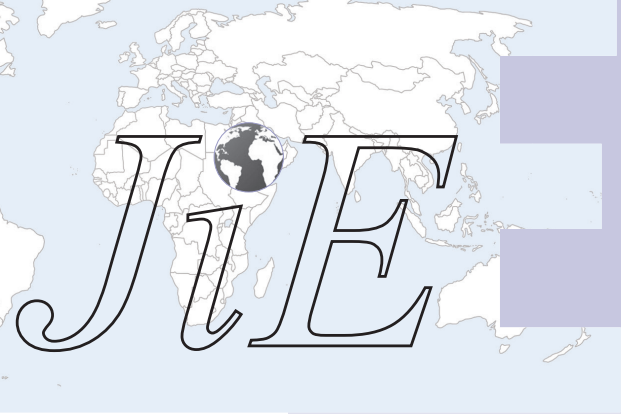

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Contents

From the Editor's Desk...

As this issue goes to print there are many issues that have caught the attention of everyone worldwide. On the covid front, it is reported that more than 5 million deaths happened altogether in the world. More than half of the deaths reported on a seven day average were in United States, Australia, Brazil, Mexico and India. Another news on covid front was the 'Tit for Tat' by India, which imposed a 10 day quarantine for Brinish Nationals. This was considered as a dip in India-UK ties.

Prime Minister Narendra Modi's visit to US and his address to United Nations General Assembly were also in news. He talked at length on India's democracy and the spread of terrorism. Another issue that was in news was the formation of alliance by Australia, UK and US (AUKUS), a historic security pact in the Asia-Pacific. This alliance will allow Australia to build nuclear-powered submarines for the first time, using technology provided by the US. This alliance drew sharp criticism from France, Malaysia and host of other nations, which feel that this alliance may trigger hostilities from China that may have an impact on their security.

It is also being widely debated whether AUKUS will eclipse QUAD group, which consists of United States, India, Australia and Japan. Prime Minister Narendra Modi made it clear that QUAD has much border scope than AUKUS and the formation AUKUS will not eclipse QUAD.

On the national front, the announcement of National Monetization Pipeline (NMP) also became a matter of debate. Under NMP, government intends to unlock the value of certain assets such as gas pipelines, power transmission assets, to name a few. NMP estimates aggregate monetization potential of Rs 6.0 lakh crores through core assets of the Central Government, over a four-year period, from FY 2022 to FY 2025. Whether NMP will be successful in its aim only time will tell. As far as some good news is concerned, tax buoyancy, rise in exports were considered as positive signs for Indian economy.

This issue of journal throws light on topics such as Prospects of India's Economic Integration, Exchange Rate and Bilateral Trade Balance of India, Impact of Balance of Payments on Economic Growth of South Africa and Factors responsible for conflicts in Africa.

We are sure the topics in this issue are of immense value for our readers once again. We request our regular contributors to continue to show the same enthusiasm in contributing articles. We further request to keep sending review of books that talk about issues pertaining to international economics.

Dr G Rajesh

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Prospects of India's Economic Integration – A Study with Comparison to Mist and Mint Nations

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Abstract

Economic integration is a process whereby two or more economies understand to pursue policies and objectives for economic development in the common interest for mutual benefits of all members/participating countries. Integration is the process where an understanding is made among nations to decrease and eliminate tariff and non-tariff barriers for the free flow of goods or services and factors of production. The degree of economic integration is a continuum that ranges from free trade to political unions as desired by participating countries to use a sophisticated, deeply integrated, trans-nationalized sense of space to achieve national economic interests. The research studies available in economic integration are abundant, yet very few studies suggest India's economic integration with world nations. India has always been skeptical about growing threats if borders with neighboring nations are open for trade. The main objective of the present study is to lay down basic parameters for comparing the MINT (Mexico, Indonesia, Nigeria, and Turkey) and MIST (Mexico, Indonesia, South Korea, and Turkey) nations and India. To meet this objective, certain parameters like Gross Domestic Product (GDP), Exports and Imports, Current Account Balance as a percent of GDP, Population, and Inflation to provide strength that India shall have economic integration opportunities with MINT and MIST nations.

Keywords: Current Account Balance, Economic Integration, EXIM, GDP, International Trade, MINT, MIST, Trade Prospects of India

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Introduction

Economic integration is a widely debated topic globally with its rising significance. Even though there is limitless literature on the integration arrangements, no single readily agreeable definition of economic integration has attained acceptance among theorists, scholars, and experts. Therefore, the concept incited significant discussion and argument in the political and economic literature.

Economic integration, in general, has two vague definitions; the first one is generalized economic integration, where there is openness for all the countries across the world to be interdependent and interconnected by eliminating trade barriers and taxes. While the second one, in a narrow sense, is regional economic integration, where two or more nations of a region that share similar geographical or cultural values voluntarily take part as a unified supranational institution [1]. These countries adopt unified economic policies, monetary policies, and financial policies to cancel barriers that hinder economic growth.

In a nutshell, Economic integration is a process whereby two or more economies make an understanding to pursue objectives and policies for economic development in the field of common interest for mutual benefits of all members/participating countries[2]. It is an alliance between nations based on their current level of productivity, development, and standard of labor whereby governments of such nations conclude understandings by negotiating a transfer of certain commodities, capital, and labor enabling the economies to attain a certain degree of improvement in their economy[3].

Integration is when an understanding is made among nations to decrease and eliminate tariff and non-tariff barriers for the free flow of goods or services and factors of production[4]. Therefore, it is an arrangement in which economies are no longer divided by economic frontiers, and such nations strive to bring in considerable policy changes to function as an entity. These arrangements need the participating nations to adjust their behavior to facilitate their common objectives and partner nations. Meaning, economic integration initially stages flexible embodiment of social, political, cultural, and economic considerations. It later can achieve these objectives more efficiently than just as unilateral pursuance of policy in each nation[5].

In the current day scenario, economic integration and coordination are among the critical indicators for strengthening stability and prosperity on a global spectrum. Integration creates potential circumstances for the development of trade and extension of local markets and contributes to industrialization. As the extent of economic integration increases, so does the intricacy of its regulations, which includes changes in policies and regulations, enforcement, and assertion mechanism to guarantee that

exporters and importers comply. The degree of economic integration is a continuum that ranges from free trade to political unions as desired by participating countries to use a sophisticated, deeply integrated, trans-nationalized sense of space to achieve national economic interests[6].

Preceding, a basic understanding of the country profiles of India and MINT& MIST nations is provided for making convincing cases for the objectives of this paper.

From being a closed economy, for more than three decades, India adapted Liberalization, Privatization, and Globalization in the early 1990s, thereby opening its markets for trade, investment, and economic development. India's Look East Policy is its first such attempt to develop and enact strategies for forging close economic and commercial bonds, increasing cooperation, and expanding regional markets with South East Asian nations[7]. Later India has participated and signed understandings for integration with many neighboring and global countries. India entered into free trade agreements, preferential trade agreements, comprehensive economic cooperation agreements, and bilateral trade agreements with varied nations worldwide to foster hassle-free trade, mobility of investments, and development of industries in both nations[8].

Currently, India is considered one of the fastest-growing economies globally, with accelerated average Gross Domestic Product (GDP) growth of 7% from 1997 to 2017[9]. India's post-independence journey started as an agrarian country; however, the manufacturing and services sectors have emerged strongly over the years. Today, the service sector is a highly developing segment intercontinentally, contributing more than 60% to its economy and accounting for nearly 28% of the business [10]. Manufacturing is also one of the prime sectors and is being boosted through the Government's initiatives, e.g., "Make in India." Although the contribution from the agricultural sector has declined to around 17%, it outweighs the agricultural output to that of the Western Countries [11].

MINT was initially coined by one of the well-known asset management company Fidelity Investments, in 2011 and was later popularized by the former Goldman Sachs economist Jim O'Neill. MINT nations are referred to as 'frontier markets' because these markets are smaller than BRIC countries but have the similar potential [12].Fidelity grouped these nations considering the pro-economic stance of MINT economies with favorable legal systems and regulations that help business growth. Also, these nations have abundant raw materials, geographical trade advantage, large young population, well-organized banking system, opportunities to expand retail credit, and three out of four nations are already major oil exporters. MINT was initially supposed to be MIST with S standing for South Korea, was later changed by O'Neill upon the insistence of the BBC [13].

Likewise, MIST is another rhetorical agglomeration of emerging nations popularized by O'Neill in 2013. MIST has not caught the eyes of the larger audience as it lacks solidity that of BRIC antecedent, yet these nations have about 1% of global GDP each [14]. These nations, i.e., Mexico, Indonesia, Nigeria, Turkey, and South Korea, are also part of the Next Eleven (N-11) Countries, another myriad group of emerging nations acronym coined by O'Neill in 2004[15].

Mexico is the largest economy in Latin America, located strategically between South America and the United States of America. Nearly 75% of Mexico's exports are made to the US, leading to an increase in GDP by 3.5% yearly[16]. Turkey is also tactically placed at the end of the European Union region, having billions of dollars' worth of trade agreements with many Asian and African countries. Nigeria has a geographical advantage in trade and is one of the largest economies in Africa and Nigeria is the 26th largest economy in the world for over a decade. Indonesia and Nigeria are leading economies in the productive commodity industry and major exporters of raw materials and oil [17]. South Korea is the world's tenth-largest economy by nominal GDP, fifth-largest economy in exports, and ranks eighth in world imports[18]. All the nations, except Nigeria, are also members of G-20 nations.

Review of Literature

The research studies available in economic integration are abundant, yet very few studies suggest India's economic integration with world nations. Therefore, this research work will be weighty in adding to the depth of knowledge of abiding literature by filling the gap of non-focus on the economic integration of India. The following works are available for understanding the earlier studies in this area.

Amita Barta(2004)[19] studied the trade potential of India to enter into bilateral trade agreements with global countries. The study used the augmented gravity equation model using various parameters to understand India's economic integration with world nations. It revealed that the degree of India's trade potential is higher with Asia-Pacific region countries followed by Western Europe and North America. Further, the study suggested that India can attain maximum trade benefits by entering into trade agreements with distant developed countries and neighboring or nearer emerging nations. The study concluded by suggesting policymakers make considerable efforts to enter into trade agreements with the nations of the regions mentioned earlier to develop the Indian economy.

Rajeev and Manjeeta(2009)[20] attempted to understand India's role in South Asia trade & investment integration. The study observed that India should take disproportionally great responsibility for promoting integration

with its neighboring nations. It stated that India could make a considerable trade impact globally considering its geographical area, extensive human resources, and great prospects for investments. The study suggested that for successful integration, India should pay maximum attention towards encouraging investments in the expansion of production capacities, policy changes to favor the business environment, develop physical infrastructure, improved transportation connections within and outside the peninsular sub-continent. Further, the study concluded that the current position of India could see betterment only if the nation takes a justifiable and cooperative stance for international trade agreements and bilateral benefits that visibly accrue from integration with immediate partner economies and by integrating with global nations.

Baldev Raj Nayar(2014) [21] made a thorough study on India's economy. The study observed that the Government and market could work hand-in-hand to accentuate economic integration. It concluded that the market supported by the Government has the potential to meet all the needs of economic integration, thereby strengthening trade expansion, mobility of labor and capital, and widened the scope for the diffusion of industry. The study inquired into various parameters like economic planning, tax reforms, fiscal and monetary policy, trade, investments, entrepreneurship, and population distribution to understand favoring conditions for India to pursue economic integration.

Mohsen et al. (2014) [22] studied the exponential rise in the growth of emerging nations as economic powers, especially BRICS and MIST nations. It observed that BRICS and MIST economies had demonstrated significant economic progress in the last decade, making a remarkable contribution to global economic growth by playing a crucial role in global financial development, exerting an upward trend in economic growth against other emerging global economies and markets. The study finally stated that both group nations, i.e., BRICS and MINT, have long-run validity for purchasing power parity. These nations have a stationary real exchange rate for investments and trade.

Filip and Petar(2016) [23] attempted to study MINT as an alternative or next BRICS-like nations. It observed the potential of MINT nations by analyzing various parameters like GDP, FDI, and government consumption patterns, to understand the significance of their role in international trade relations. The study implied that MINT countries do not have a solid economic and political framework to challenge BRICS nations. It stated that MINTs are a group of rapidly growing and emerging nations with very distinct characteristics and are much more critical for the world trading economy. The study identified that the geostrategic position of Turkey, strategic value of Nigeria's oil and gas, Indonesia's geographic position in

the Asia-Pacific rim, and labor-intensive markets like Mexico connecting North and South America could be an advantage if these countries could make policy changes for economic integration. Considering the location of these nations, they can also look into integrating with the neighboring emerging nations and developing nations across the world for economic development.

Lenee and Oki(2017) [24] enquired into market development as a subset of financial development, an engine for economic growth of the MINT countries. It considered variables like market capitalization ratio to GDP, gross domestic savings relative to GDP, gross fixed capital formation relative to GDP, and change in GDP due to change in the value of transactions of markets. It identified that market development effects vary by specific country markets and economic systems. The study observed that many investors treat the MINT nations as a grouping of peculiar features and not a replacement for BRICS economies. However, the MINT has great potential in influencing global economics. Finally, the study concluded that the MINT economies need a structured-focused financial development framework to spur economic growth, which is possible through economic integration with global nations.

Need for the Study

The research studies available in economic integration are abundant, yet very few studies suggest India's economic integration with world nations. India has always been skeptical about growing threats if borders with neighboring nations are open for trade. India could not play a greater role globally with unstable and insecure neighborhoods. The studies in the field of integration have often shown that countries that have integrated into the world economy have experienced faster economic growth rates compared to those that have chosen the path of protectionism [25]. Nevertheless, it is worthy of a study as there are many similarities between the MINT, MIST, and Indian sub-continent. India is the 7th largest economy in the world with a nominal GDP of $2.72 Trillion[26], which is almost equal to the nominal GDP of the top two Countries, i.e., South Korea and Mexico, from the MINT and MIST group. The present study focuses on understanding India's trade relations with these two group Countries. Therefore, this research work will be weighty in adding to the depth of knowledge of abiding literature by filling the gap of non-focus on the economic integration of India**.**

Objectives of the Study

The main objective of the present study is to lay down basic parameters for comparing the MINT and MIST nations with India. The following are the specific objectives set for the study:

- To study and understand the concept of economic integration in International Trade;
- To analyze the process of economic integration with select parameters; and
- To make appropriate suggestions and to draw meaningful conclusions.
- To achieve these objectives set for the study, certain parameters like GDP, Exports and Imports, Population, Ease of doing business, and Inflation are considered for making a case. So, for supporting the objectives, data has been collected accordingly. The data has been imbibed systematically to present the objective ideally. Preceding MINT and MIST groups shall be referred to as a single MINTS group for the convenience of data representation.

Sources of Information

The paper is based mainly on secondary sources of information. The secondary sources of information like IMF World Economic Review Report, The World Factbook, Articles, and works published in different online media portals. As the study is confined only to secondary data, 28 years of data from 1991 to 2019 has been considered to formulate a proper understanding of the need for studying the prospects of the economic integration of MINT and MIST Countries with India.

The information collected from various sources has been analyzed meaningfully in the following paragraph to achieve the objectives set for the study. The process of economic integration has been studied by identifying certain important parameters like GDP, Imports & Exports, Current Account Balance, Inflation, and Population.

MINT(Mexico, Indonesia, Nigeria, and Turkey) and MIST (Mexico, Indonesia, South Korea, and Turkey) are among many acronyms developed by policymakers, investment companies, and academics to group emerging countries that share similar traits like rapid economic development, large spread working-class population and demonstrate favorable demographics with positive economic prospects in coming two decades[27]. These nations are considered growth markets considering the spread and magnitude of changes in these economies and their impact on a global footprint.

The parameters of economic integration in the context of MINT and MIST compared with India are presented hereunder.

Parameters of Economic Integration

The study focused mainly on the parameters like GDP based on PPP share, Exports and Imports, Current Account Balance, Population, and Inflation for analyzing the economic integration of India with MIST and MINT

countries. For the convenience of the study, five years average value is shown wherever necessary.

Gross Domestic Product – An Economic Indicator

The first step starts with understanding *GDP based on the PPP share of world total* expressed in percentage change. The same is presented in Table-1.

Table-1: GDP Based on PPP Share of World Total (As %)

Country/Year	1991-1995	1996-2000	2001-2005	2006-2010	2011-2015	2016-2019
India	*3.5542*	*4.021*	*4.4784*	*5.3852*	*6.4576*	*7.65825*
Mexico	2.557	2.5042	2.3478	2.1128	1.9894	1.91575
Indonesia	2.069	2.0888	1.9772	2.1178	2.3868	2.56925
Nigeria	0.6016	0.5622	0.6656	0.8002	0.9286	0.875
Turkey	1.357	1.3894	1.3298	1.4094	1.5694	1.66525
South Korea	1.3078	1.4822	1.6214	1.622	1.6226	1.587

Source: IMF WEO 2019

Note: Expressed in percent of world GDP in PPP dollars

The data in the above Table-1 shows that the GDP growth as a world share in PPP. The data shows and justifies that the Countries, including India, are increasing. Indonesia has a 2.6% of the world GDP on PPP share. South Korea, Mexico, and Turkey have a similar GDP on PPP share with a combined average of 2%. We can deduce that if the same pace continues, these countries' GDP increases as a part of the PPP world share, showing their potential to show a significant share in world trade.

Imports – An Economic Indicator

Imports are essential for an economy for the exchange of currency and meeting the needs of the resources. Imports help in significant exposure for any country for their currency's increased demand and attract more investors to set up their venues. Table-2 hereunder shows the volume of goods and services as a present change according to the change in quantity demand.

Table-2: Country-Wise Volume of Imports of Goods and Services

Country/Year	1991-1995	1996-2000	2001-2005	2006-2010	2011-2015	2016-2019
India	*10.741*	*6.8152*	*10.8648*	*10.7354*	*2.8646*	*9.34025*
Mexico	10.6668	17.441	9.4812	3.5798	4.9982	4.568
Indonesia	12.294	-0.2	12.9593	6.0562	4.8264	8.063
Nigeria	16.8366	-1.5486	13.8504	10.5256	2.4636	0.932
Turkey	9.4138	13.4282	11.3084	5.1566	4.442	-0.7015
South Korea	15.3734	8.0482	5.6851	7.5378	4.4038	4.31075

Source: IMF WEO 2019

Note: Percent change of volume of imports refers to the aggregate change in the quantities of total imports.

From Table-2, we can understand that few countries started to be more dependent on imports and in later years they have considerably lowered their dependency. Indonesia registered the highest volume of imports among MINTS. India and South Korea have an almost similar volume of imports of goods and services. Country-wise Import figures (2017 Est.) have been mentioned in Table-3.

Table-3: Country-Wise Imports for the Year 2017 (Million Dollars)

Country	*IND*	MEX	IDN	NGA	TUR	SKOR
Imports	*452.2*	420.8	150.1	32.67	225.1	457.5

Source: The World Factbook, CIA

Note: Imports compare the total US dollar amount of merchandise imports on c.i.f. (cost, insurance, and freight) or f.o.b. (free on board) basis calculated on an exchange rate basis.

As per The World Factbook [28], the country-wise imports have been given in Table-3. Korea and India are top in the selection, with imports at $457.5 Million and $452.2 Million, respectively, followed by Mexico's $420.8 Million. Nigeria noted the least imports trade from the group at $32.67 Million.

Exports – An Economic Indicator

If any country registers higher *Exports*, it implies that the country has better industries and policies to support the trade for their respective domestic player, meaning better employment and investment facilities. Table-4 shows the volume of exports of goods and services of the MINTS Countries and India as a percentage change with respect to change in demanded quantities.

Table-4: Country-Wise Volume of Exports of Goods and Services

Country/Year	1991-1995	1996-2000	2001-2005	2006-2010	2011-2015	2016-2019
India	*9.7474*	*10.0562*	*16.2646*	*12.6916*	*3.3174*	*8.45275*
Mexico	9.665	9.8452	3.5934	4.055	6.201	4.17275
Indonesia	10.28	4.328	2.5906	5.4132	1.4682	6.113
Nigeria	2.4316	1.6622	8.4734	-0.1286	-2.3726	1.5285
Turkey	8.0258	6.695	9.1056	4.9012	6.5196	6.32675
South Korea	14.89	14.9336	10.6152	8.9216	5.2758	2.87

Source: IMF WEO 2019

Note: Percent change of volume of exports refers to the aggregate change in the quantities of total exports.

From the Table-4, we can deduce that except for Countries like South Korea, Mexico, and Nigeria, which have a significant year-after-year increase in exports, the rest of the countries noted low exports because of political instability, a factor of government policies, economic instability, etc. India has faced few debacles between 2011-2015 due to political and policy changes, yet it managed to keep pace. Country-wise Exports figures (2017 Est.) have been presented in Table-5.

Table-5: Country-Wise Exports for the Year 2017 (Million Dollars)

Country	*IND*	MEX	IDN	NGA	TUR	SKOR
Exports	*304.1*	409.8	168.9	1.15	166.2	577.4

Source: The World Factbook, CIA

Note: Exports compare the total US dollar amount of merchandise exports on f.o.b. (free onboard) basis calculated on an exchange rate basis.

From Table-5, we can observe that Korea and Mexico have the highest export trade of $577.4 Million and $409.8 Million, respectively, followed by India's $304.1 Million. The least export trade figures are noted for Nigeria $1.15 Million as per The World Factbook[29].

Current Account Balance – An Economic Indicator

The current account balance is one of the yardsticks of measuring a country's savings. Apart from non-financial assets, net capital transfers, and acquisition/disposal of non-produced, the current account balance represents the net foreign investment or net lending/borrowing position of a country vis-à-vis the rest of the world[30]. As per the current 5th edition of the Balance of Payment Manual, the key categories of the current account are goods, services, income (compensation of employees and investment income), and current transfers[31]. Table-6 shows the Current Account Balance of the MINTS Countries and India as a percentage of GDP.

Table-6: Current Account Balance as Percent of GDP

Country/Year	1991-1995	1996-2000	2001-2005	2006-2010	2011-2015	2016-2019
India	*-1.026*	*-0.986*	*0.529*	*-2.035*	*-2.639*	*-1.358*
Mexico	-6.112	-2.038	-1.279	-0.827	-1.923	-1.607
Indonesia	-2.016	1.441	2.639	1.283	-2153	-1.811
Nigeria	-0.071	2.631	8.457	8.795	1.413	0.112
Turkey	-0.426	-1.046	-1.683	-4.731	-5.491	-2.441
South Korea	-1.131	2.144	1.531	1.441	4.709	4.82

Source: IMF WEO 2019

Note: Current account balance as a percent of Gross Domestic Product indicates the country's level of international competitiveness.

When a country's current account balance is incurring a surplus, the country is a net lender to the world countries. While, when a country's current account balance is running into a deficit, the country is a net borrower from the rest of the world. Tenacious current account deficits or surpluses demonstrate a macroeconomic fragility that is antagonistic to sustained economic development and, thusly, to sustained means of execution of economic development objectives [32]. In the case of Emerging and Developing countries with high current account deficits and incomplete financial markets, depending on the macroeconomic conditions, international capital market fluctuations and financing of the

deficit often indicates a risk of a future sudden reversal of international financial flows, thereby, abrupt decrease in the means of implementation of sustainable development goals [33].A current account deficiency must be mitigated by increasing financial and non-financial liabilities or decreasing reserve assets. From Table-6, we can deduce that only South Korea and Nigeria had a surplus in their current account balance while the rest of the countries showed a fluctuating deficit.

Inflation – An Economic Indicator

Inflation can be called a continuous rise in prices or when the affordability of the consumers decreases. Economic growth is measured in the gross domestic product (GDP), or the total value of all goods and services produced. Compared to the previous year, the percentage of growth or decline is adjusted for Inflation. Table-7 hereunder shows the Inflation of the MINTS and India. Some Economists believe that if any country can keep its inflation rate constantly at 6% or below that rate, it may fuel economic growth [34]. Inflation at lower levels helps the economy pump more money into big industries like automobiles and manufacturing. They provide more employment and form a circular flow of money. All these factors contribute to Inflation's calculation, eventually showing less Inflation, which means more affordability or spending capacity of individuals.

Table-7: Inflation Rate of Mints and India

Country/Year	*IND*	MEX	IDN	NGA	TUR	SKOR
1991-1995	*9.4708*	19.5518	8.754	NA	80.025	5.9662
1996-2000	*7.0552*	16.662	21.1196	10.2382	71.319	3.9202
2001-2005	*4.4*	4.5208	10.2164	14.8096	26.7334	3.194
2006-2010	*8.47*	4.4632	6.7354	11.181	8.2062	3.134
2011-2015	*7.49*	3.5146	5.4446	9.5518	8.198	1.7386
2016-2019	*3.73*	4.511	3.34275	14.3535	14.06375	1.3665

Source: IMF WEO 2019

Note1: Annual percentages of end-of-period consumer prices are year-on-year changes

Note 2: IND – India; IDN – Indonesia; KOR – South Korea; MEX – Mexico; NGA – Nigeria; TUR – Turkey

Table-7 shows that many countries were affected by World Economic Crises 2008 but managed to pull back themselves by curtailing to be around 6%.Prolonged Inflation may cause significant loss to the country in the form of less production, low standard of living, and less money at the disposal for both individuals and the country as such. Countries like Mexico and Turkey have faced this situation because of political instability.

Population – An Economic Indicator

According to the United States Census Bureau, the world's *population* was about 7.55 billion in 2019[35]. At the same time, the combined population of India and N-11 Countries exceeds half the world's population. Population

growth influences various phenomena, such as the age configuration of a country's population, international migration, economic inequality, and workforce size. In his book on inequality, Thomas Piketty (2014) [36] observes that economic growth "..always includes a purely demographic element and a clear economic component. Only the latter allows for an amelioration in the standard of living". Economic growth is estimated by changes in a nations's Gross Domestic Product (GDP) which can be disintegrated into its population and reciprocative economic elements defining it as population times per capita GDP. GDP is a standard of economic output and is also a criterion of national income, which can be interpreted as total output net of capital depreciation plus net income from sources outside the country. Table-8 shows the population-wise break-up of MINTS and India.

Table-8: Population of Select Countries (In Millions)

Country/Year	*IND*	MEX	IDN	NGA	TUR	SKOR
1991-1995	*891.75*	91.582	188.5034	98.4328	58.3244	44.1948
1996-2000	*992*	98.4338	201.6078	112.748	62.9178	46.2782
2001-2005	*1,081.80*	104.673	215.259	129.145	67.2126	47.835
2006-2010	*1,167.10*	111.321	222.9765	147.919	71.6234	49.0078
2011-2015	*1,249.96*	118.37	248.7974	169.407	76.6912	50.4656
2016-2019	*1,325.67*	124.115	262.7533	191.351	81.4133	51.5593

Source: IMF WEO 2019

Note 1: For census purposes, the country's total population consists of all persons falling within the scope of the census. In the broadest sense, the total may comprise either all usual residents of the country or all persons present in the country at the census time

Note 2: IND – India; IDN – Indonesia; KOR – South Korea; MEX – Mexico; NGA – Nigeria; TUR – Turkey

Finally, from Table-8, we can observe that out of MINTS, the biggest economies as per population are Indonesia and Nigeria. While the least populated country is South Korea. The population of India exceeds two-thirds of the total population of the MINTS Nations. By considering this, we can clearly say that if trade between India and MINTS strengthens, India will be the biggest beneficiary as it shares similarities.

Conclusion

It is evident from the study that out of MINTS (MINT and MIST), except for Nigeria, all the nations have great prospects and potential in playing an impeccable role considering their share in exports and imports, GDP, and population. It is probable, also possible, that the MIST group of nations can be a successor for BRICS-like impact nations, and economically integrating with these countries shall help both developing and emerging nations globally. Albeit Nigeria being one of the biggest nations of Africa and one of the leading producers of oil in the world, it needs a robust economic framework to show an appreciable impact on the global scale.

The study tried to tabulate the data available on hand pertaining to GDP, Exports and Imports, Current Account Balance, Population, and Inflation. From the data provided, it is evident that there are similarities between India and MINTS Nations. An in-depth study must be made regarding commodities traded between these Countries, and understanding about various agreements should be studied to get a proper paradigm on strengthening cross-border trade with these countries. With the given GDP growth rate and Inflation, it can be deduced that having proper trade undertakings with these Nations shall help India strengthen its domestic player's specifically Medium, Small, and Micro Scale industries. Except for Nigeria, which is still in the recovery or growing path, the rest of the Nations may boost the Indian economy.

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Exchange Rate and Bilateral Trade Balance of India: ARDL Approach

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Abstract

Rising deficit in India's trade balance has always been a matter of concern for policy makers. Present study examines the relationship between exchange rate and bilateral trade balance of India for a period of 2008 Q1 to 2018 Q4. Auto regressive Distributed Lag (ARDL) model to conintegration has been used to test the long run and short run relationship between the variables in sample trading partners in quarterly data over a period 2008-2018. The result shows that in the short run devaluation of exchange rate becomes effective measure in reducing India's trade deficit with some of her trading partners. In the long run, devaluation of exchange rate will not prove to be an effective tool in the direction of improvement of bilateral trade balance of developing nation like India with any of her trading partners.

Keywords: ARDL, Bilateral Trade Balance, Cointegration, Exchange Rate, Trading Partner

Introduction

In post second world war phase, dichotomy between exchange rate and trade balance has been an important matter of concern for all the countries. For India and China both, Europe has been an important destination of international trade both exports and imports wise. India depends upon European Union (EU) alone for 20.2 percent of her exports and 13.3 percent of her imports (in 2009-10). Bilateral trade between the two grew at an average of 9.6 percent during 2006-10. But Europe pessimism has forced India to search new trading partners in Asia, Africa and Latin Africa (Acharya and Kar, 2014). Bhagwati(1958) though, strongly advocated free trade policy and export promotion as an important tool of development

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strategy postulated immiserizing growth thesis which had encouraged developing nations like India to adopt import substitution development strategy. Consistent adoption of import substitution and least attention to export promotion strategy for several years are some of the important reasons for chronic trade deficit in Indian economy and has always been a matter of attention for policy makers in India. Further, through central bank intervention, India has been using the policy of exchange rate[1] devaluation to enhance its exports and reduce imports and thus to correct its trade balance as well as to achieve other objectives also.

Table-A.1.1 and Figure-A.2.1 show the current account position of balance of payments in India. EU and United States (US) used to be her major export destinations, but due to the prevalence of Europe pessimism India has been exploring several export markets in Asia, Africa, and South America. Rising Trade balance deficit with China is a serious matter of concern for most of the countries in the world. Major trading partners of India have also been changing over a period of time. Since year 2008, imports as a percent of GDP(29.27%), exports as a percent of GDP(24.097%) and trade as a percent of GDP(43.038%) rose remarkably high in India as compared to previous years and it was a structural shift in the pattern of India's external sector. Further, trade balance, though had been negative for several years, but in 2008, trade balance deficit rose enormously. Further since 2007-08, India' trading partners were also performing differently. China, US, UAE emerged as largest trading partners of India. Hongkong is a country which has performed as consistent emerging partner. So, these four countries have been selected for the study. Table-A.1.2 and Figures A.2.2, A.2.3 and A.2.4 in Appendix (A) show the percent share of India's trade with three trading partners. China's trade share has increased from 10.63 percent in 2008 to 12.24 percent in 2018(mainly due to rising India's imports). US's trade share has increased from 10.14 percent in 2008 to 11.13 percent in 2018(mainly due to rising India's exports). Hongkong's trade share has remained almost constant with certain fluctuations during 2008-2018.

Present study aims to analyze the effect of devaluation of Indian Rupee on India's trade balance with her three major trading partners from 2008 to 2018 with the help of ARDL approach. Paper is organized like this. Review of Literature is followed by Theoretical Framework, Data sources and research Methodology and analysis of the empirical results while last is conclusion.

Review of Literature

S. Magee (1973) finds that adjustment of trade to devaluation takes place with some time lags. Tang (2008) finds that studies on devaluation impact

of currencies generally deploy (1) Marshall Lerner condition (Ex +Em >1) and (2) the J curve analysis[2]. LM condition says that devaluation of a currency will favorably affect trade balance if the summation of elasticities of export and import is greater than one. While J curve hypothesis assumes that consequent upon lags of time and adjustment, in the short period devaluation fails to improve trade balance but in the long run it improves. Earlier empirical studies used trade data in aggregates but recent studies use trade data for two trading countries, meaning bilateral. Krugman, P. R. and Obstfeld (2013) observe that permanent shift in money supply changes long run expected exchange rate and sharp exchange rates fluctuations and consequently causes strong short run effects on output. Similarly fiscal expansion causes long run expected exchange rate and sharper currency appreciation making domestic goods so expensive that the resulting 'crowding out' of net export demand cancels the policy's effect on output and employment(If economy is on long run equilibrium). Current account of balance of payments may follow J-curve pattern after real currency depreciation, if exports and imports adjust gradually to real exchange rates. It implies that first trade balance worsens, and then improves.

ARDL approach has been employed in various studies to check above J curve relationship for different countries. Bahmani-Oskooee (2005) employed ARDL approach to detect the presence of J curve concept on the bilateral trade between Australia and her trading partners. He was unable to find the presence of J curve. While applying ARDL approach for Malaysia and her major trading partners Bahmani-Oskooee and Harvey (2008) found the positive impact of devaluation of Malaysia currency upon her trade balance with some of her trading partners in the long run. He further finds mixed result in the short run. Bahmani-Oskooee and Cheema (2009), failed to analyze an evidence of a positive and significant relationship between the real exchange rate and the trade balance for Pakistan and her trading partners. Moodley(2010), tested J hypothesis between South Africa and other BRICS nations, by using ARDL approach to co integration and found no conclusive relationship between S. Africa and her trading BRICS partners except Russia. Setou (2011) examined the impact of devaluation of South Africa currency on her trade balance with her Euro zone partners with the help of Vector Error correction mechanism and found J curve Phenomenon with US and UK only. Niyitegeka, O. and Tewari, D.D.(2014) employed ARDL model to test the impact of devaluation of South African currency on her bilateral trade balance with her 10 trading partners. He found favourable relationship only with Switzerland. Hunegnaw, F.B. and Soyoung Kim (2017) used ARDL model for the East African countries and found that real exchange rate improves trade balance with four nations, elasticity of trade balance with respect to exchange rate is found to be

inelastic and J hypothesis is not traceable. Chowdhary, Khanom, Emu, Uddin and Farhana(2014) in their study of Bangladesh's trade balance for a period of 1973 to 2011 find that cointegration technique reflects a positive influence with exchange rate devaluation and trade balance. Grangercausality gives evidence of bidirectional causal relationship between devaluation and trade balance both in short run and long run. Increase in GDP of both domestic and foreign countries has a significant impact on trade flows. Present study tries to fill the study gap of effect of devaluation on India's trade balance with her major trading partners with the help of ARDL approach.

Theoretical Framework

Development level of a country decides, whether export promotion or import substitution or mix of both strategies are to be adopted. For semi industrialized countries in Asian and Latin American regions, where manufacturing goods constitute a major proportion of total imports, import substitution development strategy would be harmful (Bhagwati, 1988). Romer(1990) and Rebelo(1991) emphasize product quality and product differentiation in trade as the source of growth for developing nations. Developing countries benefit more from the diversification of their export basket while developed nations perform better through export specialization. Views of Lewis (1954), Rosenstein-Rodan (1943), Prebisch (1950) and Singer(1950) on export pessimism and North South Debate contributed a lot to the adoption of inward looking policies by developing nations. They also find a secular deterioration of the term of trade (TOT) for the developing nations exporting primary goods vis a vis manufacturing goods exporting developed nations. So, free international trade as a tool of development works better for only a particular type of commodity-composition of export baskets of nations. Chang (1945) in his 1945 and 1948 studies found the absence of LM condition, as a result prewar elasticity optimism was replaced by elasticity pessimism. Orcutt, G. (1950) using regression technique to estimate elasticities, confirmed their gross underestimation in international trade. Empirical studies by Harberger, A.C.(1957), Houthakker, H. and Magee, S.(1969), Stern, R.M., Francis, J. and Schumacher(1976), Artus, J.R. and Knight, M.D.(1984), Goldstein, M. and Khan, M.S.(1985) and Marquez(1990) confirmed the existence of J curve effect and found long run elasticities, almost twice the elasticities found during 1940s empirical studies.

Alongwith several theoretical justifications of export diversification, less dependence on import substitution strategy, export products quality and differentiation and focus shift from export of primary products to export of manufactured products, government intervention through devaluation

becomes almost essential to reduce trade deficit. As devaluation policy has its own limitations, so very often gives mixed results. Devaluation is a deliberate policy tool to lower the value of exchange rate. Devaluation, on the one hand, reduces foreign value of export items, hence export items become cheaper for foreigners, hence foreign demand for exportables increases and thus exports increase. But devaluation has dampening effect upon imports, causing imports costlier and hence demand for imports reduces. Consequently, trade deficit is likely to shrink. Devaluation policy may have mixed effects both in short and long run.

Data Sources and Research Methodology

Bilateral trade data has been taken from Ministry of commerce, Government of India (GOI). GDPs and exchange rates Data have been taken from International Finance Statistics, International Monetary Fund (IMF). India's major trading partners are US, China, UAE and Hongkong. But in present paper, only three partners US, China and Hongkong have been considered. Whole exercise has been performed on Quarterly data from 2008-Q1 to 2018-Q4. Due to non availability of Quarterly data for UAE, UAE (though very important trading partner) has been skipped. Bilateral trade balance(TB) between India and her trading partners has been taken as dependent variable. Gross domestic product of trading partner(GDPj), Gross domestic product of India(GDPInd) and bilateral exchange rate between India and trading partner(ER) variables have been taken as explanatory variables. Figure A.1 in Appendix (A) show the trend of variables used in the model. Here dependent variable is Bilateral trade balance (TB) between India and her trading partners. To check long run and short run relationships between regressors and regress and, following model has been used:

$$\ln TBj,t = a + b_1 \ln GDPj,t + b_2 \ln GDP\ Ind,t + b_3 \ln ERj,t + et \qquad ...(1)$$

By taking log, unit effects have been nullified. Quarterly data from 2008 Q1 to 2018 Q4 has been considered, in other words, there are 44 time observations. Since data series are in Quarterly form, so time series methodologies for checking unit roots in the individual time series have been used. Bilateral trade balance has been taken as ratio of India's export values to j country and its import values from country j in million USD. GDP Ind,t is the index of India's real GDP as a proxy for India's income. GDP j, t is the index of country j's real GDP as a proxy for j country's income. ERj,t is the bilateral exchange rate between country j's currency and Indian rupee and et is the error term. For bilateral exchange rate, first for each country exchange rate in terms of USD has been taken and then cross rates

have been found out in terms of Rupee. Theory says that increase in India's income GDP Ind, t will lead to increase her imports from partner country j, so coefficient b2 is expected to be negative. Similarly, increase in partner country j's income GDPj, t will lead to increase her imports from India so coefficient b1 is expected to be positive. Since depreciation of Indian Rupee(ER j,t) will lead to rise in India's exports and fall in her imports from her partners, so coefficient of b3 is expected to be positive in the long run. In short run, it can be negative, according to J curve hypothesis.

Descriptive Statistics

Before dealing with any econometric treatment for mentioned variables, first, trends in variables have been shown in figure A.1 and also descriptive statistics has been calculated. Results of descriptive statistics for three trading partners have been given in Tables A.2.1, A.2.2 and A.2.3 in Appendix (A). In table For US, mean values are (1.57) for TB, (106.96) for US GDP and (56.96) for ER. Maximum values represent the maximum values that each variable has taken. Maximum values are (2.18) for TB, (120.56) for US GDP and (72.55) for ER. Minimum values are (.997) for TB, (97.02) for US GDP, and (39.99) for ER. Similarly minimum values represent the minimum values that each variable has taken .Standard deviation indicates variation in data series. Standard deviation values are (.33) for TB, (6.95) for US GDP, and (9.13) for ER.

For China, mean values are (.28) for TB, (126.56) for China GDP and (8.76) for ER. Maximum values are (.53) for TB, (168.7) for China GDP and (10.75) for ER. Minimum values are (.121) for TB, (70.48) for China GDP, and (5.58) for ER. Standard deviation indicates variation in data series. Standard deviation values are (.102) for TB, (31.003) for China GDP, and (1.55) for ER.

For Hongkong, mean values are (1.54) for TB, (109.7) for HK GDP and (7.33) for ER. Maximum values are (3.36) for TB, (126.77) for HKGDP and (9.27) for ER. Minimum values are (.642) for TB, (90.54) for HK GDP, and (5.14) for ER. Standard deviation indicates variation in data series. Standard deviation values are (.58) for TB, (10.35) for HK GDP, and (1.17) for ER. For India, mean, maximum, minimum and standard deviation values of GDP are (120.62), (174.35), (79.09) and (25.83) respectively.

ARDL Cointegration

Classical conintegration and Vector Error Correction (VER) model requires data series to be stationary I(0) and I(1) for the evaluation of long run and short run relationships. Autoregressive Distributed Lag (ARDL) model, developed by Pesaran & Pesaran(1997) and Pesaran et al.(2001), breaks the above restriction and provides an opportunity to study I(0) and I(1) jointly. ARDL is an OLS based model, applicable both to stationary

and non stationary time series. This model does not require checking the stationarity of time series separately, as the integrating properties of the variables are inbuilt, while calculating the critical values. Further data in present study is Quarterly data (2008-2018) which is not very big sample size. Another argument provided by Pesaran and Shin(1999) that the ARDL model is most suitable when data size is small. Therefore following ARDL model has been developed in present study. Equation (2) is written as follows:

$$\Delta \ln TB_{j.t} = a + \sum_{i=1}^{p} b1 \Delta lnTBj, t-i + \sum_{i=1}^{q1} b2\ \Delta lnYj, t-i + \sum_{i=1}^{q2} b3\ \Delta lnYInd, t-i + \sum_{i=1}^{q3} b4\ \Delta\ lnERj, t-i + \beta_1 \ln TB_{j,t-i} + \beta_2 \ln Y_{j,t-i} + \beta_3 \ln Y_{Ind,\ t-i} + \beta_4\ \ln ER_{j,t-i+} e_{2t} \quad ...(2)$$

Here Δ is difference operator. Difference variables capture short run dynamic changes. Rest of lagged variables analyze long run effects. Null hypothesis for the existence of non existence of long run relationship in equation (2) is $\beta 1 = \beta 2 = \beta 3 = \beta 4 = 0$. (p,qs) are optimal lag lengths of dependent and independent variables respectively. They have been determined on the basis of criteria of minimum value of Akaike Information Criteria (AIC)(Akaike 1974). To estimate the long run relationship in the model F Bound test for Cointegration (Pesaran et al 2001) has been used. Question is that how does changes in exchange rate (devaluation) of Indian Rupee lead to changes in bilateral trade in short run?, as policy initiatives are generally taken and determined with respect to short run fluctuations, so Pesaran ARDL model runs like this: Testing co integration by observing F test which has null hypothesis of 'non existence of co integration' of H0 : y1=y2=y3=y4=0 as against alternative hypothesis of existence of co integration H1: y1 ≠ y2 ≠ y3 ≠ y4 ≠ 0. To test conintegration he suggests two critical values. One set assumes that all variables are not stationary; or I(1) and the other assumes that they all are stationary; I(0).If the calculated F-statistic lies above the upper level of the band, null hypothesis of 'non existence of conintegration' is rejected, indicating conintegration.

Empirical Results and Discussion

Selection of optimum lag length for applying ARDL model is very important and significant. Selection of an optimum lag length affects long run relationship among variables very much (Bahmani-Oskooee and Bohal, 2000). F bound test has been applied to test long run relationship among studied variables. Critical values for F Bound test are taken from Pesaran et al (2001a). Table-A.3 in Appendix (A) shows that value of F Statistic is 3.73 for US, 6.09 for China and 4.18 for Hongkong. The value is higher than critical values for upper bound I(1) at 5% and 10% level

of significance (in case of US) while for China and Hongkong, values are higher than critical values for upper bound I(1) at 2.5% and 5% level of significance. Thus results in Table-A.3 indicate that three explanatory variables with dependant variable have long run relationship (cointegration) in study period from 2008 Q1 to 2018 Q4. For selection of optimum lag length for each country in ARDL modeling, various tests are available. In present study Akaike Information Criteria (AIC)(Akaike 1974) has been applied for selecting the structure of optimal lag . ARDL(2,0,1,1) for US, ARDL(1,0,4,0) for China and ARDL(2,4,3,1) for Hongkong have been selected on the basis of AIC criteria. To check the appropriateness of the model further diagnostic tests of serial correlation and heteroscedasticity have also been used. Table-A.4 in Appendix (A) shows that there is no serial correlation and heteroscedasticity. To check the stability of the model, CUSUM and CUSUM square tests have been used. Figures-A.3.1 and A.3.2 for US, A.4.1 and A.4.2 for China and A.5.1 and A.5.2 for Hongkong clearly show that the model used is stable.

Long Run Results

After checking all required conventional tests for suitable ARDL model formulation, long run statistics of the model has been extracted. Tables A.5.1, A.5.2 and A.5.3 in Appendix (A) show the long run results. In Table-A.5.1, it may be inferred that in the long run, none of the variables in the model will affect bilateral trade balance between India and US. In Table-A.5.2, China GDP is statistically significant at 5% level. China GDP is negatively related to bilateral trade balance between India and China. It means that import demand for Indian exports rise with a rise in GPD in China, so trade balance deficit falls. All other variables are found statistically insignificant. Since, variables are in log form; therefore 1% increase in China GDP will lead to a fall of 1.94 % in bilateral trade balance. Thus it may be inferred that in the long run, rise in China GDP will tend to reduce bilateral trade balance between India and China. Table-A.5.3 shows that Hongkong GDP and India GDP are statistically significant at 5% level. India's GDP negatively and Hongkong GDP positively affect bilateral trade balance between India and Hongkong. It means that Hongkong import demand for Indian exports falls with a rise in GPD in Hongkong, so trade balance deficit rises. Similarly with rise in India GDP, Indian import demand for Hongkong exports falls, so trade balance deficit falls. It implies that 1% increase in India's GDP will lead to 14.6% fall in bilateral trade balance between two countries. 1% rise in Hongkong GDP will lead to 23.87% rise in bilateral trade balance. Thus it may be inferred that in the long run increase in India GDP will tend to reduce trade balance while increase in Hongkong GDP will tend to raise bilateral trade balance.

Short Run Results

In the short run, analysis has shown a mixture of positive and negative impacts. Error correction term is showing a very rapid speed of adjustment towards long-run equilibrium. Significantly negative coefficient is obtained for ECT $_{t-1}$ for all three trading partners. This not only supports co integration, but also shows the adjustment of all variables in each model towards their long run equilibrium (Bahmani-Oskooee and Harvey 2009). Tables A.6.1, A.6.2 and A.6.3 in Appendix (A) show short run impacts of different variables. ECT (-1) values are -.29, -.81 and -.31 for US, China and Hongkong respectively.

- Table-A.6.1 shows that 1% devaluation of Indian Rupee leads to 1.01% fall in bilateral trade balance. 1% rise in India's GDP leads to 1.36% fall in trade balance, 1% rise in 1 year lagged Trade balance leads to .31 fall in trade balance. Thus it may be inferred that in the short run 1 year lagged bilateral trade balance and current India GDP negatively affect India US bilateral trade balance. Devaluation of bilateral exchange rate also affects bilateral trade balance inversely, supported by J curve hypothesis.
- Table-A.6.2 shows that 1% rise in 1and 3 year lagged India GDP results in fall of 1.89% and 4.95% respectively in bilateral trade balance while 1% increase in 2 year lagged India GDP leads to 1.52% rise in bilateral trade balance. Thus it may be inferred that lagged values of India GDP affect India China trade balance both inversely and positively.
- Table-A.6.3 shows that 1% rise in 1 year lagged values of Hongkong GDP and trade balance, and 1% exchange rate devaluation lead to .34%, 17.09% and 1.89% decline respectively in trade balance. 1% rise in 3 year lagged Hongkong GDP, current and lagged values of India GDP, lead to 5.99%, 1.49%, 1.83% and 3.96% rise respectively in bilateral trade balance. Thus it may be inferred that in the short run lagged as well as current values of Hongkong and India GDPs and lagged trade balance value affect trade balance both inversely and positively. Devaluation of bilateral exchange rate inversely affects India Hongkong bilateral trade balance, thus supported by J curve Hypothesis.

Conclusion and Policy Implications

The study thus tries to investigate short run and long run relationship between exchange rate and trade balance of India with her major trading partners. Short run analysis has shown a mixture of positive and negative impacts. Error correction term is showing a very rapid speed of adjustment towards long-run equilibrium. The results suggest that there should be country specific Fiscal and monetary policies to improve bilateral trade balance situation. Devaluation of exchange rate can become

effective measure in reducing bilateral trade balance deficits with US and Hongkong as supported by J curve Hypothesis while in case of China it is not effective. Therefore expansionary fiscal and monetary policies are required to intervene so as to help in the devaluation of exchange rates which will result in the improvement of India's bilateral trade deficit. Since trade balance is also the result of lagged values, so the lagged values of domestic and foreign GDPs can play significant role in affecting trade deficit of India. In the long run, none of the variables in the model will affect trade balance of India with US. Rise in China GDP will tend to reduce bilateral trade balance of India with China, as rise in China GDP will enhance the consumption demand for Indian exports. In case of Hongkong, rise in India's GDP will tend to reduce trade balance deficit and on the other hand, rise in Hongkong GDP will tend to raise bilateral trade balance deficit. How the rise in India's GDP and rise in Hongkong's GDP affect bilateral trade balance deficit in the long run, will depend on the values of the income elasticity of demand for each other's exports as well as the productive capacity of each nation's export and import competing industries. Devaluation of exchange rate will not prove to be an effective tool in the improvement of bilateral trade balance of developing nation like India with any of her trading partners in the long run. Instead of relying upon devaluation tool, developing nations like India are needed to diversify their domestic baskets as well as explore new markets and focus more on technology sensitive manufactured exports to improve her trade position with her trading partners. Further, ample scope lies in exploring her foreign trade with ASEAN nations. Certain findings also indicate that India's engagement with Asia may help to enhance India's economic efficiency and export performance, besides regional stability and cooperation. Since reforms in nineties, major challenge for India's trade policy with ASEAN is India's small share in ASEAN trade (Hoa,T.A. 2012). Ample opportunities exist for the expansion of trade between India and ASEAN via trade promotion, RTAs and economic and trade cooperation.

Footnotes

Though Managed float regime is the current international financial environment, till 1975-76, Indian rupee was pegged to basket of currencies. Currency selection and weight assignment was left to discretion of RBI. In 1978, RBI allowed domestic banks to undertake Intra day trading in foreign exchange. During 1978-1992, foreign exchange transactions were regulated by Foreign Exchange Regulations Act(FERA). In 1991 downward exchange rate adjustment was done to end the pegged exchange rate regime. In 1992, to ease the transition to a market determined exchange

rate system, the Liberalized Exchange rate Management System (LERMS) was used as a dual exchange rate system. Since 1993 dual rates converged and the market determined exchange rate regime is there in India. All foreign receipts can now be converted at market determined exchange rates.

J curve concept explains that a developing nation in her initial stages, imports more and her export capacity is limited, consequently her trade balance falls. Increase in imports may adversely affect the favorable effects of devaluation, causing adverse trade balance in short run.

Abbreviations

EU: European Union, US: United States, TB: Trade balance, ARDL: Autoregressive distributed lag, GDP: Gross domestic product, ASEAN: Association of South East Asian nations, ECT: Error correction term

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Appendix (A)

Table-A.1.1: India's Foreign Trade (Million USD)

Year	Exports	Imports	Trade Balance
2004-05	83535.9	111517.4	-27981.5
2005-06	103090.5	149165.7	-46075.2
2006-07	126414.1	185735.2	-59321.2
2007-08	162904.2	251439.2	-88535.0
2008-09	185295.0	303696.3	-118401.3
2009-10	178751.4	288372.9	-109621.4
2010-11	251136.2	369769.1	-118632.9
2011-12	305963.9	489319.5	-183355.7

Year	Exports	Imports	Trade Balance
2012-13	300400.6	490736.6	-190336.1
2013-14	314415.7	450213.6	-135797.9
2014-15	310352.0	448033.4	-137681.4
2015-16	262291.1	381007.8	-118716.7
2016-17	275852.4	384357.0	-108504.6
2017-18*	303376.2	465578.3	-162202.1

Source: * provisional, Directorate General of Commercial Intelligence and Statistics.

Table-A.1.2: India's Trade Percent of Three Trading Partners

Year	India Trade (millionUSD)	HK % trade	CH % trade	US % trade
2008	414343.4	4.051432	10.63221	10.1416
2009	488991.3	2.581259	7.960305	7.107106
2010	467124.3	4.224925	11.95735	9.107591
2011	620905.3	3.759126	11.25473	8.95276
2012	795283.4	2.50732	8.410745	7.658747
2013	791137.2	2.532068	8.327275	7.833788
2014	764629.3	2.507342	9.725825	8.364423
2015	758385.4	3.263169	9.631873	8.12251
2016	643298.9	3.485035	11.11944	9.967042
2017	660209.4	3.842149	13.27131	10.71841
2018	768954.5	4.035895	12.24409	11.13035

Source: calculated from Table1

Table-A.2.1: Descriptive Statistics of the Variables (2008Q1 to 2018Q4)-Hongkong

Variable	Mean	Median	Maximum	Minim	Std. dev.	Skewness	Kurtosis	Sum	Sum square dev.	Obs.
IndHKER	7.33	7.73	9.27	5.14	1.17	-0.2	1.66	322.48	58.597	44
HKTB	1.54	1.51	3.36	.642	.58	.773	3.67	67.8	14.28	44
HKGDP	109.71	117.8	126.77	90.54	10.35	-.028	1.96	4827.24	4606.98	44
IndGDP	120.63	117.183	174.35	79.09	25.83	.29	2.08	5307.6	28700	44

Table-A.2.2: Descriptive Statistics of the Variables (2008Q1 to 2018Q4)-US

Variable	Mean	Median	Maxi-mum	Minim	Std. dev.	Skew-ness	Kurtosis	Sum	Sum square dev.	Obs.
IndUSER	59.96	59.89	72.55	39.99	9.13	-.18	1.62	2506.11	3582.44	44
USTB	1.57	1.58	2.18	.997	.33	-.04	1.92	68.88	4.82	44
USGDP	106.96	105.57	120.56	97.02	6.948	.317	1.86	4706.02	2076.022	44

Table-A.2.3: Descriptive Statistics of the Variables (2008Q1 to 2018Q4)-China

Variable	Mean	Median	Maxi-mum	Minim	Std. dev.	Skew-ness	Kurtosis	Sum	Sum square dev.	Obs.
IndChinaER	8.76	9.42	10.75	5.58	1.55	-.43	1.66	385.55	103.14	44
ChinaTB	.28	.27	.53	.122	.102	.589	2.58	12.31	.449	44
ChinaGDP	126.56	125.94	168.7	70.48	31.1	-.15	1.69	5568.78	41331.49	44

Table-A.3: F-Bound Test Results

Trading partner	R-square	2.5% I(0)	2.5% I(1)	5% I(0)	5 % I(1)	10% I(0)	10% I(1)	F-statistic	k
US	.596	3.15	4.08	2.79	3.67	2.37	3.2	3.730	3
CHINA	.714	3.15	4.08	2.79	3.67	2.37	3.2	6.094	3
HONGKONG	.840	3.15	4.08	2.79	3.67	2.37	3.2	4.184	3

Table-A.4: Diagnostic Tests

Trading Partner	Diagnostic Test	Test Statistics	P value
US	Breusch GodfreyLM (a)	.386	.816*
US	Breusch-Pagan- Godfrey(b)	.364	.916*
China	Breusch GodfreyLM (a)	.758	.562*
China	Breusch-Pagan- Godfrey (b)	1.33	.227*
Hongkong	Breusch GodfreyLM (a)	.786	.547*
Hongkong	Breusch-Pagan- Godfrey (b)	1.115	.39*

Note: Null Hypothesis (H0) for (a): No serial Correlation and (b): No Heteroscedasticity *implies non rejection of Null Hypotheses.

Table-A.5.1: ARDL Long Run Results for US, with Dependent Variable: Bilateral Trade Balance (DlnTB)

Variable	Coefficient	Standard Error	t-statistics
lnUS GDP	-6.999	5.952	-1.175
lnIndia GDP	2.093	1.443	1.449
lnBilateral Exchange rate	2.858	2.034	1.404
Constant	78.21	72.785	1.074

Note: ln represents log, D represents difference operator

Table-A.5.2: ARDL Long Run Results for China, with Dependent Variable: Bilateral Trade Balance(DlnTB)

Variable	Coefficient	Standard Error	t-statistics
LnChinaGDP	-1.941	.611	-3.179**
LnIndiaGDP	1.181	.842	1.402
lnBilateral Exchangerate	.004	.470	.009
Constant	5.998	1.663	3.605

Note: ** indicating statistical significance at 5% level of significance. ln represents log, D represents difference operator

Table-A.5.3: ARDL Long Run Results for Hongkong (HK), with Dependent Variable: Bilateral Trade Balance (DlnTB)

Variable	Coefficient	Standard Error	t-statistic
LnHKGDP	23.871	10.67	2.237**
LnIndGDP	-14.61	5.727	-2.551**
LnER	2.711	1.744	1.555
Constant	-58.25	28.452	-2.047

Note: ** indicating statistical significance at 5 % level of significance. ln represents log, D represents difference operator

Table-A.6.1: ARDL Short Run Results for US, with Dependent Variable: Bilateral India US Trade Balance; D (lnUSTB)

Variable	Coefficient	Standard Error	t-statistic
DlnUSTB(-1)	-.308	.109	-2.823**
DlnIndGDP	-1.364	.293	-4.662***
DlnER	-1.01	.42	-2.402*
ECT(-1)	-.286	.063	-4.566*

Note:*, ** and*** indicating statistical significance at 1%, 5% and 10% level of significance. ln represents log, D represents difference operator.R2 = ..596, Adj.R2 = .564, DW = 2.205

Table-A.6.2: ARDL Short Run Results for China, with Dependent Variable: Bilateral India China Trade Balance; D(lnChinaTB)

Variable	Coefficient	Standard Error	t-statistic
DlnIndGDP	1.182	.872	1.357
DlnIndGDP(-1)	-1.885	.922	-2.046**
DlnIndGDP(-2)	1.519	.879	1.729***
DlnIndGDP(-3)	-4.951	.853	-5.806*
ECT(-1)	-.810	.138	-5.865*

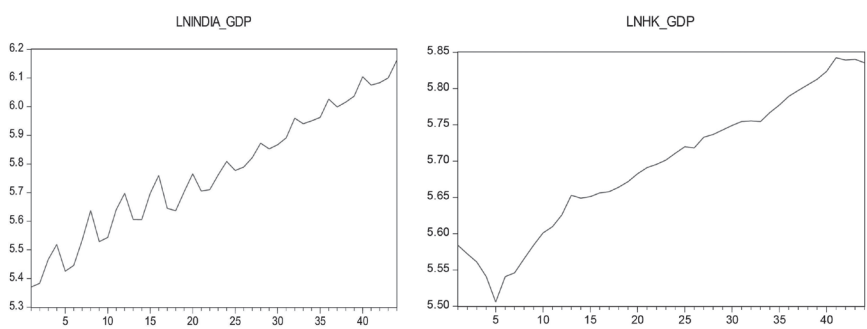
Note:*, ** and*** indicating statistical significance at 1%, 5% and 10% level of significance. ln represents log, D represents difference operator. R^2 = .71, Adj.R^2 = .68, DW = 1.997

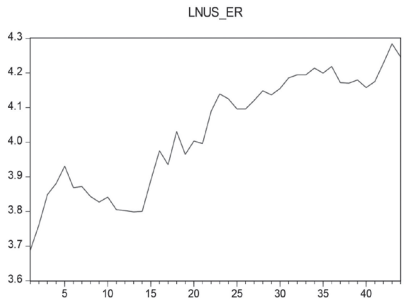
Table-A.6.3: ARDL Long Run Results for Hongkong (HK), with Dependent Variable: Bilateral India Hongkong Trade Balance (DlnHKTB)

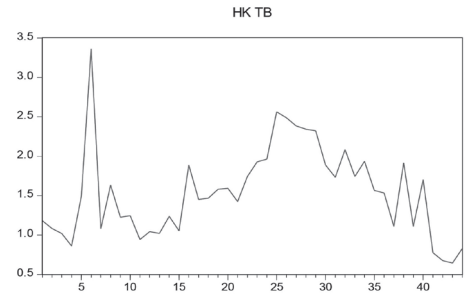
Variable	Coefficient	Standard Error	t-statistic
DlnHKTB(-1)	-0.342	.109	-3.135**
DlnHKGDP	2.126	2.964	.717
DlnHKGDP(-1)	-17.088	2.319	-7.368***
DlnHKGDP(-2)	-4.42	2.869	-1.541
DlnHKGDP(-3)	5.993	2.415	2.481**
DlnIndGDP	1.499	.829	1.809*
DlnIndGDP(-1)	1.831	.646	2.836**
DlnIndGDP(-2)	3.962	.735	5.39***
DlnER	-1.892	.713	-2.652**
ECT(-1)	-.307	.062	-4.913***

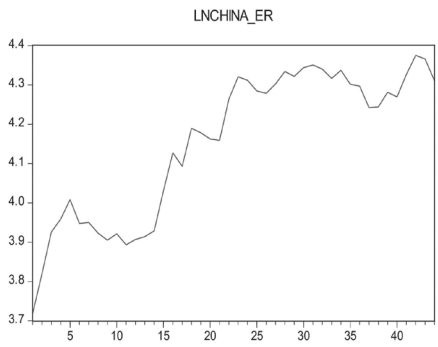
Note: *, ** and*** indicating statistical significance at 1%, 5% and 10% level of significance. ln represents log, D represents difference operator.R^2 = .84, Adj.R^2 = .793, DW = 2.166

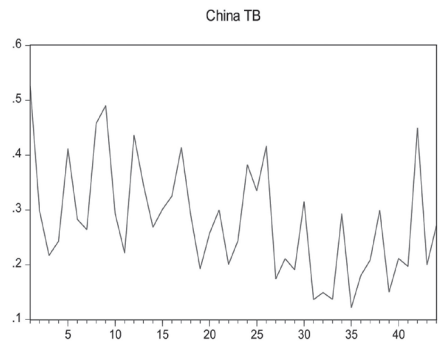
Figure A.1: Trends in the Variables (2008 Q1 to 2018 Q4)

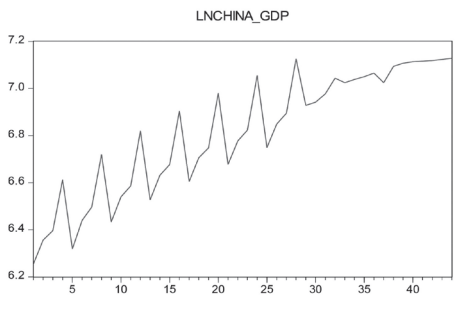


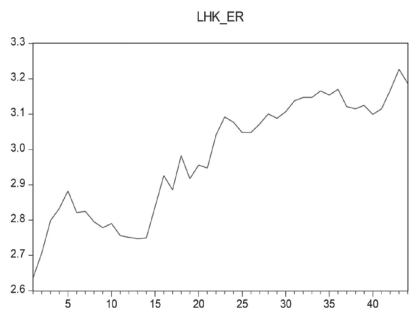

LNUS_ER

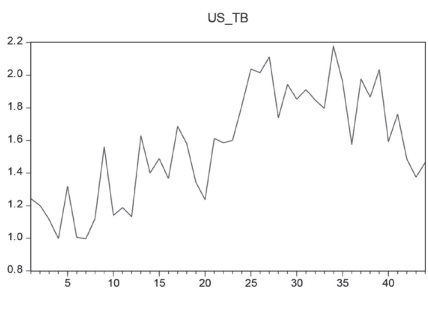

HK TB


LNCHINA_ER


China TB


LNCHINA_GDP


LHK_ER


US_TB

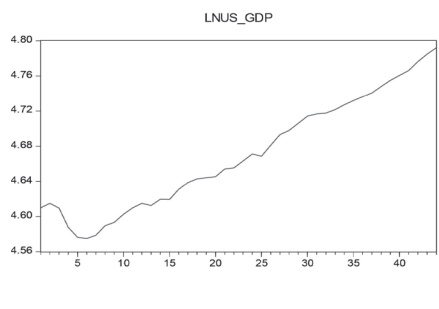

LNUS_GDP

Figure-A.2.1: India's foreign trade position (2004-05 to 2017-18)

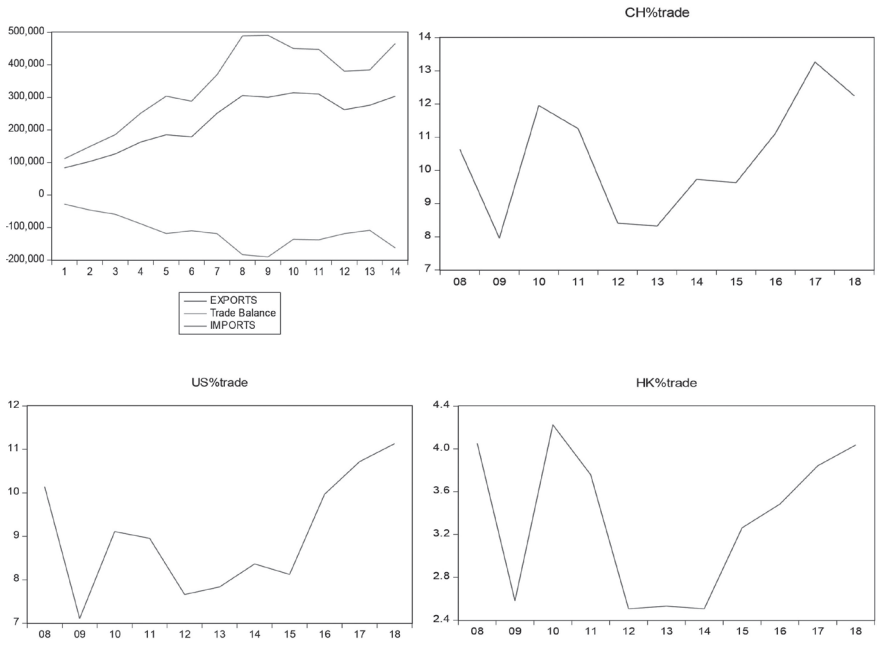


Figure-A.3.1: OLS based CUSUM test (IndUS)

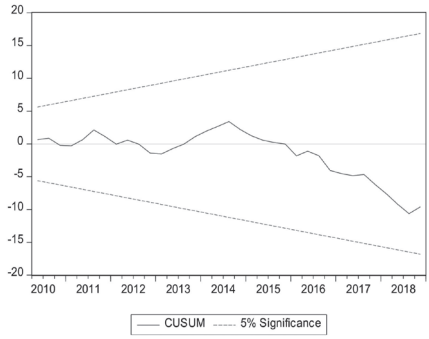


Figure-A.3.2: OLS based CUSUM square test(IndUS)

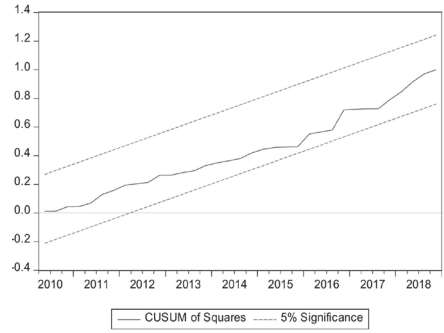


Figure-A.4.2 OLS based CUSUM square test (IndChina)

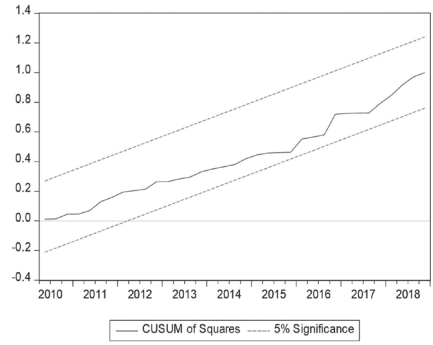


Figure-A.4.2.1OLS based CUSUM test(IndChina)

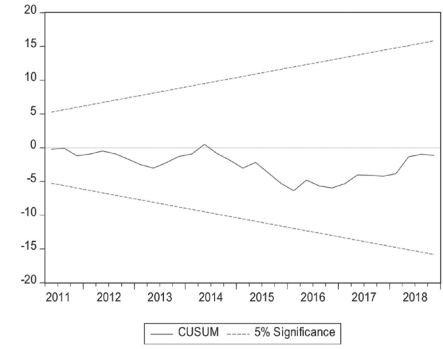


Figure-A.5.1: OLS based CUSUM test (IndHongkong)

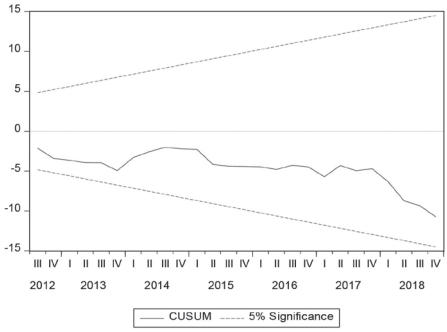
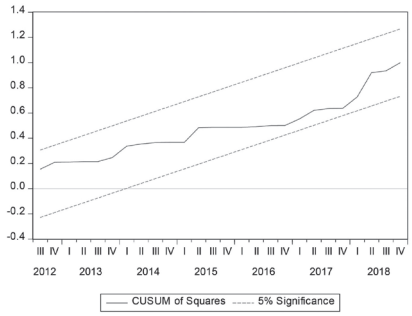


Figure-A.5.2: OLS based CUSUM square test(IndHongkong)



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The Impact of Balance of Payments on Economic Growth of South Africa During 2008-2018

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Abstract

This paper explores the impact of balance of payments post-2008 on economic growth in South Africa. The objective of the paper was to establish the connection between the balance of payments and economic growth in South Africa. The secondary data was gathered from the South African Reserve Bank (SARB) and Statistics South Africa (StatsSA) from 2009 to 2018. The Augmented Dickey-Fuller (ADF) and Phillips-Perron tests were used to test for stationarity. The results reveal that Real Gross Domestic Product (RGDP), Balance of Payments (BOP), Exchange Rate (ER), and Money Supply (MS) were statistically significant after first differencing. Lag two was noted to be the optimal lag by means of the Akaike Information Criterion (AIC). The Vector Autoregressive Model (VAR) results indicate that there was a negative substantial relationship between RGDP and BOP. The Granger causality test was implemented and BOP was found to contribute to Granger GDP. Stability analysis of the model was assessed using the Cumulative Sum of Recursive Residuals (CUSUM) and the Cumulative Sum of Squares Residuals (CUSUMQ) tests and the model was found to be stable. The South African government should enhance the domestic economic structure in order to stabilise the balance of payments it is recommended that the monetary policy could stimulate growth using a flexible rate regime.

Keywords: Balance of Payments, Economic Growth, Exchange Rate, Money Supply, Real Gross Domestic Product

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Introduction and Background

A country's economic growth does not manifest in isolation, as there are general dependencies of regions, which have a substantial impact on the country's economic growth prospects. Each country aims to ensure that it has benefited from the inter-dependencies to become a preferred investment destination and to escape criticism. If a country does not guard against unfavourable imbalances that are generally agreed to be a warning sign, the country could end up in a serious economic crisis. Although surpluses are not good per se and neither are deficits bad per se, unfavourable balances may create restrictive conditions for every economy. It is therefore imperative for a country to have the necessary policies in place to avoid excessive imbalances.

International trade contributes to the growth and improvement of a country's economy (Awe, 2013:96). These kinds of engagement agree with countries addressing their needs. According to Oliphant (2017:24), the balance of payments (BOP) represents the country's transactions with the global market. For emerging markets, there is a strong mercantilist perception that trade surpluses stem from countries' own competitiveness and are considered as a benefit (Kantor and Holland, 2014:13). On the other hand, as stated by the aforementioned, trade deficits represent a lack of competitiveness. Trade balance and capital account balance need to be analysed simultaneously to get a conclusive picture of the balance of payments incidence (Gulzar & Feng, 2012:94). For economies such as South Africa, current account deficits are inevitably considered dangerous and an indication of the economic downturn. From these deficits, economists fear that there will be an unexpected break of capital flows, which translates to macroeconomic challenges, for instance, credit crunches and real depreciation (SARB,2017). It is from this belief that policymakers and politicians call for strong policy measures such as protectionism and capital controls to certify a positive balance of payments which is fundamental in steering economic growth (Trunin (2017:8).

Economic growth can be defined as a rise in the market value of goods produced and services provided within the economy over a specified time. South African economic performance was somewhat steady from 1994 to 2007, with the country experiencing a positive balance of payments (Kantor and Hallord, 2014:7). This scenario was connected to the country's GDP conceived to be the aggregate of goods and services manufactured by the entire economy (Pillai, 2013:7). According to the aforementioned, GDP was affected by consumption, current investments and government spending trends, imports and exports. Any disparities of the above factors negatively or positively affect GDP, which determines economic stability. With the setting in of the 2008 global financial crisis, the country suffered

currency depreciation, low savings and capital withdrawal; a situation closely linked to the balance of payments incidence (Mokgola, 2015:34).

Objectives of the Study

The objectives of the paper are as follows:

- To establish a connection between economic growth and balance of payment.
- To validate the impact of balance of payments on South Africa's economic growth, and
- To determine the strategies to ensure a favourable balance of payments to impact economic growth in South Africa.

Literature Review

The literature review considers the impact of balance of payments on economic growth. Literature assists in identifying trends and relationships between variables before data analysis. Through literature review, a comparison can be made between the results of the study and the empirical findings. This paper explores the theories that underlie balance of payments (BOP) and economic growth after conceptualising the two variables of interest.

The key terms that relate to the current account and capital balance are explored in detail. The variable economic growth is conceptualised together with ways of measuring economic growth. Theories under the balance of payments and economic growth; the theory of product life cycle, the theory of endogenous growth and classical growth theory are presented. The real gross domestic product is utilised as a proxy for measuring economic growth and the discussion of other proxies of economic growth are presented.

The two main elements that affect economic growth, namely demand factors and supply factors, will be discussed. A theoretical review of the connection between BOP and economic growth will be undertaken. The South African BOP and economic growth trends from 2009 to 2018 are presented as well. The strategies for improving BOP for higher economic growth, namely infrastructure development, human resources development, improving trade performance, demand management and influencing currency exchange rate and supply-side improvements are taken into consideration in this literature review.

Balance of Payments

Oliphant (2017:24) states that balance of payments (BOP) represent a country's transactions with the entire global market. Mpofu (2014:19) expounds that balance of payment denotes the total inflows and outflows

of money in the form of trading goods or services and investment - the current account (whereas the financial or capital account is in the form of FDI, capital flows and portfolio investment). Nyasulu (2013:15) adds that BOP is often called the balance of international payments and encapsulates all the country's economic transactions involving individuals, government bodies and corporates. All the components of the capital and current account will be considered as part of the balance of payments in this paper.

Current Account

This element constitutes various balance of trade items, namely: net export-imports for goods, which are visible; net export-imports of services, which are invisible; investment incomes and transfers (Nyasulu, 2013:15). The current account balance is favourable when the residents (that is businesses, households and government) have sufficient capital to fund (income or savings) all procurements (government expenditure, business growth or consumer spending) in the country (Mpofu, 2014:19). Most countries aim to have a trade surplus, whereby the country generates more in earnings and spends less than it earns. The four components of this current account are demonstrated below:

Figure-1: Components of Current Account

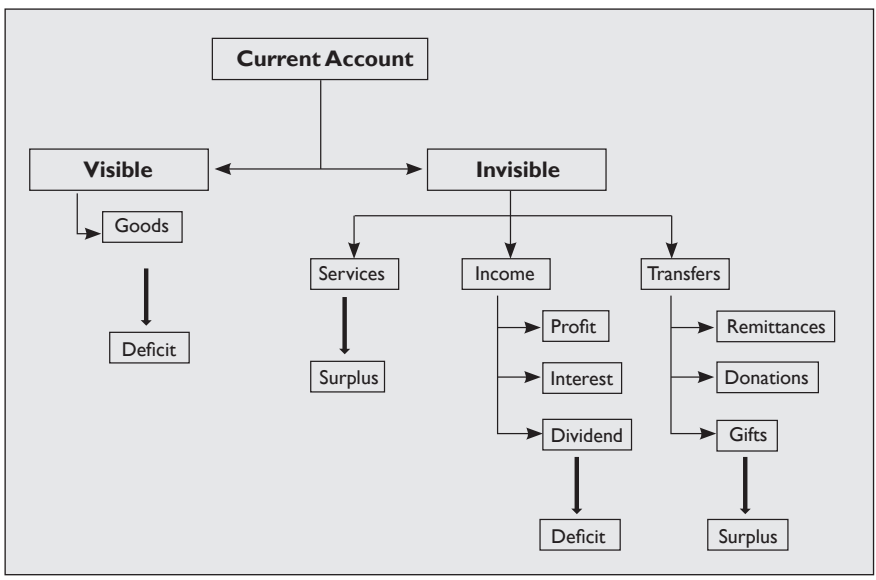


Figure-1 illustrates the components of the current account which are visible and invisible respectively. Under the visible component are goods traded, and under the invisible component are services, income (profit, interest and dividend) and transfers (remittances, donations and gifts).

These are broken down further below:

Trade: This is the exchange of goods and services and signifies the major current account component. According to Dullabh (2014:27) a trade deficit was adequate to activate a current account deficit. Dullabh further highlights that a deficit in goods or services is often significant in counterbalancing any net income, asset income and direct transfer surplus.

Net Income: Oliphant (2017:25) emphasises that this refers to income acknowledged by the residents less income paid to foreigners. There are two main sources of this income, namely income from foreign assets of residents in the form of dividends and interest from overseas investment, and income from work executed by residents overseas (Nyasulu, 2013:16). For foreigners, income will be in the form of dividends and interest payments on assets within the country and wages for foreign workers. If the residents' income is greater than that of foreigners, there will be a positive net income.

Direct Transfers: These transfers can be in the form of remittances, bank loans, foreign assistance and FDI(Mpofu, 2014:20). Remittances are earned from overseas workers. In 2018 the United States threatened to stop these remittances to Mexico, which earns an estimated $25 billion in remittances per annum (BBC, 2018:1). Direct transfers also include direct foreign aid by the government. FDI occurs when residents invest in activities overseas constituting at least 10% of the capital owned by the foreign venture. Bank loans are those given to foreigners, which add up to the country's income.

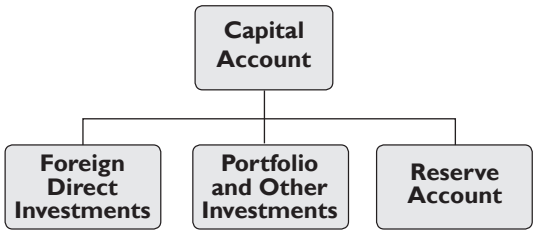
Asset Income: This was constructed through gains or decreases in assets that comprise government or central bank reserves, bank deposits, real estate and securities (Dullabh, 2014:28). The high performance of these assets results in a high asset income. The balance of asset income excludes assets that belong to foreigners, such as liabilities to non-nationals in the form of bank deposits, loans from foreigners to domestic banks, purchase of government or private bonds and securities, FDI debt and net shipments to foreign governments (Nyasulu, 2013:16). However, the opposite of these liabilities constitutes asset income for the country.

Capital Balance

According to Oliphant (2017:24) capital BOP measures capital in the long term and short term and includes foreign direct investment (FDI) and trade in securities. Oliphant adds that the capital account measures financial transactions that have an impact on the future savings, production and income of a country.

Mpofu (2014:20) alluded that transactions that produce income are a component of the balance of payment; if it is investment income the balance is classified with the financial account and if it is income from goods and services then the balance goes to the current account Figure 2.2 below shows the components of the capital account:

Figure-2: Components of Capital Account



Source: Mpofu (2014:21)

International transfers of ownership include trademark acquisition by a foreign bank or local company acquisition rights for a location abroad, waiver of international debt, and overseas insurance settlement. Generally speaking, the main components of the capital account relate to disposals and acquisitions.

Non-Produced and Non-Financial Assets Acquisitions or Disposals

Nyasulu (2013:17) categorises it as either tangible or intangible. Examples of tangible assets are mineral rights and drilling rights, while by contrast; intangible assets may include franchises, copyrights, patents, trademarks and leases.

According to Oliphant (2017:26), these assets are problematic to measure given the lack of a reliable technique and they are often challenging to classify under licence fees, professional fees or royalties. Usually, acquisitions generate a deficit and surpluses arise from disposals.

Capital Transfer: this item may comprise insured disastrous losses, debt forgiveness made up of principal and outstanding interest charges that have occurred, and specific transfers of a government's assets abroad. Nyasulu (2013:17) asserts that procurements of non-produced non-financial assets establish a capital account deficit.

Economic Growth

Economic growth refers to a rise in the market value of the goods and services produced within the economy over a specific period of time. Musasiwa (2012:42) conceptualises economic growth as a rise in how an economy is capable of generating goods and services from a particular period to another. However, economic growth is measured by GDP and steered by the factors of production, as stated by Oliphant (2017:24). In the light of the above definitions, it is clear that there are diverse ways of measuring economic growth. These are described briefly in the subsequent sections.

Ways of Measuring Economic Growth

Economic growth can be expressed as either real or nominal GDP. The

most widely- used method is the real GDP. The aforementioned argue that Net Domestic Product (NDP) can also be utilised to measure the growth of an economy.

Real GDP: This factor signifies the aggregate value of goods or services produced in an economy for a specific period (StatisticsSA, 2018:3; SARS,2018). The term 'real' entails that the GDP has been calculated taking the impact of inflation into account (Nyasulu, 2013:18). There are also two methods of real GDP calculation, namely the seasonally adjusted and annualised quarterly growth rate, and the year-on-year unadjusted quarterly growth.

The former shows changes in real GDP at quarterly intervals with the annualised rate being the per cent change for two quarters raised to the power of four (Mpofu, 2014:22). Furthermore, the quarters are adjusted to eliminate all the seasonal impacts before being annualised. The method assumes that the percentage change from a particular quarter to the next is maintained for the full year (annualising) which is the official measure of the economic growth rate adopted by South Africa (Oliphant, 2017:25). This method is attractive as it facilitates comparisons and forecasting, particularly when drawing up government budgets.

The latter compares the real GDP quarterly level for a specific quarter with the previous year's same quarter (Dullabh, 2014:29). No annualising or seasonal adjustments take place. According to Dullabh (2014:33) this method was preferred by economists as it facilitates year-on-year comparisons and eliminates the impact of seasonal variations. This method takes into account what transpired in the economy in the previous year rather than the previous three months considered when using the former method.

Net Domestic Product (NDP): Spånt (2013:41) remarks that the net domestic product is also an appropriate measure of economic growth. The aforementioned conceives NDP as the difference between GDP and capital goods depreciation. Charles (2012:9) considers NDP to be the netbook worth of goods or services created in a country. Spånt (2013:41) submits that the growth measures employed currently revolve on the GDP as the main index of economic growth. Steven & Barbara (2014:24) add that there should be much greater emphasis on NDP considering the change in investment toward information technology (IT) assets that are short-lived and characterised by higher depreciation. This entails that the use of GDP in most countries, including South Africa, is misleading as GDP growth now surpasses NDP growth based on the real output growth overestimation and the possibility of non-inflationary real wage gains (Spånt, 2013:41). This is another possible area worth exploring to ascertain the differences

resulting from using the two methods and their potential impact on the economy.

Steven and Barbara (2014:24) underline that the paramount measure of economic growth is GDP that interprets all investment expenditures irrespective of intended use; that is, for capital stock or obsolete equipment and software replacement. They contend that the expenditure towards a replacement of obsolete equipment or software does not increase the capacities of the economy in any way but rather restores. If all expenditure is allocated for the replacement of capital stock, no citizen will be better off and no more output for future periods will be available (Charles, 2012:9). This makes NDP more fitting as it calculates economic growth by subtracting capital depreciation from GDP. Using the same rationale, NDP is more applicable in measuring overall welfare than GDP. Having conceptualised the two key terms in this study, the following section gives the theoretical basis of the study.

Theories under BOP and Economic Growth

For this endeavour, two theories have been employed. The following section will expound on the theory of product life cycle and the theory of endogenous growth.

Theory of Product Life Cycle (PLC): The PLC theory by Raymond Vernon (1966) holds that products go through a three-phase cycle. The first phase is the introduction of the product, which occurs in regions with comparative advantage in labour or technology or in a big market that easily accepts innovations. When this product matures, there is now a window to export the product, as the initial problems have been addressed. At saturation phase, the comparative advantage in the development region is lost which may entail the import of the product back from less-developed regions (Dullabh, 2014:29).

Vernon's PLC theory highlights that the higher the exports of a nation, the higher the probability that foreign manufacturing and production will turn out to be competitive and economical in trade marketplaces (Oliphant, 2017:26). This results in amplified competition concerning imports within the domestic economy. Dullabh (2014:29) articulates that this theory highlights how nations anticipate trading goods and services that comprise an extreme quantity of production factors while importing goods that necessitate rare or limited production factors that result in the BOP. The PLC theory include all monetary implications of production factors. All these monetary implications involve all expenditures and overheads involved in manufacturing goods in the country, which have implications for the GDP. This theory highlights that countries are engaged in the trade of their manufactured goods, a point of relevance to the current study.

Theory of Endogenous Growth: The Theory of endogenous growth by Paul Romer (1986), underlined by Mokgola (2015:41) states that the capital in a nation either remains constant or rises. The theory emphasises technical progress, stemming from the rate of investment, capital stock, and human capital. It further assumes that economic growth is influenced by technological change, which is endogenous (Mokgola, 2015:41). It also assumes that knowledge of a new design is partially retainable and excludable; which results in users seeking permission to use it as the foundation of trade (Mogoe, 2013:30). Further, it emphasises that the disproportionate levels of capital for developed and developing countries results in capital flow from the former to the latter or the opposite.

Further, this theory assumes that the economy grows when production factors are promoted. These production factors comprise economies of scale, increased capital and progressive technology (Mogoe, 2013:30). Within this concept, the degree to which an economy grows depends on variables which include the rate of return on investment. In this view, there is a connection between BOP and economic growth, which makes the theory applicable to this study.

Classical Growth Theory: This classical growth theory by Adam Smith (1776) centres on the elements that govern economic growth or performance, namely labour, capital, output and technology. Economic growth is attributed to population growth, productivity and land (Dullabh, 2014:30). These variables increase investment, which in turn determines the trade and ultimately the balance of payments (Mogoe, 2013:32). For labour, real GDP is assumed to increase at the same time in line with labour (Mokgola, 2015:41). When applied to the current endeavour, variables under the classical growth theory can be seen to be key to economic viability, and therefore also to trade and important for economic growth. Therefore, the availability of the factors which include capital, output, labour and technology; is imperative for trade characterised by economic expansion and productivity.

Material and Method

The research method and material explains the approach and style used in undertaking the study. A quantitative approach, positivism paradigm and a cross-sectional method were adopted in this study. The data utilised in this study were from the years 2009 to 2018 (10 years).

Research Paradigm

The objective of the research philosophy was to designate the world, and challenge competing for accounts through analyses and justifications of arrangements and policies. There are two major philosophies, namely

positivism and phenomenology. The phenomenological philosophy is based on the use of social constructs or human aspects such as feelings, attitudes and opinions. It assumes that the world was given meaning by humans. The positivism approach assumes that the world is structured and measurable. This philosophy facilitates measurements based on experiments and cases which are objective and reliable. The positivism philosophy will be embraced in this research. Further, it is better suited to the topic at hand, which seeks to investigate the impact of BOP post-2008 on economic growth in South Africa, an impact that is only quantified through measurements. It is also consistent with the quantitative approach that was adopted in the study.

Research Approach

Rampedi (2010:26) suggests that research methodology discusses all the procedures and approaches researchers used to collect all the essential information or data for the study. The aforementioned stresses how a particular research methodology allows the researchers to create suitable judgements in obtaining the desired results. There are two main research techniques, the quantitative and qualitative approaches. The first makes use of numeric data whilst the latter entails the use of non-numeric data (Sabela, 2012:85).

This study followed the quantitative approach. The rationale was that the quantitative research approach is based on numerical data, which allows the generation of objective data, unlike the qualitative approach, which is more subjective (Mokgola 2014:14). Sabela (2012:85) adds that a quantitative research approach encompasses the identification of how different factors influence one another. This is a more appropriate choice in this case whereby the study intends to govern the impact or influence of BOP on economic growth.

Target Population

Mouton (2016:134) defines a study population as a combination of all events, objects or entities which have common and/or similar traits which the investigator is interested in examining. The population for the study was the whole South African economy which consists of multiple variables related to economic growth and balance of payments.

Sampling Strategy

Brynard and Hanekom (2015:54) outline sampling as a technique utilised to select a particular group to determine features and similar characteristics of the mentioned population. The sampling strategy should specify the sample as well as the population of the selected data. Bless, Higson-Smith and Kagee (2016:18) submitted that sampling methods can either be

probability or non-probability based. The former is based on the random selection of elements whilst the latter is based on non-random selection (Brynard and Hanekom, 2015:54). The probability sampling technique was utilised to perform the study, and a simple random sampling technique was applied. The rationale behind this was to ensure equal chances of selecting the years to include in the study.

Sample Size and Data Collection

The sample was made up of 10 yearly observations from the years 2009 to 2018. The study included numerous periods using numerous variables.

According to Daas and Arends-Toth (2009:7) secondary data is defined as information or statistics that have been gathered previously for other statistical purposes. Secondary data was utilised to execute the study. The data analysed was from the years 2009 to 2018. The mentioned data was collected from South African organisations such as the South African Reserve Bank (SARB) and Statistics South Africa. Moreover, scholarly articles, journals and textbooks in both hard copy and online forms were utilised for the study. Periods from 2009 to 2018 were used

Data Analysis

Given that the study adopted the quantitative approach, statistical analysis was employed. A time-series analysis was used for the years 2009-2018. During this period, economic growth fluctuated, with the economy experiencing both an economic boom and an economic recession. Furthermore, the data collected was analysed through *E-views version 9* which is software for econometrics that is used for assessing economic models. The Augmented Dickey-Fuller (ADF) and Phillips-Perron tests were utilised to articulate the stationarity of the variables. This nature of the test examines the null hypothesis that unit-roots exist within time sequence data. Mogoe (2014:33) also proposes that the ADF should be applied when variables are not consistent. The vector autoregressive model (VAR) was utilised to examine if there is a direct relationship between the balance of payments and economic growth.

Results and Discussion

This paper presents the econometric results of the study. The data utilised covers the period 2009 to 2018. The findings are based on the secondary data that was analysed and collected using the *E-Views software version 9*. The analysis was done to address the research questions posed in the paper. This section presents the following statistical results: unit root tests, lag length selection, co-integration, correlations, model specification, diagnostic tests, Granger causality, Auto-regressive model and stability analysis.

Unit Root Tests

The Augmented Dickey-Fuller (ADF) and Phillips-Perron unit root tests were implemented to test for stationarity. Table-1 shows the Augmented Dickey-Fuller (ADF) unit-root test results. The test critical values were assessed at 1%, 5%, and 10%.

Table-1: Augmented Dickey-Fuller (ADF)

	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value	Oder	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value	Order
RGDP	-2.74	-4.58	-3.32	-2.80	I(0)	-2.58*	-4.80	-3.40*	-2.84	I(1)
BOP	0.57	-4.42	-3.26	-277	I(0)	-2.12*	-4.58	-3.32*	-2.80	I(1)
ER	-0.79	-4.42	-3.26	-2.77	I(0)	-3.34*	-4.58	-3.32*	-2.80	I(1)
MS	-1.64	-4.58	-3.32	-2.80	I(0)	-3.01*	-4.58	-3.32*	-2.80	I(1)

Data Source: SARB & StatsSA (assembled by researchers),2009-2018

Notes: *Indicates significance at 1%, 5% and 10%.

The results indicate that RGDP, BOP, ER, and MS were significant at 5% level after first differencing. RGDP offers a snapshot of a country's growth rate and its economic size. Economic growth cannot be measured directly, thus, RGDP was utilised as a proxy to measure economic growth. The balance of payments is one of the main components of the economic growth of a country (Trunin, 2017:43). RGD, a proxy of economic growth, increases when a trade surplus occurs, where the total value of exported goods and services exceeds imports. Furthermore, the increase in money supply is mirrored by an equal increase in real gross domestic product. The increase in monetary supply causes a decrease in interest rates and an increase in consumer spending. According to Osisanwo *et al* (2015), monetary supply was affected by expansionary monetary policies. The increase in money supply results in higher prices of goods and services and more potential for real output. The aforementioned expressed that the increase in monetary supply is inflationary even though different monetary policies have diverse impacts on the level of inflation.

In contrast, exchange rate appreciation causes sluggish growth of real gross domestic product because of a fall in net exports and increased demand for imported goods (Awe, 2013). A higher exchange rate can have a higher multiplier impact on the economy. The exchange rate and economic growth have a bi-directional relationship. The aforementioned adds that a strong exchange rate is generally considered as an indication of economic strength and becomes a symbol of national pride. In long run, a strong exchange rate tends to occur due to an improvement in competitiveness and low inflation. In the event, that foreign products consumers spend more on foreign products than domestic producers sell to foreign consumers; a trade deficit is encountered. Table-2 shows the Phillips-Perron Unit Root Test results.

Table-2: Phillips-Perron Unit Root Test

	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value	Order	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value	Order
RGDP	-2.12	-4.42	-3.26	-2.77	I(0)	-.2.29	-.4.58	-3.32	-2.80*	I(1)
BOP	0.57	-4.42	-3.26	-2.77	I(0)	-2.12	-4.58	-3.32	-2.80*	I(1)
ER	-0.79	-4.42	-3.26	-2.77	I(0)	-3.46	-4.58	-3.32*	-2.80	I(1)
MS	-2.59	-4.42	-3.26	-2.77	I(0)	-3.01	-4.58	-3.32	-2.80*	I(1)

Data Source: SARB (Assembled by researcher),2009-2018

The Phillips-Perron Unit Root test was utilised to corroborate the results of the Augmented Dickey-Fuller test. The results were similar and RGDP, BOP, and MS were significant at 10% level while ER was significant at 5% level after differencing.

Optimal Lag Selection

In Table-3 we presented that, the application of the lag-length selection criteria indicates different lag choices. The Sequential modified LR test statistic (each test at 5% level) LR, Final prediction error (FPE), Akaike Information Criterion (AIC), Schwarz Information Criterion (SC), and Hannan-Quinn information criterion (HQ) found lag two to be optimal. The Akaike Information Criterion (AIC) value was utilised in the study to select the optimal number of lags. The lower the AIC value, the better the model, especially for smaller data sets. Thus, lag two was found to be the most appropriate lag in this research study. This lag length was the one applied in the co-integration test and Vector Auto Regression analysis in the following section.

Table-3: Lag Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-141.21	NA	3.56e+13	36.803	36.86	36.401
1	-116.45	18.57	2.83e+11	31.612	31.71	30.943
2	27.204	35.91	0.000858*	-3.301*	-3.16*	-4.239*

Co-integration Test

The Johansen co-integration test was implemented to test for the existence of a long-run relationship between variables of interest. The variables RGDP, BOP, ER, and MS were included in the co-integration test since they were discovered to be stationary at first difference. Table-4 reveals that the results of the trace test and maximum eigen value test. The determination of conducting a co-integration test is to determine whether to utilise the Vector Error Correction Model or Vector Auto Regression model. If co-integration is detected, the VECM is used; if not, the VAR model will be the best model to use. The null hypothesis for both the

trace and maximum eigenvalue test states that there are no co-integrating relationships, while the alternative hypothesis for the trace is that there are more than zero relationships. The test statistic is compared with the critical value, and the null hypothesis is rejected if the calculated statistic is greater than the critical value. Based on the results in Table-4 there is evidence that co-integration in the series does not exist, hence the VAR model. Hence, the null hypothesis of no integration was accepted at both the trace and maximum eigenvalue. This suggests that the vector autoregressive model should be used in this study.

Table-4: Trace Test and Maximum Eigenvalue Test at the 5% Significance Level

	Trace Test				Maximum Eigenvalue Test			
Co-integrating Equations	**Eigen value**	**Statistic**	**Critical Value**	**Prob.**	**Eigen Value**	**Statistic**	**Critical Value**	**Prob.**
None	0.969	29.199	15.495	0.0691	0.969	28.009	14.26	0.0597
At most 1	0.138	1.189	3.841	0.2753	0.138	1.189	3.84	0.2753

Correlations

The correlation matrix reflects on all possible associations of the four variables under investigation; RGDP, BOP, ER and MS. Correlations show the direction and the strength of the relationship between two variables. The results indicate a negative, strong relationship between RGDP and BOP ($r(10) = -0.890531$, $p < 0.05$). The relationship between RGDP and MS was positive and moderate ($r(10) = 0.685145$, $p < 0.05$). A positive relationship means that as MS increases, RGDP increases as well. A moderate relationship implies that the correlation is significantly greater than 0.05. The other combination of variables, BOP/ER, BOP/MS, ER/MS, and RGDP/ER were not statistically significant. Table-5 demonstrates the correlation results.

Table-5: Correlations Matrix

Variable	RGDP	BOP	ER	MS
RGDP	1			
BOP	-0.890531*	1		
ER	-0.056401	-0.207753	1	
MS	0.685145*	0.069373	0.322417	1

Notes: * Significant at the 5% level.

VAR Results

This section reports the dynamic parameters acquired from VAR analysis. The Vector Autoregressive model captures the linear interdependencies among time series variables. Table-6 shows the VAR results.

Table-6: VAR Results

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	1.353974	6.83455	0.19811	0.0473
D(log(RGDP(-1)))	2.445212	1.14966	2.12689	0.9300
D(log(RGDP(-2)))	0.033481	0.33715	0.09931	0.0427
D(log(BOP(-1)))	-8.632977	4.77992	-1.80609	0.0290
D(log(BOP(-2)))	7.788024	4.11565	1.89230	0.8613
D(ER)	-0.020807	0.03443	-0.60427	0.6071
D(MS)	0.520255	0.26930	1.93186	0.0331

The results prove that the constant, the second lag of GDP, the first lag of BOP and MS were significant. The results of this study match with Osisanwo *et al* (2015) who investigated the impact of BOP deficit on Nigeria's economy and indicated an association between the BOP and economic growth. However, the first lag of GDP, the second lag of BOP, and ER did not have a significant impact on real gross domestic product. The result of the R Square reveals a percentage of 94.57 of the overall variation in economic growth. Therefore, the following model was extracted from Table-6.

According to some theories there is a positive relationship between GDP growth rate and exchange rate.

$$RGDP = 1.353974 + 0.033481 \log RGDP_{t-2} - 8.632977 logBOP_{t-1} + 0.520255MS + \varepsilon$$

Statistics South Africa (2017:2) established that BOP was one of several factors that affects the growth in GDP. A favourable BOP leads to an increase in currency external value and an unfavourable BOP causes a depreciation of currency external value (Nyasulu, 2013:20).

Diagnostic Test

Table-7: Serial Autocorrelation Test

F-statistic	0.046582	Prob. F(2, 4)	0.9550
Obs.*R-squared	0.227609	Prob. Chi-Square (2)	0.8924

The Breusch-Godfrey Serial Correlation LM Test of heteroscedasticity was utilised to test for serial autocorrelation. The null hypothesis states that the data is homoscedastic while the alternative hypothesis is in favour of heteroscedasticity. Since the p-value is more than 0.05 we fail to reject the null hypothesis of homoscedasticity. Hence, this indicates that there is no evidence of the presence of heteroscedasticity since the p-values are considerably more than 0.05.

Table-8: Heteroscedasticity Test

F-statistic	0.057000	Prob. F(3. 6)	0.9550
Obs. R-Squared	0.277102	Prob. Chi-Square (2)	0.8924

The Ramsey RESET test of heteroscedasticity was utilised to test for constant variance. The null hypothesis states that the data is homoscedastic while the alternative hypothesis is in favor of heteroscedasticity (see Table-8). Since the p-value is greater than 0.05 we fail to reject the null hypothesis of homoscedasticity. Hence, this implies that there is no evidence of the presence of heteroscedasticity since the p-values are considerably more than 0.05.

Table-9: Normality Test

Model	Jarque-Bera	Prob
Economic Growth Model	2.333	0.3114

The Jarque-Bera normality test was used to test for normality (refer to table-9). The null hypothesis states that the data is normally distributed while the alternative hypothesis states that the data is not distributed normally distributed. Since the probability value is greater than 0.05, the null hypothesis cannot be rejected in favour of the alternative hypothesis. It can be concluded that the data is normally distributed.

Granger Causality

The Granger causality test was conducted with two lags since this was discovered to be the ideal optimal lag in this study. The purpose of the Granger causality test is to ascertain whether lagged values of one variable predict changes in another. Table-10 shows the results of the Granger causality of all variables. The F-Statistic of RGDP and BOP was found to be significant. A conclusion can be drawn that there is a unidirectional causal relationship from BOP towards RGDP. The Granger causality results also showed supporting evidence of a unidirectional causality between BOP and ER, and BOP and ER were also found to be statistically significant. The other combinations of variables were not statistically significant at 5% level.

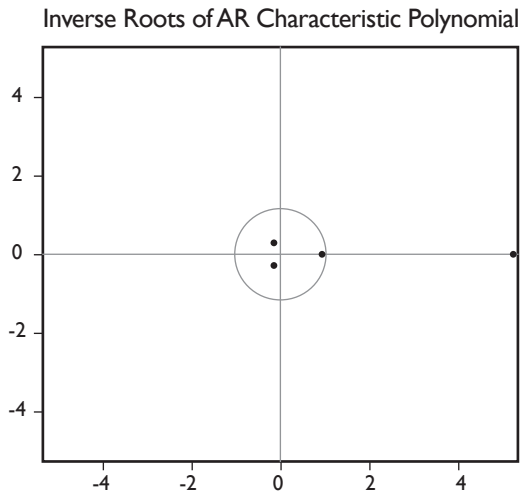
Table-10: Granger Causality

	Log RGDP	Log BOP	ER	MS
Log RGDP	n/a	1.35485*	12.2533	3.37717*
Log BOP	2.64177	n/a	11.4002*	2.15355
ER	1.29908	1.10265	n/a	0.50709
MS	1.17945	0.83490	1.52758	n/a

Notes: * Significant at the 5% level.

The estimated VAR model is stable if all the moduli are less than one and lie within the circle. Figure-3 shows an AR plot for the VAR model. The majority of the points are within the circle range, which is acceptable.

Figure-3: AR plot



Conclusions and Recommendations

Conclusion

This paper tested the impact of the BOP deficit on economic growth within South Africa from 2009 to 2018. A vector autoregressive econometric model was utilised to assess the impact of BOP on economic growth. The results indicate that the balance of payments exerts a significant negative influence on economic growth in South Africa. In contrast, the monetary policy of variable money supply was noted to exert a favourable significant influence on economic growth. The study revealed that too much dependency on imports will cause extraordinary levels of exchange rate fluctuations, which will cause a serious deficit in the BOP.

From the results, it can be deduced that the balance of payments persists to be a sensitive regulator that will always serve as a reminder of the economic limitations of South Africa. The government has to shift BOP constraints upwards in order to encourage a higher economic growth rate. Despite the negative impact of BOP on economic growth, it is anticipated that South Africa's economic growth will improve moderately over the medium term. There are certain steps that the government has already taken to restore policy confidence and certainty. Structural reforms are needed in South Africa to raise standards of living, create jobs and achieve significantly higher more inclusive economic growth.

Recommendations

This paper provides recommendations from the findings of this study. The observed cosmos of the impact of balance of payments on South African economic growth yields the following recommendations:

The government of South Africa should improve on the domestic economic structure to stabilise the balance of payments in the long term. As a component of the economic adjustment programme, several things must be done to make improvements on the balance of payments status. The South African industry must first become more efficient and more productive. As a result, it is anticipated that the balance of payments will at least partly recede on itself.

Since monetary supply was found to affect economic growth positively, it is recommended that the monetary policy should stimulate growth through flexible rate regimes. This act may be supplemented by significant depreciation, which can destabilise a country's economy. It might be impossible to stimulate growth if monetary policy is used directly; however, the economy may stabilise if monetary policy is used to target inflation.

Additionally, even though the study was directed to the theoretical propositions of BOP, it did not include the same theories in the empirical testing. Research in future should be based on empirical work on the mentioned theories so that there is clarification on whether these techniques do indeed apply to South Africa. It would also be interesting to understand more theories which combine different methods to BOP into a single approach.

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Exploring Some Factors Responsible for Conflicts in Africa, A Matrix to the Niger Delta – Conflict in Nigeria

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Abstract

The paper captures some factors causing conflicts in Africa among numerous factors as matrix to the Niger Delta conflict in Nigeria. The major factor is more of what I will call unjust legacies of the colonial governments in the past, corruption within governments, government institutions and Government functionaries. Painful to note here that religion is another factor fuelling conflicts on the continent of Africa, Islamic extremism and Christian extremism. These two religions are not originally from Africa, but Africans continue to allow them to be a dividing line against unity, peaceful coexistence and tolerance. It's imperative to note that one of the egregious mistakes made by the colonial governments in the past in Africa, was to amalgamate nation states/ethnic groups that are not compatible in histories, religious understanding, philosophy and cultures making it impossible after many years of self determination to coexist as evidently manifesting in Nigeria, where the impeachability of the North and South is the foundation of numerous conflicts. Human rights violations by the state is another factor responsible for conflict, often the governments regardless and respectively use their armed forces to intimidate their citizens, use the armed forces to rig elections in favor of the incumbents. Terrible and bad leadership cause conflict in Africa, this is the reason for anyone to understand the perpetual underdevelopment of the continent. Some of the elements responsible for conflict stated above caused the conflicts and wars in Rwanda, Sudan and Nigeria. These elements of conflicts in Africa are a matrix to the Niger Delta Environmental Degradation and pollution, a source of the conflict in the sense that the natural environment of the people is contaminated by the activities of the oil and gas industry, causing spillages, polluting the rivers, gas flaring, a constant pollution of the air and the destruction of their farmland by both factors of pollutions. The Niger Delta area rich in natural resource but ironically one of the poorest zones

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in Nigeria as the absence of basic amenities is obvious, the Area continue to experience untold hardship by the people especially those in the inter-land where the major bulk of crude oil and gas are exploited from, the lack of road network of this areas, no health care centers, electricity, clean water to drink, primary and secondary schools for the people and shelter that are decent for the 21st century. These unpalatable treatments have awakened a conflict in the region.

Keywords: Africa, Colonial, Conflict, Continent, Natural Resources, Niger Delta, War

Background

The Africa continent is rich in various natural resources, from crude oil, gas, limestone, iron, rubber, timber, cocoa plants just to mention a few. Despite these rich natural resources, Africa is characterized by several ethnic conflicts that have led to genocides, extrajudicial killings, and a near-human catastrophe (Fagbadebo, 2019). Colonialism is seen as the basic source of conflicts in Africa as ethnic groups that should never have been united as a state were amalgamated into one entity for the sole purpose of reaping the benefits of Africa's rich natural resource reservoirs (Ocheni & Nwankwo, 2012). Because of the critical role of oil products in the Nigerian economy, the actions of the federal government and the MNCs in relation to the welfare of the indigenous communities of the Niger delta continue to receive criticisms from analysts, academics, and the entire global community, giving rise to a plethora of research literature.

Nevertheless, it can be argued from the outset, after going through so many materials on the field of analysis, that the issues outlined in our statement of research problems and research questions were not addressed; and if dealt with, not convincingly or exhaustively dealt with, leaving space for further inquiry. Hence, the literature reviewed in this chapter has been split into two sections: the first section discusses the major conflicts associated with the exploitation of oil and other natural resources in various African states, and the second section discusses this matter and associated conflicts in the Niger Delta region. This study adopted this approach since the conflict echoes a pattern that is noticeable across the whole of Africa and not just in Nigeria. Conflicts in Africa at the end of the day are fueled by political interest in the state, cultural and socio-economic desires by some actors. The continent of Africa has been held back from progressing technologically, economically and growth in respect for human rights because of the sundry conflicts that have been experienced on the continent. This chapter, therefore, discusses the causes of these conflicts in Africa.

Conflicts in Africa

Africa is a unique continent because of the various natural resources found in it; from crude oil, limestone, iron, rubber, timber, cocoa to mention just a few. Indeed, the history of human civilization can be traced to Egypt (Bernal, 2020; Ocheni & Nwankwo, 2012). However, the history of post-independence Africa has been characterized by several ethnic and religious conflicts that have led to genocides and large-scale economic ills. Africa continues to be bedeviled by sundry conflicts. As a result of these conflicts, the West perceived Africa as a dark and hopeless continent (Thomas & Falola, 2020). This perception of Africa by mainstream scholars in the West seems myopic, biased, and scholarly inaccurate as many countries in Africa still experience a relatively peaceful situation today.

This unfortunate situation has made Africa the cardinal point of conflict and peace studies in academia. Although the Middle East has a remarkable level of conflicts from one state to another, the causes of conflicts there are not far from religious extremism and territorial redefinition (irredentism), where a particular state tries to get back its lost territory from another state (Alaaldin, 2018). Whereas conflicts in Africa are a result of economic development and not so much as a result of territorial redefinition (Besley & Reynal-Querol, 2014) According to (Brunnschweiler & Lujala, 2019), the abundance and availability of natural resources have emerged as an important element in understanding civil conflicts in Africa. Following their cue, (Mbagwu, 2002) summarizes the causes of conflicts in Africa under three major headings, military dominance, political instability, and economic decline. Identifying the causes of conflict in Africa is a very complicated and technical issue. Looking at the scholarly writings (Alaaldin, 2018; Ocheni & Nwankwo, 2012) argued that the major causes of conflicts in Africa can be summarized into colonialism, corruption, religious diversity, marginalization of some ethnic groups.

Colonialism as a Source of Conflict in Africa

Since most countries gained independence in the 1960s, poor governance, historical animosities, exclusionary politics, disputed legitimacy, resource rivalry, external influences, globalized conflicts, and radical ideologies have combined to generate numerous episodes of violent conflict across the African continent (Stedman, 1996; Gilpin, 2016). Among these, colonialism is seen as the basic source of conflict in Africa as ethnic groups who should never have been united as a state were amalgamated into one entity by the colonial masters. According to (Ocheni & Nwankwo, 2012):

Colonialism is the direct and overall domination of one country by another based on state power being in the hands of a foreign power (For example, the direct and overall domination of Nigeria by Britain between 1900-1960). The first objective of colonialism is political domination.

Its second objective is to make possible the exploitation of the colonized country

In some cases, like the case of Nigeria, the imperial masters made ethnic groups of the country more powerful politically without considering the future of other ethnic groups in the country. This is so because the coming of the imperial government in the 19th century in Africa was simply motivated by the fact that the African continent is endowed with a lot of natural resources, and not for the wellbeing of the continent (Lagwaila, 2006). The colonial rule left a legacy of negative dimension on the continent of Africa and this has made a better percentage of Africans live below the poverty lines. The resultant effect is corruption among government officials and in the private sectors, ethnic and religious conflicts, rebellion against the government by militant groups because of mismanagement of natural resources as it reflects (Muggah, 2012). Likewise, (Kleih, 2002) complements this view by stating that conflicts in Africa consist "of two clusters of interrelated basic factors: colonialism and its legacy and the post-colonial crises-the authoritarian multiplex, the crises of economic underdevelopment, social malaise, and the ethno cultural conundrum." This view is all-encompassing as it highlights both the colonial and other causes after the independence of African countries.

Africa's high levels of ethnic diversity or its artificial states are the secret to explaining the continent's high rates of civil conflicts. This multi-ethnicity presence in African societies makes it highly probable for ethnic tensions that invariably lead to conflicts. These conflicts in Africa at the end of the day are fuelled not just by political interests, but also cultural and socio-economic desires. Africa has been held back from progressing technologically, economically, and with respect for human rights because of the sundry conflicts that have become synonymous with its history (Leonard & Straus, 2003).

It is worthy of note here that the endowment of Africa with salubrious vegetation, best weather, and rainfall, which historically and ironically developed Europe and America through the instrumentality of slave trade in the 17th and 18th centuries and after the abolishment of slave trade those natural resources were forcefully taking away from time to time to Europe and America through the instrumentality of colonialism which came to an end in the early 1960s except for South Africa that got decolonized in the 90s (Mundy, 2011). One can submit here unequivocally that the continent of Africa is still contributing to the development of Europe and America through the instrumentality of neo-colonialism aided by the World Bank and the International Monetary Fund (IMF) and the United Nations (UN). In this sense African countries and their leaders continue to borrow money from IMF or the individual European countries and the United States of

America for their infrastructural development and technological assistance, painfully these offers are granted to these African countries with some conditions that give an open door to the neo-colonial master to control the political and economic institutions of their countries. The big disadvantage of poor technological advancement in Africa gives room to their leaders to run to the Western world for help in technology to explore the natural resource in their states and often agree to the conditions of determining the political and economic institutions to get the technological help from them (Ocheni & Nwankwo, 2012).

This is the experience of the African continue and the 54 members state of the African Union and has remained one of the factors the continent is still underdeveloped with all its natural and human resources. These colonial and post-colonial factors are the major factors challenging the development of the African continent and the sense of repositioning the continent today.

Corruption as a Source of Conflict in Africa

Corruption is one of the major sources of underdevelopment and conflicts in Africa. According to the United Kingdom Department for International Development (UKDFID, 2015), corruption involves the mismanagement of natural resource and the Commonwealth of the people and it denies the citizens of their rights to have basic infrastructures, like good road network, electricity, health care, clean pipe-born water, schools, and security. (Mbara et al., 2019) attempts a comprehensive definition of corruption:

…the abuse of public office through the instrumentality of private agents, who actively offer bribes to circumvent public policies and processes for competitive advantage and profit. Beyond bribery, the public office can also be abused for personal benefit through patronage and nepotism, for example, the theft of state assets or the diversion of state revenues.

Corruption, no doubt, is ripe in Africa as African leaders continue to loot public funds, transfer the looted funds to banks in Europe, America, Canada, and some parts of the Middle East, like Dubai.

With the return of many Africa countries to democratic government, the challenge holding, or militating development is corrupt elected civilian leaders who foolishly acquire state's money and resources, banking them in millions of dollars, British Pounds and Euros in America, Europe, and Dubai leading to under-development in Africa (Mills, 2012). This reflects the challenges facing Nigeria State today, underdevelopment even though this country is rich in crude oil and other natural resources. For countries like Rwanda and South Africa which experience infrastructural development, this is the outcome of the leadership structure; a leadership that is generally corruption-free brings about human and infrastructural development (Mbara et al., 2019).

Religion as a Source of Conflict in Africa: Nigeria in Focus

According to Mbiti (1969),African people are notoriously religious (and) religion permeates into all the departments of life so that it is not easy or possible to isolate it. The people of Africa had their religious identity before the arrival of the European missionaries who came and occupied the African continent in the name of bringing Christianity to the people, using all forms of psychological strategy to erode their Africa traditional religion from them (Salawu, 2010). Some scholars have argued that the idea perpetuated by the colonizers, that their religion is supreme and civilized as against the religions of Africans that are uncivilized, is another factor that aided the underdevelopment of the African continent (Ushe, 2015). The Europeans were strategic in the occupation of the African continent using the tool of religion which Karl Marx perceives as the opium of exploitation and the expressway to a class difference in the society. The western missionaries supported their evangelization with free education for the people of Africa, to get access and to be easily accepted by the African people who were already doing well with their religion; this aided the erosion of the African foundation of values and orientation of the younger generations paving way for the western values system (Pool, 2019).

Christianity as a religion in Africa is experiencing an astronomical growth, except in the sub-region of North Africa. Today there is a high rate of the proliferation of churches more than industries driven by the economic hardship on the continent and lack of jobs for the growing population. These churches and their founders continue to use the psychological approach which the European missionaries used on the psyche of their members that the socio-economic backwardness experienced by Africans is caused by the devil and that it can only be solved with constant prayers and payments of tithes(Ushe, 2015). This situation already limits their way of thinking in solving the large socio-economic problems before them. It should be noted that socio-economic problems are solved economically with the political will of the government and the determination of the members of society.

In Nigeria, church business is the easiest way to riches if one can work on the congregation's psyche, display magic before their very eyes, shouts to the top of your voice by commanding the divine then be rest assured to have a blossoming empire. In major cities across Nigeria, churches are located everywhere with the main goal of collecting money from members to build primary, secondary schools, and universities which the common man in the church, who contributed to the building, cannot send their children to. All these factors have made Africa a continent that cannot be developed or repositioned. This is not how Christianity is practiced in Europe and America which for them in recent times is charitable and not the other way around as is the case in Africa. In Africa, big church owners

fix prices for blessings by the selling of olive oil and other sacramental have skyrocketed to about $10,000 as evident in a viral video of Pastor Ayo Orisejafo and Rev Funke Adejumo asking their church members to "sow-seeds" with God for that cost (Salawu, 2010).

African countries (Nigeria, Egypt, and Sudan) have experienced conflicts emanating from a disparity in religion. The conflicts experienced in different parts of Nigeria, the Niger Delta conflict included, have some religious undertone (Ushe, 2015). Nigeria continues to experience religious conflicts between Christians and muslins, and these conflicts often are painted with ethnic differences and this has pushed Nigerians to the point of identifying themselves based on their religion or ethnicity (Paden, 2015). Nevertheless, the source of religious conflict in Africa and particularly in Nigeria is corruption, the bedrock of religious conflict. This is confirmed in (Ocheni & Nwankwo, 2012) where they argue that religious conflict is possible when there is corruption in the system, oppression from the upper class, hateful religious sentiments, poverty, and injustice in the land.

Incompatibility of Amalgamation and Human Rights Violation as Causes of Conflict

The Northern and Southern parts of Nigeria are incompatible in some respects, both in religious understanding, language, culture, and ideologies (Mbara et al., 2019). The major agitations and cries of the Niger Delta people are those that infringed upon their fundamental rights, violated by the federal government especially in a democratic dispensation where their fundamental rights to live in a healthy environment and get the direct benefits of hosting one of the biggest crude oil and gas wells and plants in Africa(Bodo, 2019; Harrington, 2005). They are supposed to be protected and guaranteed by the laws of the land and those of the international system, for them, their situation as of today in Nigeria is characterized by marginalization and the lack of appropriate infrastructure, this unpalatable situation sharply contradicts the experiences of oil and gas host communities / states in a country like Libya located in North Africa where the benefits of the crude manifest in social amenities and infrastructure of the citizens especially the host communities.

The causes of conflicts can also be seen in the works of (Paden, 2015) who opined that most of the violent conflicts and civil wars that have occurred in Africa in the latter half of the 20th and now the 21st centuries have their roots in the undemocratic systems and processes of government, unequal control, and resource distribution that are politicized and articulated in socio-cultural terms. It is crystal clear to note that many African countries cannot provide enough stability and security for their citizens. (Salawu, 2010)submit that conflicts arising in Africa because of a failure of the state

to perform some of its fundamental tasks are the major weakness that the continent faces especially in recent times. The African continent has been recognized to be one of the poorest continents in the world, with most citizens living in extreme poverty; the people have certain expectations that the government has intermittently failed to live up to its task of good governance of which due to factors such as corruption and being at the disadvantaged end of the international political economy makes it hard for a palpable hope for the future.

The multiplicity of ethnic groups in Africa is not a cause of the conflict, but several actions such as the marginalization of groups, which may just situate the Niger Delta conflicts again in the same connection, colonial legacy as indicated in an earlier discussion. Nigeria's Niger Delta region has undergone numerous shades and degrees of conflict in the last two decades. These conflicts range from clusters of intransigent disputes over environmental justice problems between local communities and oil firms to 'wars' between armed groups and soldiers sent by the Nigerian federal government to protect critical oil facilities and employees of multinational companies operating in the region (Simbine & Neji, 2018). The distribution of natural resources and ethnic group differences or rivalry and the colonial rules has led to several conflicts and wars especially in Africa, a case in retrospect is the Rwanda Civil War which was attributed to the colonial legacy in the country and multiplicity of the ethnic group and dominance by an ethnic group over the other.

Bad Leadership as a Cause of Conflict in Africa

Corruption is intrinsically linked to leadership incompetence in Nigeria and other parts of Africa. The corruption and mismanagement discussed earlier are essentially responsible for the let-down of leadership. Corruption, put differently, is a direct result of Nigeria's bad management, low value, and reward scheme (Mbara et al., 2019). It is obvious that after many years of colonization of many African nations, aspects of basic development like road, electricity, clean water, housing for their poor population and security of lives and properties remains a challenge. Commenting on the state on the Nigerian state, for instance, Chinua Achebe, in his masterpiece, The Trouble with Nigeria (1984:1) maintained that leadership remains the most fundamental problem with Nigeria when he affirmed:

The trouble with Nigeria is simply and squarely a failure of leadership. There is nothing wrong with the Nigerian character. There is nothing wrong with the Nigerian land or climate or water or air or anything else. The Nigerian problem is the unwillingness or inability of its leaders to rise to the responsibility, to the challenge of personal examples which are the hallmarks of true leadership.

The backward factor this time is not the colonial factor but the factor of greedy and selfish African leaders, who continually desire to remain in power to loot, amass and steal the resource of state needed for development meant for basic amenities. The underdevelopment of the African continent can, therefore, be seen not to be far from leadership failure. Having, the right leaders to drive development that can reposition the continent in the way and manner European leaders have made Europe as a continent today remains elusive for most African countries (Mbara et al., 2019).

The slow development and repositioning of the Africa continent can be ascribed to the various military coup d'état experienced after independence by some countries on the continent. For many years military governments piloted the affairs of the state without systems in place to check the excesses of these governments. This era in Africa bought about the institutionalization of corruption, human right violation and the projecting of poverty on the continent as many military leaders never cared about their masses, theirs was only the accumulation of state resource for themselves and family, a major factor still holding the development of Africa backward (Ocheni & Nwankwo, 2012). To this end, many African scholars trace the continent's underdevelopment to the relationship between African countries with those of the western world or their erstwhile colonial masters which were and remain exploitative aided by her selfish leaders. This has helped in advancing the development of Europe and America to the detriment of the development of Africa (Ocheni & Nwankwo, 2012).

A counter position in the same connection is the view of (Morris & Fessehaie, 2014), who sees and understands the underdevelopment of the continent of Africa from the absence of industrialization. Nevertheless, one of the core challenges of development in Africa is the low level of scientific and technological advancements and the total technological support from the Western world. Africa needs technological assistance in the area of converting those natural resources/raw materials on the continent to finished goods. Often these western countries using the corrupt African leaders give tight conditions and that can aid their access easily to the political and economic manipulations of those African nations (Dimkpa, 2015). The panacea to this situation is for African leaders to encourage technical education for African students both at the secondary and post-secondary levels of education the just the Chinese breakthrough.

This sharp practice by functionaries of government at all levels makes politics attractive, the easier way to get rich quick, and those who find themselves in power continue to do everything to remain there forever, as it is today in Zimbabwe and Cameroon whose leaders Robert Mugabe and Paul Biya have spent over thirty years leading their countries (Dimkpa,

2015). The case of Nigeria is chronic, corruption characterizes everything in government especially the administration of former Nigerian President, Dr Good luck Ebele Jonathan, under his watch, billions of dollars were stolen by his ministers and aids, the most astonishing one was the level of corruption in the petroleum sector, this obi sees as a factor that causes conflicts in Africa (Mbara et al., 2019). The continent of Africa is held back from progressing technologically, economically, and with respect for human rights because of the sundry conflicts that have been experienced on the continent. The next sections shall be looking at various conflicts with some African countries.

The Sudan Conflict / War

Before the right to self-determination of Southern Sudan from the then Sudan sovereignty, geographically speaking, Sudan was the biggest African Nation in landmass, this country is located within the North-Eastern sub-region of the continent of Africa, both in the distant past and in contemporary times, Sudan has experienced conflicts especially with a religious undertone, between the adherers of Islam who predominate the Northern part of Sudan, and Christian faithful who are in the South of the country (Awolich, 2015). With the fall of the Ottoman-Egyptian government in the 1890s, because of an Anti-Imperialist religious revolution led by Islamic Mahdist, Muhammad Ahmad, Britain and Egypt jointly re-conquered Sudan and ruled Khartoum in 1898. During the Anglo-Egyptian rule, the people of Sudan saw themselves as one united people with one mission, without discrimination based on religion, belief system, language, and history (Dessalegn, 2017). But over time, things started changing for the worst and this brought disunity in the land, ethnic identity recognition.

The discovery of oil in Southern Sudan in 1977 at Bantiu, also led to the deployment of Northern troops in the region which caused further clashes. Though oil comes from this part of the country, development has been low as compared to the North(Lunn, 2018). This narrative and account are like the Niger Delta region of Nigeria situation today. In Nigeria, conflicts are considered from religious differences between the North and South, where Islam from the side of the North is predominantly professed and Christianity from the side of the South is predominantly professed and adhered to by its faithful. Sudan since her independence in 1956 had gone through the repressive rule with discrimination against Southern Sudan and attempt to Islamize the country. Nimeri dissolved the South's constitutional guarantee as promised in the Addis Ababa Agreement and instituted Arabic as the main official language for Sudan which could.

Nigerian Conflicts / War

Nigeria has a large population – 206,139,589 as of November 2020 – (Worldometers, 2020) with over 250 ethnic groups and approximately 500 languages. She has three major ethnic groups (Igbo, Yoruba, and Hausa) while other ethnic groups though independent, tend to be subsumed into these three main groups geographically (CIA World factbook, 2020). Nigerians are very religious people and some Nigerians hold and follow their religious creed and indoctrination sometimes to the extreme. There are three prominent religions in Nigeria: Christianity, Islam, and the African Traditional Religion (ATR), although, the 1999 constitution of the Federal Republic of Nigeria expressly recognize the activities of Christianity and Islam religions. No doubt about it, with the above characteristics, pointed out, Nigeria is a nation-state heterogeneous in composition but tries to be harmonized by the central Government of the day (Thomas & Falola, 2020).

Nigeria is designed to be economically strong with all the natural resources it is blessed with. From crude oil in the Niger Delta Area to the Middle Belts iron and steel. Paradoxically, in the face of all these endowments, the Nigerian masses remain one of the poorest groups of people in the world today. An average of 67.1% (112 million) of Nigerians is said to live below the poverty line. Fighting poverty has thus remained one of the daunting challenges facing most administrations in Nigeria (Nigeria, CIF 2014-2016). The political class steals billions of dollars annually and stockpiles this money into foreign accounts overseas. These clear facts give a picture of the general causes of conflicts in Nigeria, which not significantly different from other African countries sampled thus far in this research work. Tracing various conflicts in Nigeria even before independence has their source and cause from religious and ethnic dominations. As history has clearly shown that between 1757-1809 Uthman Dan Fodio started a Jihad (Holy War) against pagan tribes in the North with the primary intention of converting the Hausas to Islam and to have an Islamic territory (Amujiri et al., 2015).

Since this Islamic jihad in Nigeria, religion has been a major source of conflict in Nigeria as the Islamic domination continues to be implemented in the Northern part of Nigeria against Christians in that Area (Amujiri et al., 2015). Without mincing words, the jihad movement of Islamic domination and the establishment of an Islamic state with a full sharia system has become a great challenge to the entire international community as this implementation cut across many parts of Africa and the Middle East and attempts to force it into Europe. Nigeria as a nation experiences the outcomes of jihadist struggles, which was started by Uthman Dan Fodio, in the Boko Haram insurgency especially in the North East of Nigeria. This situation has been worsened since the assumption of office by President

Muhammadu Buhari as the ethnic Fulani militia has laid siege on the entire country with fears of Fulani hegemony pervading the entire country.

One ethnic group in Nigeria whose people are always the main victims of the jihad movement are the Igbos who settle in different parts of Nigeria because of their industrious and business drive (Mbara et al., 2019). Those of them in the Northern part of Nigeria, the base of this jihad struggle, have always been attacked, dispossessed of their belongings, and even killed by the Hausas/Fulani ethnic group because the Igbos are predominantly Christians. In this connection after Nigeria was colonized by the British government in 1960, three years later in 1963, Nigeria became a republic and in 1967, a civil war broke out. The immediate causes of the war can be traced to the killings of the Igbos by the Hausa / Fulani ethnic group in the North which led to the agitation by the Easterners to have their country called "Biafra." The Igbos were conquered by Nigeria and got reunited in 1970 which brought the civil war to an end (Achebe, 2012). This religious hit to Islamize Nigeria continues to come and go in different ways by the constant killings of Southerners and Christians in particular. The activities of Boko Haram members are to see that the entire Nigeria legal system is replaced with a Sharia legal system and the elimination of western education for the Islamic / Arabic educational system.

Finally, Nigeria continues to experience conflicts premised on religion especially in the North. In 1980 there was a conflict in Kano and later went all the way to Maiduguri, a prophecy was made by an Islamic leader that all Muslims were not righteous as such needed some purifications rites by drinking male blood and this they extended to both Christians in Kano. This caused some resistance from the Christian communities and it became a serious conflict until the government of the day intervened in the situation and brought calmness into Kano (Mbara et al., 2019). Apart from the ongoing conflict in the Niger Delta, other conflicts experienced in Nigeria are always the dominance attempt by the Muslim community over Christians in the North and never experience such from Christians over Muslims in the south. The 1999 conflict in Kaduna state and Zamfara State under General Olusegun Obasanjo's watch as the President of Nigeria emanating from the imposition of the sharia legal system in the entire country. This became another cardinal point of religious conflict in Nigeria as Christians vehemently rejected such legal system in Christian-dominated states and Kaduna state which has like 50 percent Christians in Southern Kaduna.

The Oil and Gas Industry Activities in Nigeria

Literature on the negative sides of the oil industry in Africa is focused on the Niger Delta area as the Niger Delta story is pathetic and has continued to be the primary source of the conflict in the area. It is unexplainable that

an oil-producing area can be characterized by pure under development and environmental pollution with little or no funding to address the issues of pollution (Maass, 2010; Osagie et al., 2016). The situation of the Niger Delta looks hopeless when you physically see the level of environmental degradation, pollution occasioned by years of oil spillage which has messed up the waters/rivers in the community. Farming is almost impossible with the oil pollution in their farmlands. The most painful part is the constant gas flaring that because health challenges to the people of the area especially those in the hinterland (Ibaba & Ikelegbe, 2010; Simbine & Neji, 2018) The reactions to the horrible pollution and neglect by the Nigerian government have caused the conflict that is ongoing in the area, militancy, sabotage of pipelines, and kidnapping of a foreign oil worker (Idemudia, 2010).

Conclusion

The conflicts in Africa are informed by economic factors in the end, ethnic domination over others to control their affairs and resources, west religion brought to Africa an easy way to exploit the people of their resources in the name of God. The continent of Africa is one of the blessed continents with human and natural resources, yet remains one of the poorest, characterized by conflicts, wars, human rights violation, bad leadership, corruption, disasters, illiteracy and ignorance amongst a better part of the population. The regions that never originated from Africa, but widely practiced amongst Africans, Islam and Christianity constantly have remain a source of conflict and war in Africa, as in the case of Sudan, Nigeria and many parts of Africa not captured in this paper. The colonial legacies and colonial governments' structures upon which many nations in Africa build their governmental structures on has indicated am outcome of failure, breading corruption amongst government functionaries and failure to dispense justice in the legal system with attendant failure in other institutions of state. However, the paper unpacked the factors responsible for the conflicts in Africa and how these factors are connected or stand as a matrix to the Niger Delta conflict in Nigeria.

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