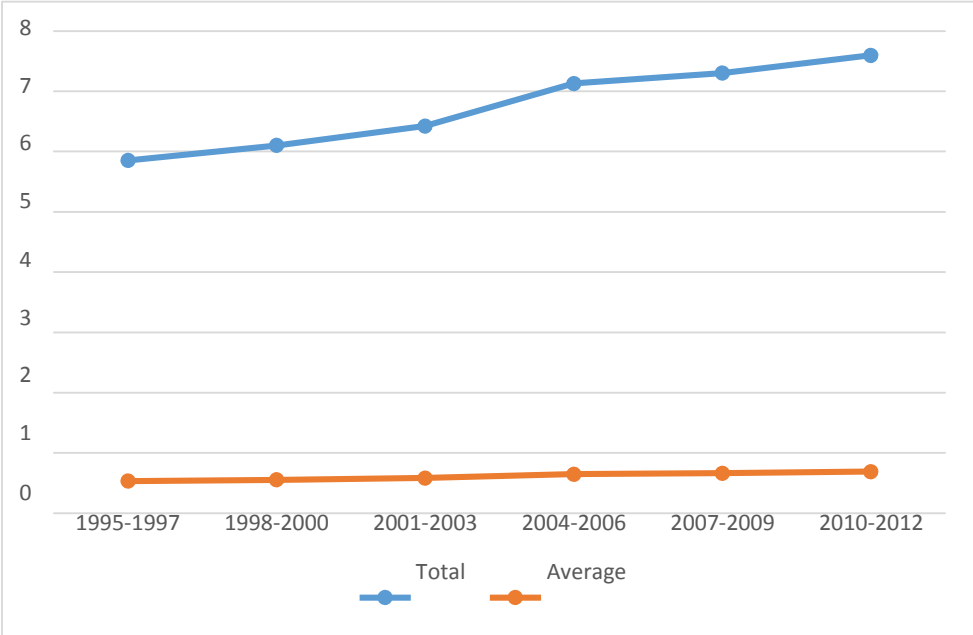**Source***: Drawn with data from UNCTAD*

3.5.3. Index of Openness in the non-Fragile Low Income Countries

As depicted in Figure 3.20 and Table 3.15, average index trade openness among the non-fragile low income countries was maintained below 100 as majority of the countries in this group kept their indices below 100 over the study period. Only in Mozambique, Gambia and Madagascar was an index greater than 100 observed.

Figure 3.20: Index of openness for non-fragile low income countries

Source: *Drawn with data from UNCTAD*

**Table 3.15: Index of openness for Non Fragile Low Income Countries in US$billion**

Year	Benin	Burkina Faso	Ethiopia	Gambia	Kenya	Mali	Madagascar	Mozambique	Rwanda	Sierra-lonne	Uganda	Total	Average
1995-1997	0.55	0.36	0.31	1.17	0.76	0.57	0.97	0.38	0.18	0.27	0.31	5.85	0.53
1998-2000	0.62	0.37	0.38	1.26	0.68	0.68	0.94	0.41	0.20	0.24	0.31	6.10	0.55
2001-2003	0.62	0.27	0.38	0.99	0.74	0.84	0.84	0.74	0.26	0.38	0.34	6.42	0.58
2004-2006	0.60	0.31	0.44	1.01	0.84	0.76	0.88	0.97	0.34	0.53	0.41	7.13	0.65
2007-2009	0.65	0.37	0.35	0.77	0.82	0.69	1.15	1.03	0.35	0.45	0.65	7.30	0.66
2010-2012	0.59	0.59	0.45	0.76	0.87	0.62	1.04	1.09	0.39	0.42	0.75	7.59	0.69

Source: Authors' computation from *WDI* 2013

3.5.4. Index of Openness in the Fragile Countries

Figure 3.21 and Table 3.16 capture the trend of trade openness in the fragile countries of the Sub Saharan Africa over the period of 1995-2012. On the average, there was a reduction in the trade liberalisation policies among these countries between the period of 1995-2000 and this was subsequently maintained till the end of the period. As evident in Table 2.18, this pronounced abstinence from a trade liberalisation regime is most notable in Burundi as her index of openness dropped significantly from 6.59 to 0.14 between 1995 and 2000. Togo was the most open among these economies as it recorded an index that was above 100 throughout the entire study period.

Figure 3.21: Index of Openness The Fragile Countries
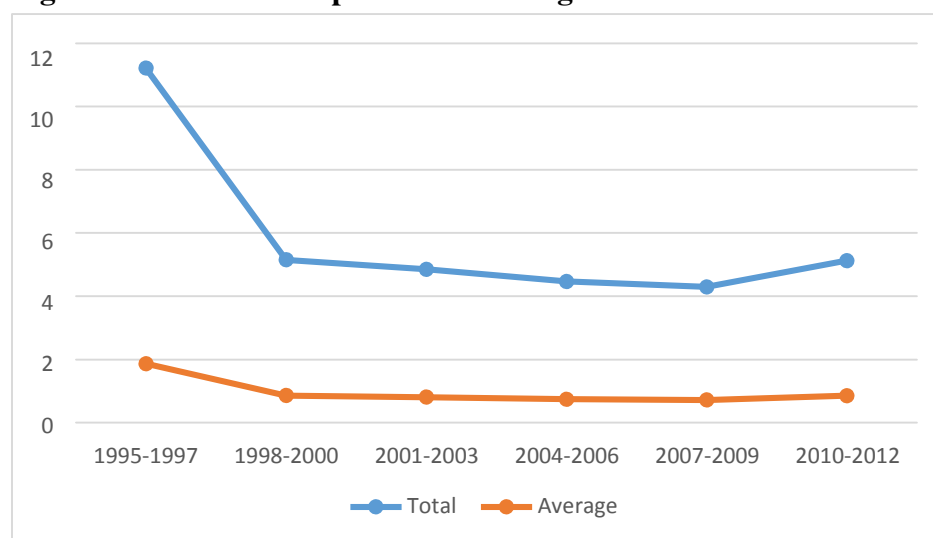
Source*: Drawn with data from UNCTAD*

Table 3.16: Index of open for Fragile Countries in US$billion

Year	Burundi	Central Africa Republic	Democratic Republic of Congo	Cote d'voire	Eritrea	Togo	**Total**	**Average**
1995-1997	6.59	0.60	1.33	0.94	0.50	1.25	**11.21**	**1.86**
1998-2000	0.14	0.56	2.15	0.94	0.24	1.11	**5.15**	**0.85**
2001-2003	0.18	0.51	1.29	1.37	0.21	1.28	**4.85**	**0.81**
2004-2006	0.22	0.42	0.98	1.52	0.19	1.12	**4.47**	**0.74**
2007-2009	0.26	0.40	1.07	1.32	0.18	1.05	**4.29**	**0.72**
2010-2012	0.30	0.33	1.64	1.29	0.42	1.15	**5.13**	**0.85**

Source: Authors' computation from WDI 2013

4. Conclusion and Policy Recommendation

The study has empirically examined the structure of import demand for the Sub Saharan Africa for thirty countries for the period spanning from 1995-2012. Specific objectives of the study are to examine the determinants of import in the sub Saharan Africa and to examine how the selected variables influence imports. The study attempted to show the effect of trade liberalisation on imports incorporated other vital variables such as degree of openness and foreign exchange reserves. The study also structurally analyzed the trend of import demand in the Sub Saharan Africa according to the International Monetary Fund (IMF) grouping. Finding revealed that relative price of import has a positive relationship with import demand which implies that there is high import demand at higher import prices. This is contrary to theory in traditional literature on import demand but it is meaningful for poor developing countries in general, SSA in particular. High production costs cum low level of technology in developing countries make import demand for most manufactured good inevitable. As prices rise, total import expenditure rises for these countries. The result also showed that the level of aggregate import is determined by income in the long run.

4.1. Policy Recommendations

The results of the aggregate import demand and the components studied have some important policy implications. First, policies aimed at raising reducing import by raising import prices through tariff will prove ineffective in the Sub-Sahara Africa. Other restriction methods such as ban should be employed. An expenditure dampening policy will be effective to reduce import demand while one that is directed at increasing the domestic production would ease the shortage. Also, export promotion and removal of other international trade barriers to encourage exports will increase exports and raise export revenue to finance the ever-increasing imports.

Finally, policy authorities who aim at reducing imports to correct balance-of-payments imbalances in the long run should target the efforts at policies that will reduce spending power at the macroeconomic level, and implement policies that will ensure increased domestic supply. These will reduce the dependence on imports and reduce import demand.

4.2. Limitations of the Research

Having come thus far, we cannot rule out the fact that there are limitations inherent in this research. First, sample countries and data chosen for this study were influenced by data availability. The unavailability of data such as import value index and foreign asset for some SSA countries to a

large extent affected the robustness of our results. These data are central in analyzing the determinants of import demand behaviour of an economy.

In spite of this limitation, it is obvious that this research has contributed to the increasing literature of import demand determinants. However, to increase the frontier of knowledge, study could be carried out on import determinant for disaggregated import in the Sub-Saharan Africa. This can capture the import demand behaviour of the sub- Sahara African economies for specific goods. Moreover, other panel methodologies such as General Moment Method (GMM) could be employed where there is availability of data for a longer time dimension.

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