# Currency Union as a Panacea for ills in Africa: A New Institutional Framework and Theoretical Consideration

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## 1.0 INTRODUCTION

A currency union is a union to which two or more countries agree to surrender their monetary sovereignty to adopt an official currency issued by a Central Bank tasked with formulating and implementing monetary policy. Currency union came to light when there was a need for choosing a suitable exchange rate regime as an improvement on the fixed exchange rate. Comparatively, currency union is superlative to fixed exchange rate due to equalization of price through the laid down nominal convergence criteria and the introduction of a common currency to ensure greater transparency in undertaking transactions (Rose, 2000; Abban, 2020a). Currency union is touted to emanate several gains and has the potential to be disastrous based on the conditionality among member-states. Empirical studies emphasize the main advantages of currency union membership lies with the elimination of exchange rate volatility to increase savings, relaxation of policies that hinder the free movement of persons and capital to improve trade and tourism, price transparency to intensify trade, and the ability to induce greater Foreign Direct Investment (FDI) to stimulate intra-trade flows (Rose, 2000; Micco et al., 2003; Aristotelous & Fountas, 2009; Rodriguez et al, 2012). The key areas that benefit from currency union membership include production, the financial market, the labour market, tourism, the private sector, the political environment among others (Karlinger, 2002; Martinez et al, 2018; Formaro, 2020). On the other hand, the main disadvantage includes the operational cost of adopting a common currency, potential asymmetry of shocks due to fiscal spillovers, and language barrier. Language barrier will not be a major impediment to trade when countries use a common currency hitherto transparency backed by technology will ensure members adjust with one another over time. Also, when greater trade flows are endogenously determined among members, countries will be less exposed to external shocks. In the argument of Rose (2000), the main facilitator in the stimulation of the gains of a currency union is contingent on the private sector involvement backed by mutual trust and elimination of national chauvinism.

Developed countries with greater contribution to world trade are liable to use sovereign currencies compared to developing countries. Due to the other incentives of a currency union, advanced countries also enjoy the membership of the union. The official documentation of currency union membership began with the European Monetary Union (EMU). The main purpose of the integration was to consolidate the gains of members in international trade, eliminate potential trade distortions affecting pricing, and eliminate extreme nationalism among others. However, the EMU fuelled debt stock due to the substandard mechanism to check compliance and the level of borrowing in the initial stages of currency union membership (Abban & Ofori-Abebrese, 2019). Additionally, the main attributing factor for the crises in the European Monetary Union was the large public sectors heavily financed by external debts and the attractiveness to borrow from the international market. Despite the challenges, trade statistics showed that currency union formation increased the trade flows among members.

In developing economies, the use of independent currencies serves as a trade barrier due to the cost of exchanging one currency for the other. This is intensified by the high demand for foreign currency to trade among developing countries of the same trade bloc. The use of sovereign currencies allows countries to borrow to stimulate employment, infrastructure, and economic growth without strict adherence to macroeconomic restrain. Additionally, one major advantage of the use of sovereign currencies is the ability of countries to devalue to boost trade. However, countries that have a significant contribution to global trade and an optimal level of importation can exclusively benefit from devaluation. Given this, countries that do not contribute significantly to global trade cannot maximize the gains from devaluing their currency and will suffer from the adverse effect of imported inflation if the country is a highly import driven economy. Empirically, studies on developing countries have not been able to measure the exact cost involved in using sovereign currency, due to most transactions are undertaken using foreign currencies hence the high demand for foreign currencies. Therefore establishing the link between exchange rate volatility of sovereign currency and trade was difficult to establish over the years. In this background, the cost of using sovereign currency passes through two channels which emanate greater cost when counties are highly import driven. Thus, the additional transaction cost for accepting the sovereign currency and the cost of using foreign currency engaging in international trade. However, the technicality of some sovereign currencies used by some developing countries maximizes the gains from international trade. Thus, if the currency is convertible, there is a greater tendency to ease transaction costs compared to a strict sovereign currency. To adopt a convertible currency, there is a need to have buffers to reduce the volatility of the currencies.

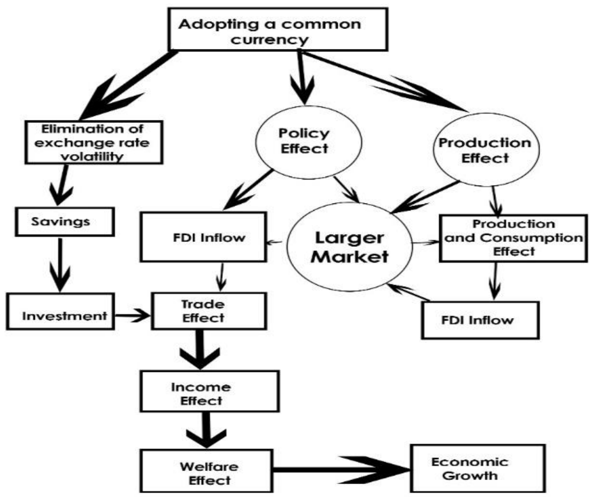
The relatively low contribution of African countries to global trade and substandard buffers makes the currency more volatile therefore a greater tendency of eroding the gains from trade. As a result, investors in developing countries proxy their investment in dominant currencies. A foreign currency serves as the bridge between the two sovereign currencies therefore currency union eliminates the bridge and serves as a direct link between the countries. However, there is a need for preliminaries of the policies before adopting a common currency.

In Africa, producers were faced with a relatively small market size due to protection set by countries while demand for goods is high, which has festered for some decades reminisced from resentments of indigenous producers leading to high imports. As a result, the most prevalent job opportunities in Africa were small-scale businesses. In light of currency union formation, countries will benefit from the elimination of transaction costs hinged on the policy on the common currency, free movement of persons, and the Right of Residence and Establishment. Thus, currency union reduces the heavy reliance on foreign investors to indigenous investors. Under the policy of a common currency, indigenous producers can form cartels and conglomerates to facilitate the diversification of the economies. As a result, import controls can be enhanced with the initiation of a common currency. Additionally, most foreign investors index their profit margin to the size of the market and exchange rate risk, therefore relatively small countries would benefit from improved pricing due to an integrated market coupled with sound macroeconomic stability.

Also, there is a lack of an internally superlative organization empowered to serve as a check on the sovereign governments. The existence of obsolete laws has led to a reactive rather than proactive nature of economic organizations to which African countries hold membership hitherto inhibiting stronger political ties. In this background, the existing framework of integration could worsen the economic stance in the future unless countries integrate to tackle ills among members. The existing framework will likely yield both internal and external adverse effects if further integration is not pursued. In the background of internal effect, the member-states are plagued with several barriers that erode the gains from trade such as smuggling, bribery, and corruption, embezzlement of national coffers, wrong invoicing, security-related issues hitherto trade barriers (Abban, 2020a). Moreover, the resources of most countries are mismanaged and misappropriated with demographic dispensation on a high. Also, the use of sovereign currencies harms the growth of the banking sector by impeding financial inclusion in developing countries where there is a relatively large informal sector. Additionally, the non-convertibility of currencies contributed to the current ameliorated state of economic affairs with the high demand for foreign currencies to facilitate intra-regional trade. As a result, some currencies were convertible at black market price which led to currency hoarding. In the context of external effect, the heavy reliance on foreign direct investment (FDI) inflow from foreign partners exposes the economies to greater external shocks therefore the need for further integration. In this background, the 2008 International financial crises were a major contagion to the effect of FDI inflow to developing countries. More so, the lethal effect of the contemporaneous 2019 Corona Virus derailed supply chains and halted economic activities signaled the exigency for further integration. In this context, most countries experience relatively higher inflation dispersion or volatility beyond the consistent band. Moreover, the turbulence on the change in climatic conditions has a significant effect on agricultural production and the growth of the primary sector which would harm the volume of accumulated reserves (Abban, 2020a). Additionally, there were current distortions in global trade due to some advanced countries stifling their trade policies, and practicing home bias. According to World Data Lab, approximately eighty percent of countries deemed to fail in eradicating poverty will be in Africa. Therefore, to increase the long-term competitiveness of the economies to reduce poverty in Africa, there is a need to integrate further to form a currency union. *Currency union with a common policy* tends to unearth greater trade potentials among the countries.

Empirically, Countries adopting a common currency benefit from three major channels to impact trade. The three-dimensional effect has a stronger impact on the transformation of the economies by curing prevalent ills in the economy in line with improved standards of living.

**Figure 1.0: Conceptual framework of Currency Union Effect on Economic Growth**




## Source: Author

From the diagram above, adopting a common currency reduces transaction costs amongst member-states by eliminating exchange rate volatility. All things being equal, this would lead to increase savings. Can the level of savings be reduced based on the quantity of money printed in the union?

To induce Foreign Direct Investment (FDI), there is a need to reduce inflation variation, exchange rate volatility, public debt to GDP, provide an official channel for foreign investors, greater transparency to reduce the tax burden in the economy, and ensure a sound business environment among others. The main source of FDI inflow emanates from the intra-membership inflows in the currency union and foreign investors. In a currency union, FDI can be stimulated through the policy and production effect. In this background, currency union leads to the formation of a relatively larger market for the production and consumption of goods and services. This provides an additional incentive for domestic producers to enjoy economies of large-scale production. Furthermore, the FDI inflow could result from integrated money and capital markets to ensure cross-country portfolio diversification. In the same vein, the money market deepens because stocks would be indexed in a single currency *with no additional transaction costs* on the integrated market. For developing countries to maximize the gains of currency union membership, there is a need to consciously outline policies to induce greater FDI inflows.

The strength of a currency union as a panacea for ills can be achieved with an appropriate institutional framework, policies, and trade and transport infrastructure among others. For countries to give up their sovereign currencies to form a currency union, there is the need for the three policies to be implemented effectively with no exceptionality. The policy of free movement of persons, goods, and capital, the Right of Residence and Establishment and Trade Liberation Schemes (TLS). Currency union can help attenuate the level of corruption and other forms of barriers when the Central Bank oversees the activities of the National Banks. Also, the lack of appropriate channels for investors' sprawls corruption-related activities, therefore, forming a currency can provide the needful platform. Additionally, currency union ensures price transparency which equalizes price, therefore, attenuating smuggling by eliminating price differential among members. Furthermore, currency union ensures adequate market information for the allocation of resources. Also, the implementation of laudable policies to eradicate cankers is booted by the opposition parties and victims, therefore, rebelling against the sitting government due to the high illiteracy rate of indigenes. Given this, currency union can provide the platform for continuity of national development projects and policies towards achieving the long-term growth and development of the member-states.

Currency union with a common policy set out an institutional framework to ensure the attainment of a political union. *Currency union with a common policy* can ultimately lead to the documentation and development of tourist sites by developing a common policy variable. In a nutshell, currency union can lead to unearthing the relatively large informal sector through a laid out diversification policy.

## 1.1 Institutional Setting

Given this, the study seeks to suggest a new institutional framework to this effect.

The ***Policy Review Team*** should be tasked with reviewing all policies of political parties before the official launch of their manifestos. The reason for the review is to eliminate the favourability of some policies to woo voters by politicians satisfying the short term needs but detrimental to the long-run growth of the region. Therefore such policies will be heavily scrutinized. The ***Team*** should be tasked with interrogating the ministers, senators among others, on their intended projects with the assigned funds and make the information available to the populace before an election. The developmental projects will be communicated on a website based on demarcated districts, regions, among others that are accessible to the populace. The ***Team*** further ascertains the achieved projects before an election period. The ***Regional Economic Policy Unit*** under the aegis of the ***Policy Review Team*** should facilitate the continuity of good policies and coordinate among member states.

The ***Contract Specialists Group*** under the auspices of the Central Bank should evaluate contracts of the various member-states which are detrimental to the long-term growth. The ***Group*** will also be responsible for social impact reforms and providing the framework for businesses to contribute to the social well-being of the citizens. Also, tasked with the formulation of business laws, harmonization of policies, and business cycle synchronization.

The ***Currency Group*** should focus on policy coordination with the national policies of the member-states to ensure economic growth through financial and macroeconomic stability. Moreover, the ***Group*** will be tasked with monitoring and improving the integrated financial market. The ***Group*** will seek to follow up on the summit report and outline recommendations of up-surging issues of socio-economic importance. It should be comprised of policy analysts and finance ministers.

The ***Commission*** should analyze the convergence of member states in line with the stability pact and other agreed policies. It should access the economic circumstances of the member states and suggests to the council for policy formulation. The ***Commission*** should evaluate political and economic hindrance to trade in the region as well as other important issues of pressing attention. The ***Commission*** should be tasked with the elimination of political monetization, state capture, and reduce in-house partisan disputes. Also, every government must be well scrutinized on budget, disbursement, and conducts with the report available before an election year.

The ***Economic and Finance Council*** should comprise of economists, ministers of finance, and researchers of all member-states representing each member-state in the policy orientation process at the Central bank with the ***National Banks Economic Council*** comprising of 20 economists of the member countries forming the second supra authority with the Governor the highest for transparency and fair policy initiatives among member states. The **Council** should evaluate all activities undertaken by each team, group, and commission.

The ***Evaluation and Investigative Team*** should be tasked with evaluating how the government performed per their manifesto and how funds were disbursed before an election. The ***Team*** will begin by evaluating how funds were disbursed by Senators, Ministers, and anyone funds were channeled through at the constituency level. The policies should be in sync with the national and regional policies and the needs of the people which would be accounted for when the tenure is falling due. The Ministers, Senators among others, are to prepare a proposed plan on how each fund will be disbursed per the needs of the indigenes to serve as a standard for the team to evaluate the progress. The ***Team*** is to create a platform for indigenous contractors of professional backgrounds to bid for the contracts in terms of costs and quality.

The ***Team*** should evaluate, encourage and support institutions' internal integrity management initiatives such as setting up complaint resolution mechanisms for citizens to report any bribery incidents they encounter or service delivery charters outlining the services offered, the amount of time taken, and fees charged to access the services. Also, the ***Team*** should be tasked with reviewing all activities of the Electoral Commission to ensure political parties are not incongruous with proceedings without malice before an election. Additionally, the ***Team*** should be tasked with the digitization of services to reduce service transaction time and minimize human contact.

***Marketing and Innovation Group*** will be charged with the marketing of the goods produced and suggest ways to improve the branding of the products. The ***Group*** should is to reach out to prospects, investors, customers, and maintaining a high standard brand. The ***Group*** will serve as an intermediary between the customers, investors, and producers to ensure efficient communication to all related parties and coordinating the marketing system. This can be easily achieved through a digitalized coordinated cross border activities. The ***Group*** should advice the indigenes of the prices of extractive minerals and how to get the best deal from selling to the government. Additionally, the ***Group*** should be responsible for culminating innovative ideas and creative inventions to be heavily financed and marketed for the domestic and global market.

***Regional Human Rights and Drug Trafficking Unit*** should be under the aegis of the ***Security Coordination Group*.** The ***Unit*** should be tasked with mapping drug traffic routes, interrogate culprits on the acquisition route, and abolish all drugs that are detrimental to human health. The ***Unit*** should be tasked with undertaking checks at vantage points and equipped with the necessary tools to enhance the effectiveness of the department. The ***Unit*** should digitalize all drugs categorized as illegal, conditional use among others on a common platform, and effectively communicate the health implications to the populace. Also, the ***Unit*** should be charged with investigating the authenticity of drugs sold on the market to avoid the sale of complicated health drugs.

***Labour and Wage Group*** should be responsible for setting out the regional minimum wage and resolve labour-related issues resulting from the integration. Also, it should focus on integrating the labour markets of member-states and resolve labour market pressures. In this background, the ***Group*** should be tasked with initiating policies that will enhance the level of savings of labour and design a policy framework for showing the various component of the unemployed populace to effectively map with available vacancies within the region especially related projects undertaken.

The ***Education and Training Group*** should be tasked with grass route education on the need for some practices to be curtailed. The team is to advise the populace on how their direct and indirect behaviours affect the economy as a whole. The ***Group*** should devise active policies to involve citizens' vigilantism towards keeping the environment safe for living. The **Group** should be in consultation with the populace on the needs of the populace as well as acquiring information for policies implemented to ensure improvement in the policy delivery.

***Real Estate and Planning Evaluation Team*** should be tasked with outlining standardized plans to put up buildings capable of housing people without land wastage. The ***Team*** should map out locations for the government to put up buildings as a housing unit for indigenes with dilapidated buildings whiles making room for people to stay. The purpose of the ***Team*** is to reduce the adverse effect of land wastage as well as reducing the size of productive lands to stimulate economic growth.

***Government Specialists Group*** should be tasked with mapping out unproductive arable lands and evaluate the possible primary sector activity that can be undertaken on the land without been left in a deplorable state. The ***Group*** should be tasked with ensuring negotiations with owners of the resources and ensuring a suitable livelihood for persons of the status quo. In this view, the owners of the resources should be well briefed and considered in any adjustment in the decision. The ***Group*** will be mandated to have consultations with the indigenes and traditional leaders.

The ***Sanitation and Environmental Control Unit*** should be tasked with devising innovations for the disposal of waste and reducing the level of waste in the environment. The ***Unit*** should be tasked with the protection of water bodies, land, and air. Any act that is detrimental to the environment should be abolished backed by law. The ***Unit*** should be responsible for initiating academic competition among students to ensure knowledge is obtained to develop an appropriate and efficient policy variable to extirpate the effect of pollution and damages.

***Education Review and Reform Team*** should be tasked with introducing courses that have a direct effect of eradicating the regional problems as well as addressing the shortfalls and needs notably on unearthing the large informal sector, trade and transport infrastructure, policies on savings, capacity building among others. The ***Team*** should be tasked with documentation of academic innovation and creativity by assigning the patent right to inventors. Technology should be practically executed as a precondition.

The ***Electioneering Team*** should be tasked with undertaking elections. The possible candidates to serve as Electoral Commissioner should be suggested by the incumbent government but highly assisted by the ***Team*** and other commissions. The ***Team*** should devise policies to contain staunch political affiliates from exhibiting unlawful political tensions. Every year, the ***Electoral Commission*** should open a portal for indigenes of the constituent to assess their Member of Parliament. The specific amount given for the developmental project should be accountable for per the standards outlined for the funds to be used. The ***Team*** should evaluate all costs involved in the electoral processes.

The ***Investment Monitoring Group*** should be tasked with outlining formal channel for foreign investors to avoid corruption blotted contracts. The ***Group*** should be tasked with partnering domestic investors with foreign firms to undertake the task. The ***Group*** will be tasked with assigning rule of origin to countries heavily funded to maximize production. The ***Group*** should be tasked with the implementation of the Common External Tariff (CET). Additionally, the ***Group*** should monitor and supervise the even spread of investment across member states.

The ***Database Management and Analysis Team*** should be tasked with synchronizing the database for all citizens from childbirth. The **Team** should be tasked to compile all databases including occupation, residence among others. This database will automatically drift the populace of voting age to the Electoral Commission platform. The ***Team*** should be tasked with analyzing the trends of the data for policy purposes.

The ***Financial Market Coordination Team*** should be tasked with integrating the financial markets of member-states. Initiating policies that are suitable to induce foreign investors and ensure greater portfolio diversification among the populace. The ***Team*** should educate on the need to invest in the financial markets as a platform for indigenes to maximize gains from their savings. They should register potential financial institutes on the market for indigenes to invest in.

The ***Fiscal Coordination Team*** should focus on the effective coordination of fiscal policies. Effective fiscal policy coordination would be a tool for recovering from idiosyncratic shocks. In this context, the ***Team*** should be responsible for cross-border fiscal transfers to countries hit with bad shocks. The ***Team*** should be charged with the evaluation of funds needed to help attenuate the effect of shocks and the coordination of budget evaluation and allocation. Also, the ***Team*** should help member states with huge budget deficits devise policy towards deficit reduction.

The ***Research Group*** should be tasked with undertaking research concerning policies that are likely to have a favorable effect on the growth. In this background, the focus should be on improving transparency and diversifying the economies. The ***Group*** should consist of a maximum of 20 members tasked with diverse research fields with additional external two researchers well vest with the field of interest.

The ***Regional Private Investors Coordination Team*** should focus on mobilizing resources and know-how on private sector development. The ***Team*** should comprise of major stakeholders in the private sector and the indigenous investors to devise measures to expand and effectively coordinate with the pressing needs in line with regional policies to ensure efficient production level to help in the diversification process of the economies. In line with ***Producers Association of the various RECs***, tasked with producing the basic needs and other products that repatriate greater outflows. The ***Association*** should form a cartel of indigenous producers of diverse production capacity who can be heavily funded and supervised. The association determines the path to which FDI should be channeled to enhance trade.

The ***Security Coordination Group*** should devise formal approaches in handling security-related issues. These should include all security agencies and stakeholders to ensure transparency in executing duties. The ***Coordination Group*** should be assigned with a quarterly briefing of security-related events and measures laid down to settle the unrest.

The ***Implementation Committee*** should focus on the efficacy of monetary policy and initiate policies of welfare-improving as well as reducing the leakages of institutional weakness for better policy effect on the economies. Also, the ***Committee*** should be charged with the settlement of trade disputes since an increase in trade volume lead to relatively tout de suite trade disputes and labour market pressures. Also, it should focus on integrating the labour markets of member-states.

The ***Debt Evaluation and Strategic Committee*** should be charged with devising methods in attenuating the stock of debts and the rate at which the level of debt increases. The ***Committee*** should be in charge of foreign assets evaluation and devise strategies to increase the stock of foreign assets. Given this, the value of the currency will be assured of some level of stability. Also, instituting new debt management initiatives by allocating new debts to projects of long term benefits to the continent.

The ***Aid and Investment Review Committee*** should monitor and evaluate the superlative motives behind the influx of foreign assistance and its implementation. Furthermore, the ***Committee*** should be charged with examining the channels of aid and investment and execute strategies of benefits to the parties involved.

The ***Common Market Committee*** should be tasked with evaluating exports to the member-states and the rest of the world at large. The ***Committee*** should be tasked with the pricing of products originating from the continent. The ***Committee*** should be tasked with branding and adding value to existing raw materials.

***Tax Evaluation and Management Committee*** should be tasked with the formulation of tax reforms, exposing the large informal sector by increasing the tax base, tax net and issuing tax compensation plans for countries adversely affected by integration. It should publish a report on domestic revenue collection and audit all tax authorities.

***Disease and Epidemic Control Unit*** should be tasked with all cases relating to the health of persons, agricultural-related diseases, outbreaks, droughts, and related research into country-specific challenges in the health of persons, related to crops, and measures to control the spread of diseases. They should be tasked with forecasting the potential environmental changes and tasked with relevant solutions to attenuate the adverse effect of expected economic events.

***Migration Evaluation and Review Team*** should be tasked with the movement of the citizenry. The ***Team*** should enhance regulation in the movement of people and duration spent within a country as well as all migration-related activities including database. This is necessary for policy purposes and dispensation of resources.

The ***Infrastructural Evaluation Team*** should be responsible for evaluating the necessary loopholes in the infrastructural setting and devise measures for country-specific efforts towards bridging the gap. The ***Team*** should also be responsible for resolving border problems. In conjunction with the Central Bank, should create a ***Project Coordinating Group*** to ensure projects are undertaken with transparency and efficient corporation and with ***a sub-Group*** evaluating the progress of the national projects.

***Regional and National Coordination Group*** should be tasked with the purchase of produce from farmers either at farms or transported to the institution. This produce will be directed to manufacturers to transform and package the raw materials to prevent wastage. Additionally, the ***Group*** should be tasked with the pricing of lorry fares among members. The ***Group*** should be introduced to address issues on the medieval informal sectors that cannot be covered by the system and institute relevant non-government institutions to promote greater integration at the micro-level. The ***Group*** should provide greater incentive to expand and grow such small-scale businesses to be enrolled and covered on the regional base. Also, delineate measures of reducing transaction and production costs for these businesses to ensure competition. These institutions should be supported by credit packages to raise the level of output.

The ***Summit*** should set the economic predilections for policy initiations to improve upon competitiveness and evaluate the convergence presented by the ***Monetary Institute*** for evaluation and policy dialogue. The ***Summit*** seeks to assemble all leaders in the region for prospective growth and evaluation report and the way forward for the continent.

**Currency union (Economic and Monetary Unions)**

Recent growth rates recorded from 2016 to 2019 shows that Africa failed to achieve the 8th Sustainable Development Goal of 7% growth target, therefore, substandard impact in the poverty reduction process with about 49.5million people expected to reach extreme poverty in Africa due to the lethal effect of the Corona Virus disease according African Development Bank (AfDB). In light of this, currency union is touted to improve economic stance and alleviate the level of poverty. In modern times, currency union have evolved and have a compassed effect on the sectors and institutions of the economies to stimulate growth. The main goal of pursuing currency union in Africa was to boost trade among member states. In this background, intra-regional trade in Africa was about 15.5% compared to 14.6% of Latin America and the Caribbean, 54% for America, 59.6% in Asia, and 68% for Europe (UNCTAD database, 2020). On average, the performance was way below the 54.5 % of developing countries of the world according to UNCTAD. According to the International Monetary Fund (IMF), there are currently four (4) currency unions in the world namely; The European Monetary Union (EMU), the West African Monetary and Economic Union (WAEMU), the Central Africa Economic and Monetary Community (CEMAC), and the Eastern Caribbean Currency Union (ECCU). In this background, there are two currency unions in Africa namely: the WAEMU and the CEMAC forming the CFA zone. The CFA zone consists of eight West African countries and six Central African countries namely Burkina Faso, Benin, Togo, Mali, Senegal, Cote d'Ivoire, Guinea Bissau, Niger, Togo, Gabon, Equatorial Guinea, Republic of Congo, Cameroon, and the Central African Republic.

Empirically, the EMU was not a good candidate to form an Optimal Currency Area due to failure in the achievement of some of the criteria, however, adopting a common currency facilitated convergence (Komárek, 2002; Vrnáková and Bartušková, 2013). Also, studies have shown that the Eastern Caribbean Currency Union (ECCU) was an Optimal Currency Area (OCA) due to the use of the East Caribbean Dollar as a common currency (Zhao & Kim, 2014; Proczek, 2018). Other studies have shown that the CFA zone was not an Optimal Currency Area (Zhao & Kim, 2009). This is attributed to the pegged two CFA Franc (XOF and XAF) among members within each categorized monetary union and then pegged to the Euro which exerts external influence on the CFA. The external peg facilitates trade among the WAEMU and CEMAC, however, it also stimulates the demand for the foreign currency to trade which compounds the valuation of the foreign currency in the global foreign exchange market and exerts relatively downward pressure on the domestic currency. Therefore, the practice of a fixed exchange rate in a currency union retards the attainment of an Optimal Currency Area (OCA) and attenuates the gains for adopting a common currency. Also, the adoption of a common currency with sound macroeconomic fundamentals ensures the attainment of an OCA. In this background, the OCA shows the convergence of some variables and the potential of countries to converge when a currency union is established. In conclusion, the technical aspect of a currency is key to its performance among other currencies than its face quality.

**1.2 Background to forming a Currency Union for Africa**

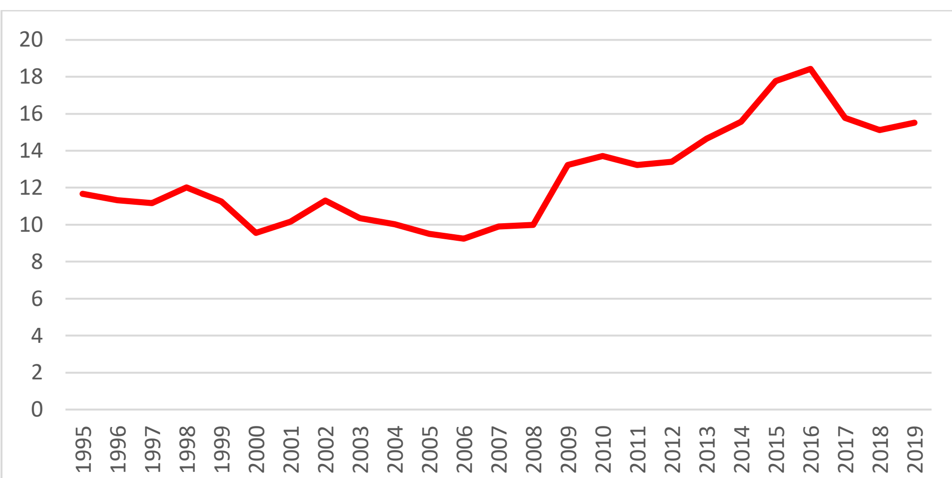
The blueprint towards forming a currency union in Africa was the Abuja Treaty signed in 1991 and officially set up in 1997. The treaty, under the Lagos Plan of Action for Africa development in 1980, was set out to integrate African countries to stimulate trade flows with the creation of the various Regional Economic Communities (RECs). The RECs were the building blocks in the integration process as contrived by AU. The goal was to communicate the aims of AU on a regional basis to achieve a common currency for the entire region by 2028. The bond between AU and the Recs was mandated by the AU constitutive act and the Abuja treaty, and steered by the protocol on Relations between AU and RECs of 2008; and the Memorandum of Understanding (MoU) on Corporation in the Area of Peace and Security between the AU, the coordinating Mechanisms of the Regional Standby Bridges of Eastern and Northern Africa and the RECs.

The protocol created a link between the African Economic Community and the RECs. The entire continent was divided into eight RECs by AU namely; East African Community (EAC), Economic Community of Central African States (ECCAS), Economic Community of West Africa States (ECOWAS), Arab Maghreb Union (UMA), Common Market for Eastern and Southern Africa (COMESA), Southern African Development Community (SADC), Community of Sahel-Saharan States (CEN-SAD) and Intergovernmental Authority on Development (IGAD). The creation of RECs led to easy implementation of regional economic transformation policies in Africa such as NEPAD in 2001 and the AU Agenda 2026 initiated in 2013 that seeks to accelerate past and present continental initiatives for sustainable development in the next 50 years. The first stage was the creation of the RECs to pursue policies towards integrating countries by 1999. The second was to harmonize and increase intraregional trade by 2007. The third stage was to create Free Trade Area (FTA) and Customs Union by 2017. The fourth stage was the African Customs Union by 2019. The fifth stage was to create a Common Market by 2023 and finally an African Economic and Monetary Union by 2028. Currently, there are several proposed currency unions in Africa using the RECs as the building blocks namely; the Economic Community of West African States (ECOWAS) of which the WAEMU is a part, the East African Monetary Union (EAMU), the Southern African Monetary Union amongst others.

### 1.3 Trade in Africa

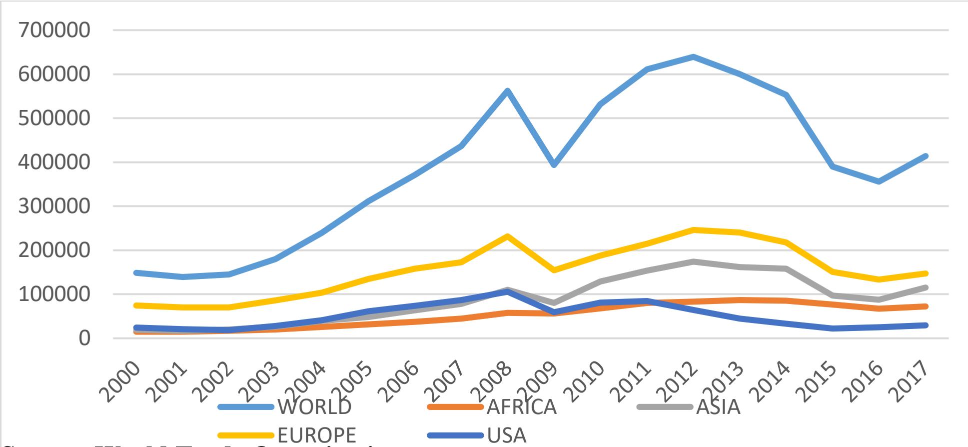
The shadow economy constituted a large chunk of trade on the continent with price differential and relatively small production size the main attributing factor for smuggling and tax evasion among others. The numerous existing trade barriers accrued large revenue flows to the countries, however, impede greater trade flows. The cost of losing revenue due to the removal of trade barriers was a key impediment to intraregional trade agreements notably in countries with a relatively larger market.

**Figure 1. 3.1: Trend Analysis of intra-regional trade in Africa**




From figure 1, the trend shows that intra-regional trade has been consistently below 20% of the total trade of the continent. This is attributed to the greater trade costs associated with trading with one another as compared to advanced countries and the poor diversification of the economies among others.

**Figure 1.3.2: Trend Analysis of Africa Trade with the Rest of the World**




**Source: World Trade Organization**

From figure 2, Africa trade about two times more with Europe than within its members from 2000 to 2017. In 2008, the international financial crisis took a toll on the volume of trade affecting trade patterns and that shows the decline in the volume of trade in the world as a whole. From 2000-2017, Europe remained the most important trade partner followed by Asia and the United State of America respectively. From 2012, the level of trade among African countries was higher compared to the United States of America. The decline in trade of the United States with Africa could have a relative adverse effect on the currency performance of African countries. This could partly account for the worsening performance of the currencies against the US dollar due to relatively greater unilateral demand for the dollar by African countries to trade with the rest of the world.

### 1.4 Comparative Analysis of Existing Currency Union

*The CFA Zone, the Eastern Caribbean Currency Union (ECCU), and the European Monetary Union (EMU)*

The CFA zone is the oldest currency union in the world and notable for stable macroeconomic performance in Africa (Gulde & Tsangarides, 2008; Abban, 2020a). The France African colonies known to be the Colonies of Françaises d'Afrique franc (CFA franc) was renamed to 'Communauté Financière Africaine' in West Africa and 'Coopération Financière en Afrique Centrale' in the Central African states after the colonies gained independence. Formerly, The CFA zone was a much larger geographical coverage compared to its current membership, however, some countries opted out for several other reasons. Saint Pierre and Miquelon islands, the Reunion Island, Comoros, Mauritania, Equatorial Guinea, Algeria, Morocco, and Tunisia were a good case in point (BlochLaine et al., 1956; St. Mark, 1964; Yansane 1984, Neurrisse 1987, Vizy1989). Currently, the CFA zone is made of 14 countries and the Islamic Republic of Comoros, characterized by two independent currencies; XOF and XAF dependent on the treaty with France. The conditions about the agreement with the WAEMU countries were; at least 20% of sight liability to be insured by foreign exchange reserves and 50% of foreign exchange reserves to be held in operations account in the French treasury to allow for the convertibility of the CFA to the Euro. The Eastern Caribbean Currency Union (ECCU) is made of eight island countries namely Anguilla, Antigua and Barbuda, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines. It is the smallest currency union in the world with a population of less than a million people as compared to the CFA Zone and the EMU (IMF, 2013). The European Monetary Union (EMU) is the largest currency union in the world made up of 19 countries forming the Eurozone namely Austria, Belgium, Cyprus, Estonia, France, Finland, Germany, Ireland, Greece, Latvia, Lithuania, Italy, Ireland, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain.

Comparatively, the CFA currencies (XOF and XAF) of the monetary unions, issued by the BCEAO and BEAC, are pegged against members before pegged to the Euro, which operates a fully convertible currency supervised by European Central Bank. The Eastern Caribbean Currency Union (ECCU) uses the East Caribbean dollar, issued and supervised by the Eastern Caribbean Central Bank which is pegged to the US dollar. Geographically, the far-flung members of the WAEMU from the CEMAC hitherto having non-binding trade policies, below par connectivity and non-members in between the two monetary zones reduced the purported gains from currency union membership as compared to EMU whose members are closely connected. In light of the argument, the ECCU members experience fragmentation which poses logical challenges in facilitating trade. Additionally, the CFA zone is a much looser political union due to the relative political instability and weak governance with substandard political binding laws in accountability, control of corruption, and a unified political decision among others as compared to EMU. The ECCU has achieved some appreciable degree of a political union even though more complex in nature. Additionally, the CFA zone was able to navigate asymmetric shocks than the EMU due to the relatively smaller size of the countries and the restrictiveness to tremendously borrow to finance budget. The island countries of ECCU are exposed to shocks notable are interminable natural disasters and easily navigate to avoid the collapse of the union.

### *1.5 Measuring the Efficacy of an Economic Policy (Abban Policy Weighted Index (APWI))*

In Africa and the world at large, measuring the efficacy of a policy is a major topic of discourse. What makes a very good economic policy? The incumbent governments are often evaluated based on their promises made through their manifestos. However, some policies have a much more grounded economic effect on the economy as compared to others therefore evaluating per promises is a necessary but insufficient condition. A strong economic policy corrects economic distortions of the past, builds capacity in the present, and has the potential to stimulate economic growth and development in the future. In this background, a policy that seeks to address past distortions but does not build capacity should be weighed 1. A policy that corrects past economic distortions and builds capacity ought to be weighed 2. Finally, a policy that binds all three criteria ought to be weighed 3. If the policy corrected a past economic distortion and led to economic growth, it is still weighted 1 because it better exposed the economy. Furthermore, policies that were promised but renege ought to be weighted as well. Therefore, the sum of all policies multiplied by their weights divided by the number of policies then compared to a benchmark. To develop a strong benchmark, there is the need to evaluate per the initiated policies of the two successive past governments of the country.

**1.6** List **of Countries and their Currencies in Africa**

| COUNTRY | CURRENCY | SYMBOL | CONVERTIBLE |
|---|---|---|---|
| 1. Algeria | Algerian Dinar (DZD) | دج | No |
| 2. Angola | Angolan Kwanza (AOA) | Kz | No |
| 3. Benin | CFA Franc (XOF) | CFA | Fully convertible to the Euro exclusively |
| 4. Botswana | Pula (BWP) | P | No but pegged to a basket of currencies |
| 5. Burundi | Burundi Franc (BIF) | FBu | No |
| 6. Burkina Faso | CFA Franc (XOF) | CFA | No but Fully convertible to the Euro exclusively |
| 7. Cameroon | CFA Franc (XAF) | FCFA | Fully convertible to the Euro exclusively |
| 8. Cape Verde | Cape Verde Escudo (CVE) | $, Esc | No but pegged with the Euro |
| 9. Central African Republic (CAR) | CFA Franc (XAF) | FCFA | Fully convertible to the Euro exclusively |
| 10. Chad | CFA Franc (XAF) | FCFA | Fully convertible to the Euro exclusively |
| 11. Comoros | Comoros Franc (KMF) | CF | No but pegged with the Euro |
| 12. Cote d'Ivoire | CFA Franc (XOF) | CFA | Fully convertible to the Euro exclusively |
| 13. DR Congo | Congolese Francs (CDF) | FC | No |
| 14. Djibouti | Djibouti Franc (DJF) | Fdj | No but pegged to the US dollar |
| 15. Egypt | Pound (EGP) | E£, ج.م | No |
| 16. Equatorial Guinea | CFA Franc (XAF) | FCFA | Fully convertible to the Euro exclusively |
| 17. Eritrea | Eritrean Nakfa (ERN) | Nfk, نافكا, ናቕፋ | No but pegged to the US dollar |
| 18. Ethiopia | Birr (ETB) | Br, ብር | No |
| 19. Gabon | CFA Franc (XAF) | FCFA | Fully convertible to the Euro exclusively |
| 20. Gambia | Dalasi (GMD) | D | No |
| 21. Ghana | Cedis (GHS) | GH¢, GH₵ | No |
| 22. Guinea | Guinean Franc(GNF) | FG, Fr, GFr | No |
| 23. Guinea-Bissau | CFA Franc (XOF) | CFA | Fully convertible to the Euro exclusively |
| 24. Kenya | Kenya Shillings (KES) | /-, /=, K, Ksh | Fully convertible |
| 25. Lesotho | Lesotho Loti (LSL) | L, M | No but Pegged to the South African Rand |

| | | | |
|---|---|---|---|
| 26. Liberia | Dollar (LRD) | L$ | No but pegged to the US dollar |
| 27. Libya | Dinar (LYD) | LD, ل.د | No but pegged to the Special Drawing Rights (SDR) at a fixed exchange rate |
| 28. Madagascar | Malagasy ariary (MGA) | Ar | No |
| 29. Malawi | Kwacha (MWK) | MK | No |
| 30. Mali | CFA Franc (XOF) | CFA | Fully convertible to the Euro exclusively |
| 31. Mauritania | Ouguiya (MRO) | MRU, UM | No |
| 32. Mauritius | Rupees (MUR) | Rs | No |
| 33. Morocco | Dirham (MAD) | MAD | Yes but pegged to the Euro and the US dollar |
| 34. Mozambique | Metical (MZN) | MT | No but transactions are accepted British Pound Sterling, US dollars and South African Rand |
| 35. Namibia | Namibian Dollar (NAD) | N$ | No but pegged to the South African Rand |
| 36. Niger | CFA Franc (XOF) | CFA | Fully convertible to the Euro exclusively |
| 37. Nigeria | Naira (NGN) | ₦ | No |
| 38. Republic of Congo | CFA Franc (XAF) | FCFA | Fully convertible to the Euro exclusively |
| 39. Rwanda | Franc (RWF) | FRw, RF, R₣ | No |
| 40. São Tomé and Principe | Dobra (STD) | Db | Pegged to the Euro |
| 41. Senegal | CFA Franc (XOF) | CFA | Fully convertible to the Euro exclusively |
| 42. Seychelles | Rupees (SCR) | SR, SRe | No |
| 43. Sierra Leone | Leone (SLL) | Le | No |
| 44. Somalia | Shillings (SOS) | Sh.so. | No |
| 45. South Africa | Rand (ZAR) | R | Fully convertible |
| 46. South Sudan | Pound (SSP) | £ | No |
| 47. Sudan | Pound (SDG) | ج.س. | No |
| 48. Swaziland | Lilangeni (SZL) | E, L | No but pegged to the South African Rand |
| 49. Tanzania | Shillings (TZS) | TSh | |
| 50. Togo | CFA Franc (XOF) | CFA | Fully convertible to the Euro exclusively |
| 51. Tunisia | Dinar (TND) | DT, د.ت | No |
| 52. Uganda | Shillings (UGX) | USh | No |
| 53. Zambia | Kwacha (ZMW) | ZK | No |
| 54. Zimbabwe | Dollar (ZWD) | $, Z$, ZWL | No |

**1.7 Proposed Currency Unions in Africa and their performance based on the OCA Criteria**

***Economic Community Of West African States (ECOWAS)***

| Author | Methodology | Emphasis (OCA Criteria) | Results | Author's Remark | Solution<br><br>(Abban Stanley) |
|---|---|---|---|---|---|
| Sireh-Jallow( 2013) | VAR and cointegration | Price similarity and shocks | There is convergence in price and asymmetric shocks | VAR showed not an OCA, Cointegration showed otherwise. | Macroeconomic convergence, a common currency, credit transfers, intense trade through diversification, |
| Mati et al (2019) | | Price Similarity and Shocks | Asymmetry of shocks | Not an OCA | Intensifying trade to reduce external shocks accompanied with sound monetary and fiscal policies |
| Egbuna et al (2019) | An OCA index | Real convergence (business cycle synchronization) | Some countries exhibit strong convergence, others moderate, and some exhibits slow convergence | ECOWAS should adopt a gradualist approach in the formation of the currency union therefore not an OCA | Intensifying trade through diversification of the economies |
| Kamara (2015) | cluster analysis | Similarities ( price and shocks) | Countries are heterogeneous in diverse ways and intra-trade is not adequate to yield the benefits expected from the union. | Not an OCA | Countries of greater external shocks will not form an OCA unless the external influence is cushioned by internal arrangements to stimulate trade |
| Habimana et al. ( 2020) | Wavelet-spectra clustering | Business cycle synchronization | Not an OCA | The ECOWAS should incorporate a risk-sharing mechanism | Empowering the possible periphery countries to increase their involvement in international trade through even distribution of credit facilities and skilled personnel |
| Abban & Ofori-Abebrese (2019) | The Gravity model of international trade | Endogeneity | Trade creation therefore OCA ex-post | Facilitate nominal convergence and provide buffers to reduce exchange rate volatility | Consolidate buffers and ensure sound monetary and fiscal policies to pursue currency convertibility |

*1.8 East African Community (EAC)*

| Author | Methodology | Emphasis (OCA Criteria) | Results | Author's Remark | Solution<br><br>(Abban Stanley) |
|---|---|---|---|---|---|
| Redda et al. (2017) | Descriptive and Comparative Analysis | Trade Openness | Members are not open to international trade | Therefore not an OCA | This is a policy inducing effect. The need to practice sound trade practices, eliminate non-tariff barriers, sound macroeconomic execution, and strong political will |
| Cárcel et al. (2014) | Fractional Integration | Inflation | There is heterogeneity in the inflation rate. | Therefore, do not form an OCA | Contrarily, forming a currency union will eliminate inflation bias to stimulate stability. |
| Caporale et al (2018) | GPPP | Business cycle synchronization | Cointegration of exchange rates | OCA is achievable in the formation of the currency union | Diversification of the economies will induce greater trade flows hitherto removal of all barriers to trade |
| Muthui et al (2016) | GPPP | Exchange rate | The members are not cointegrated. Also, there is a strong political will to form a currency union | Not an OCA | Currency union eliminates exchange rate volatility so the possibility of forming an OCA |
| Nyamrunda (2013) | Gravity model of international trade | Structural Harmonization and responses to shocks | EAC responds symmetrically to shocks, | Is an OCA | Intensifying trade flows will speed up convergence |
| Gitimi (2018) | Macroeconomic Convergence Criteria (MCC) and GPPP | Inflation (price) | a long-run convergence among members | OCA is achievable | Stringent policies will ensure convergence in the short-run |
| Umulisa (2020) | The Gravity Model of international trade | Trade flows, business cycle synchronization, inflation | The need for relatively greater business cycle synchronization | OCA is achievable and EAC has a positive and significant effect on intra-regional trade | Sound Macroeconomic fundamentals will inure greater benefits to the members. |

*1.9 Southern Africa Development Community (SADC)*

| Author | Methodology | Emphasis (OCA Criteria) | Results | Author's Remark | Solution<br><br>(Abban Stanley) |
|---|---|---|---|---|---|
| Zerihun & Breitenbach (2017) | Generalized Purchasing Power Parity (GPPP) | Price, exchange rate, Business Cycle Synchronization, and shocks | Slow convergence among member-states and the potential of posing unstable macroeconomic fundamentals | OCA is achievable when Angola and Mauritius are excluded | Diversification of the economies to facilitate the production of import substitution goods |
| Redda et al. (2017) | Descriptive and Comparative Analysis | Trade Openness | Members are open to international trade | Therefore the possibility of attaining an OCA | Further Integration of members in the financial market, stringent monetary and fiscal policies, and diversification of the economy |
| Nzimande & Ngalawa (2017) | GMM | Business Cycle Synchronization | The study finds out that intensifying trade, sound monetary and fiscal policy will ensure business cycle synchronization. The study also found out that financial integration and oil prices harmed the business cycle. | Business Cycle Synchronization can be achieved ex-post | Diversification of the economy and removal of all barriers to trade |
| Redda & Muzindusti (2017) | Generalized Purchasing Power Parity (GPPP) | Inflation rates and Exchange rates | There is long-run convergence of in real exchange rate due to similarity in macroeconomic fundamentals | OCA is achievable | Macroeconomic Restrain, financial buffers, and intensifying trade by removing barriers |

## 2.0 LITERATURE REVIEW

### 2.1 *Optimal Currency Area (OCA)*

The Optimal Currency Area (OCA) theory can be attributed to Mundell (1961) and McKinnon (1963). The theory postulates that countries with high labour mobility, a high degree of openness, substantial product diversification, sufficient flexible price and wage, effective monetary policy, similar inflation rates, and the zeal to abandon their currencies will benefit from forming a currency union. Mundell postulated that a common currency reduces transaction costs leading to trade creation. High factor mobility especially labour mobility among the countries was key in forming an OCA in a fixed exchange rate regime. McKinnon (1963) argued that the degree of openness as a relationship between tradable and non-tradable is crucial in forming an OCA. The more economies are opened to one another, the higher the tendency of forming an optimal area.

For a currency area to be optimal, Mundell (1961) argued that asymmetric shocks can be nullified with free labour mobility by liberalizing factor markets in the area. McKinnon (1963) argues an OCA as a region with a common currency and within which monetary policies, fiscal policies, and flexible exchange rates can address issues related to price stability, employment, and international payment which are conflicting. He suggested the need for the economies to be well integrated to reduce the exchange rate effect. He investigated the consequence of the size of currency unions and argued that small nations are more liable to trade and have lesser nominal rigidities. Therefore, suitable for the formation of a currency union. Kenen (1969) introduced product diversification as an important criterion for an OCA. He argued that diversity in products of the countries and the number of single product regions in a currency union is most relevant to form OCA as compared to labour mobility. Product diversity is a key factor for labour to move within a region. He further argues that when a region has a well-diversified export sector and homogenous labour with high mobility, there is a tendency for the region to form an OCA. Mundell (1961) concentrated on the cost involved in joining a currency union whereas McKinnon (1963) and Kenen (1969) focused on the conditions for enhancing the benefit for an Optimal Currency Area. The OCA focuses on the balance between the benefit of reduced trade cost and the cost of abandoning monetary sovereignty and business cycle synchronization of the member states. The theory concludes that there is a need to experience symmetric reactions to external shocks to lower the cost of regionally coordinated policies. Mundell (1973) argued that using a common currency may help an area to be optimal. This will reduce unsynchronized economic shocks leading to the creation of an optimal area. Mundell further posits that purchasing power parities should exhibit steadiness overtime. Thus, with the free movement of capital, there is the tendency of attaining an OCA.

Countries in fulfillment of the OCA criteria benefit from reduced transaction costs, price transparency, deepened and integrated money and capital markets, elimination of extreme nationalism, healthy competition to enhance trade through the facilitation of export diversification, and induce FDI as a result of sound macroeconomic indicators. The cost of forming a currency union per the OCA is; the inability of countries to respond to idiosyncratic shocks that worsen the economic situation of the area. The ability to overcome external shocks was a factor to evaluate when introducing a new currency. To add up, the loss of monetary sovereignty by member countries and the mechanism of the exchange rate which is dependent on the effectiveness of monetary policies. The OCA does not account for the political influence in the formation of a currency union. Thus, there are other benefits to currency union than just trade.

Frankel and Rose (1997) argued that trade enhancement as a result of OCA will have two effects: either an increase in industrial specialization due to comparative advantage or increased business cycle correlation. The study posits business cycle synchronization is an important criterion in evaluating an OCA and it can be achieved ex-post. The study further posits that trade openness and correlation move hand in hand. Frankel (1999) based on the Endogeneity of OCA argued that income and openness can be stimulated with policies. Thus, a country below the OCA curve can move to the right of the line with trade integration which would increase the income level to achieve OCA. Calvo and Reinhart (2002) argued that if a country cannot use monetary policy adequately then the loss of monetary policy cost will not be significant. De Grawe and Mongelli (2005) argued that countries with separate labour market institutions would not form an OCA. The benefit of an Optimal Currency Area is realized from the microeconomic base by reducing trade cost hitherto currency and exchange rate risk whereas the cost of joining the union is realized at the macro-level (De Grawe and Mongelli, 2005).

Therefore, the optimal currency area criteria were set out to evaluate conditions that will enhance the benefit and reduce the cost of adopting a common currency. De Grauwe and Mongelli (2005) argued that monetary integration will not lead to only trade but also labour and financial market integration.

The OCA emanated from the argument of the fixed and floating exchange rate but recent arguments have been raised for the reconsideration of the theory. To begin with, the theory postulates that in an area of free labour and capital mobility across regions, the area is optimal for the creation of a currency union. The free movement of capital ruins the exchange rate as a useful tool in stabilizing external disequilibria but rather it is a target of destabilizing speculative capital movements and thus a source of large asymmetric shocks (Mundell, 1973). To simply put, the exchange rate is less effective in addressing an external shock within the area using a fixed exchange rate regime. Secondly, Currency union turns to integrate the capital markets of member states serving as an insurance mechanism against asymmetric shocks. (Mundell, 1973). Thirdly, a country's monetary policy can be enhanced when attached to a low inflation anchor country (Talvas, 1993; 673-677). Fourthly, monetarism argues that activist monetary policies are the only source of instability, in the long run, governments cannot stabilize their economy through monetary policies (DeGrawe, 2006; 715). Fifthly, the OCA prediction of the Eurozone as not optimal even though members achieved the convergence criteria took a toll on the theory. Rogoff (2005) argues that the Eurozone is politically optimal but not economically. Also, the OCA criteria do not have a unified framework for estimating the formation of a currency union. There is no unanimity for the weight of each criterion and leads to inconclusive analysis (Talvas, 1993). Likewise, the OCA draws strong conclusions from several criteria to evaluate the feasibility of a currency union (Willet et al, 2007). Finally, the Endogeneity of OCA argues countries in an area can be an OCA ex-post when they form a currency union even though it was not ex-ante. Therefore, the need for reevaluation of the OCA for the above arguments. The floating exchange rate does little to help achieve monetary targets due to exchange rate volatility and currency depreciation. In light of this, currency union yields more benefits compared to the fixed exchange rate.

The OCA criteria are best used as a measure for countries who are already trading with one another and competing in international trade with infrastructures in place to facilitate trade. In this background, the business cycles will have a greater tendency to synchronize. Moreover, empirical studies using the OCA criteria showed the European Monetary Union was not an Optimal Currency Area, before currency union (Komárek, 2002; Vrnáková and Bartušková, 2013). Despite the EMU, not an OCA, the currency union stimulated trade flows among member states (UNCTAD database, 2018). A recent evaluation of the EMU countries based on OCA criteria showed countries were converging with the introduction of the Euro (Rose, 2008; Fürrutter, 2012; Crowley 2013). In this background, the OCA criteria will show varying results about countries at different stages of development irrespective of countries developed or developing. Comparatively, countries at different stages of development will not have a synchronized business cycle due to their economic structures. If developing countries can adopt import substitution policies and induce cross-country FDI, inflation can easily be attenuated within the member states. There is an exigency for developing countries to integrate further by adopting a common currency for several reasons. These assertions show there are flaws in using the OCA criteria to evaluate the feasibility of currency union on trade. In this context, the stage of development of countries also provides an in-depth criterion for currency union formation.

### 2.2 ***Theory on Exchange Rate Volatility***

Exchange rate volatility shows the level of risk involved with changes in the exchange rate. Exchange rate volatility is associated with either rise or fall in the level of exports depending on the assumptions of the variable. Conventionally, exchange rate volatility is argued to hurt exports since it increases the risk or shock involved in international trade. The prospective gains from international trade by firms are uncertain due to exchange rate volatility due to currency risk (Broll, 1994, 1995). Moreover, even with well-developed forward markets for some currencies, exchange rate volatility cannot be eliminated since it affects exporting firms in diverse channels of trade. An increase in exchange rate volatility increases the risk involved in trading, therefore, reduces the volume of trade with risk-averse firms. Contrarily, another theory on exchange rate volatility on exports shows even in the face of risk associated with volatility, it presents an opportunity for firms to maximize profits. In this background, exchange rate volatility can have a positive impact on the volume of trade. The option theory stipulates in alignment that firms with the option to export are better off when the exchange rate is volatile (De Grawe, 1992).

## 2.3 Types of Currency Areas

The choice of a currency union is dependent on the currency area and the prevailing circumstances of the countries. There are three main types of currency union namely; (i) Informal currency union (ii) Formal currency union and (iii) Formal with a Common Policy

An informal currency union is a type of currency union whereby a country unilateral adopt a foreign currency. The currency union establishes an international monetary system characterized by pegged exchange rates. The country pegging to an anchor currency benefits based on an aligned circumstance with the anchor currency purchasing power reasonably stable. The adopting country must be a major trading partner with the anchor country and also trading activities indexed to anchor currency. The trade relation should be strong to eliminate barriers of trade between the two countries so that the pegging country is less exposed to external shocks otherwise speculative attacks may lead to sharp devaluation and such expectation would generate high-interest rates and inflation that would reduce investment, therefore, dampen economic growth. Examples are Liberia and Zimbabwe.

A formal currency union is when a country adopts a foreign currency due to arrangements between the two countries. The currency union has a permanently fixed exchange rate with strict coordination of policies to unify monetary policies among member countries. Permanently fixing exchange rates necessitate monetary authorities to deliver their exclusive right to a common monetary authority by influencing the primary credit of central banks. Under this system, the domestic currencies of the member countries are allowed to circulate with some transaction cost. The benefit of joining such a currency union is small relative to the third type of currency union. An example is the pegging of Lesotho, Namibia, and Kingdom of Eswatini to the South African rand.

Formal with a *common policy* is when countries through international treaties adopt a common monetary policy and authority for the issue of the single currency with the establishment of an independent central bank that oversees the activities of the national banks. The central bank would oversee the national banks' operational and human resources without incurring the price of using all resources available. The countries turn to benefit tremendously from adopting the union such as the unification of interest rate, reduction of investment risk, and considerable savings as a result of a reduction in transaction cost which stimulates economic growth. An example is the WAEMU and CEMAC.

## 2.4 *Empirical Literature Review*

Cárcel et al. (2014) examined the feasibility of currency union in the East African Community (EAC) using monthly inflation rate data spanning from January 2004 to December 2013. The methodology deployed in the study was a fractional integration approach on inflation rate notably the Engle and Granger's (1987) and Gil-Alana (2003) methodology. The results showed that there is heterogeneity in the inflation rate. Therefore, not a possible OCA

Harvey & Cushing (2015) undertook a study to examine whether the WAMZ is a common currency area using monthly data from February 1987 to April 2011 for five countries in the zone except for Liberia. The methodology used in the study was Structural VAR of real exchange rates, real growth, and price levels. The study concludes that each country experience different shocks and countries do not respond symmetrically to external shocks therefore not feasible to form a monetary union.

Rametsi (2015) examined the possibility of SACU as an Optimal Currency Area (OCA). The data spanned from 1980 to 2015. The methodology used in the study was the Error Correction Model, central tendencies, and standard deviation to establish a relationship between real exchange rate, real GDP, the external value of the currency, and domestic value of the currency (inflation). The results showed that the error correction terms were statistically negative. The effect was that the cost and benefit of forming a currency union were based on how integrated the proposed members are to one another. The study further showed that there was a convergence of macroeconomic indicators therefore there is a possibility that the trade bloc is an Optimal Currency Area and can proceed with adopting a common policy.

Bakoup & Ndoye (2016) assert key players such as Cote D'Ivoire, Ghana, Nigeria, Guinea, and Senegal are most relevant for the West Africa Monetary Union to be established. These countries can take up the leadership role in the establishment of the union.

Mensah (2015) analyzed trade of West Africa Economic and Monetary union using data from 2002 to 2013. The Optimal Currency Area criteria were adopted to determine whether the WAMZ form an Optimal Currency Area using data sourced for five WAMZ countries. The study concludes that based on trade WAMZ is not an Optimal Currency Area but with convergence in Real GDP growth, monetary policy rate, and inflation.

Ndiaye & Xu (2016) investigated the impact of direct foreign investment on WAEMU. The study developed a theoretical model of investment using panel data from 1990 to 2012. The study showed that FDI has a positive impact on economic growth in WAEMU. Thus, FDI has led to trade and investment in the zone attributed to trade liberation and creating an enabling environment. This a clear indication of the significance of FDI in a monetary union in West Africa.

Asongu et al. (2017) listed a broad survey of literature on the proposed African Monetary Union and delineated the advances on the status quo. The study adopted a cluster analysis, disaggregating panel, and shocks to the business cycle. The result showed that different methodologies provide conflicting findings.

Cham (2016) examined monetary integration and the possibility of FDI flows in the WAMZ using data from 1980 to 2013. The methodology used in the study was Fully Modified Ordinary Least Squares (FMOLS) and Ordinary Least Squares (OLS). The study concludes that monetary union has a positive impact on FDI inflow.

Muthui et al., (2016) analyzed the possibility of East Africa Community (EAC) monetary integration using data span from 1996 to 2014. The results showed that there is no cointegration between countries therefore the EAC does not form an OCA hence monetary union will come at greater costs.

Bah et al (2017) reflect on the strong regional trade institutions of West Africa to the weak trade institutions of the current era from the Empire hood to the current state of affairs. The study used an augmented gravity model of trade to account for import duty as a measure of trade liberation from 1998 to 2011 by using the dynamic panel technique for twelve countries in the region. The result shows that a reduction in the import duties on primary and manufactured products enhance the volume of intra trade except in Agriculture. Thus, intra-regional trade in West Africa is less sensitive to changes in the agricultural import tariffs. The study further shows that current institutional trade barriers can be eliminated to allow the free flow of goods and services in West Africa. The study showed the role the regional trade institutions played to facilitate trade that has shaped the current trade pattern of the region.

Okom & Ugbe (2017) delineate the free movement of goods and trade liberation in West Africa showing the current blocks to the policy efficiency and efforts undertaken by ECOWAS to fully reap the benefit of the policy in attaining a common market. It emphasized that ECOWAS had implemented the policies and that the need for members to adhere to the standards through the willingness and zeal to converge to ensure a large trading bloc. The paper posits that Nigeria been the largest economy should embark on monetary and fiscal discipline to aid in the monetary union coming into fusion.

Redda et al., (2017) analyzed the feasibility of monetary union in the Southern Africa Development Community (SADC) and East Africa Community (EAC) using data span from 1986 to 2015. The results showed that countries in EAC have not attained the trade openness criterion therefore not liable to maximize the benefits of currency union hitherto not an OCA.

Chlond (2018) assessed hypothetically the possibility of using the rand as the common currency in the Southern Africa Customs Union using data spanning from 1960 to 2016. The study investigated the possible challenges and benefits of forming a monetary union in SACU and the asymmetry of shocks among members. The study adopted a structural VAR to measure the asymmetry of shocks among members. The results showed that forming a monetary union will come at a greater cost to Namibia, Lesotho, and Swaziland except for South Africa since the domestic component are high for all small CMA members. This indicates that economic shocks hit the area quite asymmetrically so that it is challenging for a common central bank to accommodate all economies using one monetary policy due to regional and global components estimated low. To conclude, the study showed that SACU adopting a common currency will not lead to trade.

Caporale et al. (2018) assessed the prospects of a monetary union in the East Africa Community using a monthly Real Exchange rate from 1990 to 2015. The results showed that there exists a long-run integration between the members therefore a monetary union is feasible in the East Africa Community.

Gitimi (2018) examined the feasibility of adopting a common currency in the East Africa Community (EAC) using quarterly data span from 2000 to 2015. The results showed that there was a long-run convergence among members of EAC therefore Eats Africa Community is an optimal currency area.

Preis & Rappe (2019) assessed the optimality of the East Africa Community in forming an Optimal Currency Area (OCA) using a data span from 1995 to 2017. The results showed that there exists an asymmetry of shocks, structural differences, and attainable yet unsustainable nominal convergence criteria, therefore, miniature evidence for EAC forming an OCA.

Abban and Ofori-Abebrese (2019) estimated the prospect of ECOWAS Currency union on intra-regional trade using data spanning from 2000 to 2017. The methodology used was the gravity model of international trade which was estimated using the Poisson Pseudo Maximum Likelihood (PPML). The result showed that adopting a common currency will lead to trade. The study concludes that there is greater trade potential and the exigency to fast track attaining the macroeconomic convergence.

Abban (2020) delineated the macroeconomic convergence criteria of the Economic Community of West African States (ECOWAS). The study showed the level of convergence using averages, estimated the realistic targets, and emphasized the need for trade and institutional convergence. The study stipulated the main hindrance to trade in the ECOWAS and suggested some solutions to curb the ills. The study showed that in periods of shocks there is inflation dispersion. The study concludes that, on average, countries that use a common currency (WAEMU) have sound macroeconomic indicators than countries using sovereign currencies (WAMZ) in the ECOWAS.

Abban (2020) investigated the role of institutions and infrastructure on trade among members of the ECOWAS using a dataset from 2000 to 2017. The study used an augmented gravity model of international trade which was estimated with the Poisson Pseudo Maximum Likelihood (PPML). The study used six institutional indicators from the World Development Indicators. The results showed that Political Stability and Rule of Law facilitated intra-regional trade whereas Corruption Control, Regulatory Quality, and Government Effectiveness harm trade. The study concludes on the need for a new institutional framework to curb the ills among members.

Abban (2020) used an augmented gravity model of international trade to estimate the prospect of a common currency on trade in the Southern Africa Customs Union (SACU) using a dataset spanning from 2000 to 2017. The estimation technique used was the Poisson Pseudo Maximum Likelihood (PPML). The results showed that adopting a common currency will lead to trade. The study concludes that trade and transport infrastructure and appropriate institutions are prerequisites in maximizing the gains from the formation of a currency union.

Abban (2020) estimated the prospect of the East Africa Community (EAC) currency union on trade using the gravity model of international trade. The study used a data spanning from 2000 to 2017 and the Poisson Pseudo Maximum Likelihood (PPML) estimation technique to estimate the model. The result showed that forming a currency union will lead to trade. The study concludes that adopting a common currency is superlative to the presence of a convertible currency. Therefore adopting a common currency will lead to trade in East African Community (EAC).

Abban (2020) investigated the impact of institutions, infrastructure, East African Community (EAC) membership of Burundi and Rwanda on trade in East African Community (EAC) using data span of 18 years (2000-2017). The augmented gravity model of international trade was estimated using the Poisson Pseudo Maximum Likelihood (PPML). The result showed that institutions are not significantly contributing to trade while infrastructure affected trade. The study further showed that Burundi and Rwanda gained from EAC membership.

## 3.0 METHODOLOGY

### 3.1 *DEVELOPING A MODEL FOR CURRENCY UNION AS A PANACEA*

**STEP 1**

Existing studies have shown the potential benefits from currency union feasibility on trade. In this background, developing countries have to empirically test the impact of those variables on trade to know how significant the variables have been in stimulating trade and economic growth. In response, a new policy variable has to be developed if the variable does not have a positive significant impact on trade before the formation of a currency union. However, if the variable does have a significant impact, there is a relatively greater potential gain with the formation of a currency union. A granger causality test has to be further undertaken to know the existing relationship between trade and economic growth. If there exists a positive relationship, trade can be used as the dependent variable. However, if there exists a negative or insignificant relationship, there is a need to use economic growth as the dependent variable.

**STEP 2**

Test for the Optimal Currency Area (OCA) criteria and initiate policies in the attainment of the OCA.

**STEP 3**

Test for Optimal Cost Phase (OCP) criteria to deduce if the cost of using sovereign currency outweighs the costs of forming a currency union. The outcome will show the exigency for currency union feasibility.

**STEP 4**

Test the prospect of currency union on trade using the gravity model on international trade.

**STEP 5**

The developed policy framework for the policy on currency union should be implemented to test countries wit in compliance with macroeconomic restrain. The convergence can be used tested after the attainment of sound macroeconomic stability. Also, the need to test the political and economic environment on trade or economic growth to initiate policies that can adversely affect the free movement of people and ensure safe and sound security. This is to curb any potential threat and develop strong political ties among member-states.

## 4.0 EXPECTATION OF RESULTS

### 4.1 *Expected Results*

**STEP 1**

All the variables are expected to have a positive impact on trade and economic growth

**STEP 2**

***Degree 1***

The OCA criteria such as high labour mobility and a high degree of openness are ***policy stimulating*** in the relatively short-run. The two criteria are attainable for developing countries. However, the criterion for high labour mobility will not be fully-fledged due to poor economic diversification.

***Degree 2***

The effective monetary policy requires intense coordination of policies to unearth the large informal sector. It requires macroeconomic restrain. Also, Price and Wage will equalize over time and be much flexible with an effective monetary policy. In light of this, measuring currency union feasibility based on macroeconomic convergence using inflation ex-ante fails since exchange rate compounds to inflationary pressures hitherto stringent measures to ensure discipline against inflation in a currency union. The two criteria will require time to be achieved therefore not feasible to test currency union feasibility for a developing country.

***Degree 3***

Substantial Product diversification will not easily be attained by developing countries in the same geographical jurisdiction because of the greater dependence on primary exports and similar production structures. As a result, intra-trade is relatively low therefore difficult for the business cycle to synchronize. This requires a laid out diversification road map of member-states. The criterion will not be feasible to test currency union for developing countries, however, it will spill out the targets to be achieved to form an OCA.

### 4.2 ***Background to Optimal Cost Phase (OCP)***

Developed countries with greater contribution to world trade are liable to use sovereign currencies compared to developing countries. Due to the other incentives of a currency union, advanced countries also enjoy the membership of the union but are exposed to a greater risk of shocks. The initial non-existing mechanism to check the compliance and borrowing of members in the initial stages of the implemented policy of currency union yielded a great negative externality on the economies of the world. The main attributing factor for the crises in the European Monetary Union was the large public sectors heavily financed by external debts and the attractiveness to borrow from the international market. Moreover, empirical studies using the OCA criteria showed the European Monetary Union was not an Optimal Currency Area, before currency union (Komárek, 2002; Vrnáková and Bartušková, 2013). Despite the EMU, not an OCA, the currency union stimulated trade flows among member states (UNCTAD database, 2018). A recent evaluation of the EMU countries based on OCA criteria showed countries were converging with the introduction of the Euro (Rose, 2008; Fürrutter, 2012; Crowley 2013). These assertions show there are flaws in using the OCA criteria to evaluate the feasibility of currency union on trade. In this context, the stage of development of countries also provides an in-depth criterion for currency union formation.

4.2.1 ***Introduction of the Intuition 'OPTIMAL COST PHASE (OCP)'***

Intuitively, the condition upon which a country will opt to join a currency union depends on the cost of using the sovereign currency (based on historical data and the prospective events in country-specific) as compared to the cost (shocks) associated with joining a currency union. In this background, a developing country will join a currency union, only when the cost of using its sovereign currency would be higher as compared to the cost of joining a currency union. Thus, if the state of the economic and political environment keeps worsening per historical events and has the tendency to pose danger in the future, there is the need to integrate further with other countries to enhance economic growth. Comparatively, the OCA criteria compare the cost and benefits of joining a currency union strictly showing the set-out conditions are prerequisites to stimulate trade. However, the set out nominal convergence has relegated the OCA criteria as a measure for the feasibility of currency union. Additionally, there are several other conditions on trade flows stimulation such as policy-oriented trade flows when potential is not fully tapped which will not be captured by the OCA ex-ante. Currency union membership can help unleash greater trade potential. Also, developing countries are highly vulnerable to shocks due to the use of sovereign currencies and poor diversification of the economies hitherto high dependence on the western world, so using shocks and similarity of the economic structure as a yardstick for ex-ante currency union would not be suitable. Shocks can be nullified with increased trade flows and the provision of credit facilities by adopting a *currency union with a common policy*. Additionally, empirical studies have shown that developing countries easily navigate through shocks compared to developed countries in a currency union. More so, forming a *currency union with common policy* is a means of nullifying shocks across member-states hence reducing the high dependence on foreign partners and shifting the reliance to domestic producers. Using a sovereign currency as a developing country impedes development since it culminates as a greater barrier to trade and increase the cost involved in international trade. In this context, countries with greater trade potential and the large informal sector will culminate in the gains from trade when a currency union is formed. Currency union is a major step towards the economic transformation of struggling economies. The intuition seeks to measure the cost of using existing currency, then evaluate if there is a need for the currency to be substituted with another. If the cost of using the existing currency is high compared to the cost of joining a currency union, then the countries have the incentive to join a union since the benefits of a currency union will improve their economic stance. The evaluation of the existing currency cost should comprise institutional quality (economic and political), regional growth, environmental factors depending on the contribution to GDP, human resource quality, size of the informal sector, trade barriers, and trade intensity based on potential whereas the cost of the currency union can be computed using some OCA criteria. If OCP is greater than OCA, then adopting a common currency will improve economic prospects.

Recent Endogeneity growth model estimates depict human quality easily stimulates economic growth. The OCA criteria for measuring real convergence such as business cycle synchronization, product diversification, and similarity in the industrial structure are not suitable for the feasibility of developing countries' currency union. These criteria can be attained with a well-laid criteria road map for diversifying the economies and removal of trade barriers. Also, the Endogeneity of the OCA postulates the attainment of these criteria ex-post. Countries with well-developed infrastructure and human capacity will only attain these criteria ex-ante.

The striking advantage of developing countries in forming a currency union has to do with relatively lesser nominal rigidities, relatively small public sectors compared to EMU, unattractiveness to heavily borrow from the international market, greater trade potential, and elimination of trade and non-trade barriers among others. However, reduction in currency risk, exchange rate risk and inflation risk will lower the country's cost of borrowing from the international market hence enhanced gains from trade. Furthermore, developing countries in a currency union are most likely to navigate through shocks easily compared to developed countries. Also, savings will be very large when transaction cost is reduced compared to EMU countries due to greater trade barriers in developing countries hitherto greater trade potential. Theoretically, capital would flow from region of abundance to region where capital is most needed. Thus, it will induce Foreign Direct Investment (FDI) from member-states by when policies across the region assure business confidence. Additionally, the money and capital market deepen with intense economic policy integration. Also, investor confidence can easily be enhanced by ensuring exchange rate stability across the region since risks associated with doing business is reduced.

Evaluating the EMU based on the Optimal Cost Phase (OCP), the cost of countries in the European Monetary Union not integrating further to form a currency union was the tendency of trade disputes among members, the adverse effect of sovereign currencies on international trade, and extreme nationalism which could have cost the long-term growth of the continent. Moreover, the prevention of competitive devaluation of currencies and unwholesome speculations that would adversely affect trade. In conclusion, the intuition stipulates that the cost analysis of the existing conditions pertained to using sovereign currency compared to the cost of joining a currency union is superlative to using the cost and benefit analysis of the OCA. Notwithstanding, some OCA criteria are suitable for currency union evaluation. The OCP could serve as the link between ex-ante OCA and Endogeneity of OCA.

### 4.2.2 **Steps for Optimal Cost Phase (OCP)**

1. To set out the realistic nominal convergence criteria, there is the need to use the average of the yearly average of inflation, Gross Reserves, budget deficit, Public debts per GDP, Central Bank financing of government expenditure among others.
2. Initiate policy on the free movement of people, goods, and capital
3. The roadmap for diversifying the economies to form the currency union
4. The rollout of the institutional policy framework to ensure transparency in the system.
5. To investigate the effect of political variables, security, tourism, migration, human resource quality, Foreign Direct Investment (FDI), among others on trade.
6. Estimation of the trade potential for member-states
7. To investigate the role of the primary sector on trade for the selected countries to know its intensity on trade compared to the manufacturing and service sector and the geographical fundamentals
8. The size of the informal sector and the size of foreign investors per total businesses in the countries and
9. The potential gain from the integrated financial market and suggested diverse portfolios to be listed

**STEP 4**

Currency Union should have a positive effect on trade. Additionally, the size of domestic firms to foreign firms is a prerequisite to evaluate the capacity of the indigenous private investors in raising trade flows.

**STEP 5**

There should be some level of convergence and greater discipline against inflation. Also, the political and business environment should have a positive effect on trade else the need for intense policy formulation and stringent implementation.

## **5.0 Conclusion**

With the implementation of these suggested institutions, developing countries notably Africa will be well-positioned to take off the currency union. The policy on a common currency is deemed to fail if this institutional framework is not well noted due to the deliberate effort to induce the gains from currency union membership. In this background, a currency *union with a common policy* should be the benchmark for curing the ills.