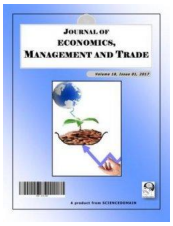

Journal of Economics, Management and Trade

21(4): 1-13, 2018; Article no.JEMT.40905
ISSN: 2456-9216
(Past name: British Journal of Economics, Management & Trade, Past ISSN: 2278-098X)

Institutional Quality and Balance of Payments Equilibrium in Nigeria

Olisah, Remigius Chinedu[1*]

[1]Department of Economics, University of Calabar, P.M.B. 1115, Calabar, Nigeria.

Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

Article Information

DOI: 10.9734/JEMT/2018/40905
Editor(s):
(1) Chiang-Ming Chen, Department of Economics, National Chi Nan University, Taiwan.
Reviewers:
(1) Babatunde Afolabi, Afe Babalola University, Nigeria.
(2) Hussin Jose Hejase, Al Maaref University, Lebanon.
Complete Peer review History: http://www.sciencedomain.org/review-history/24264

Original Research Article

Received 6th February 2018
Accepted 15th April 2018
Published 21st April 2018

ABSTRACT

The study analyzed the impact of institutional quality on balance of payments (BOP) position in Nigeria from 1970 to 2016 adopting error correction mechanism. Time series data from the Central Bank of Nigeria (CBN) and World Bank publications were utilized. The result shows a positive relationship between institutional quality proxied by contract intensive money (CIM) and BOP in Nigeria. The coefficient of CIM was significant at five per cent level with the value of1.25. This implies an improving effect of good institutional quality on Nigeria's BOP position. The coefficients of exchange rate, price level and interest rate were -0.88, (0.25) and 0.24, respectively. This portends that while exchange rate appreciation and price increase have adverse effect on the BOP, a moderate rise in interest rate exerts a favourable effect on the BOP. Given the result, it is recommended that rules and regulations guiding proper accountability in trade operations should be intensified by the government. By this, the use of anti-graft agencies such as the Economic and Financial Crime Commission (EFCC) and Independent Corrupt Practices Commission (ICPC) is encouraged. Also, the government should encourage a moderately reduced rate of inflation to encourage demand for the nation's products. By so doing, investment and production will be boosted, hence, export which enhances BOP position. Deposit rate should be kept moderately high while lending rate is kept moderately low to ensure availability of credit to investors, this will enhance the contribution of credit to the balance of payments as local production will increase in export over import. Furthermore, moderate exchange rate depreciation should be encouraged to further reduce the intensity of import dependence which deteriorates balance of payments in Nigeria.

**Corresponding author: E-mail: frolisah@yahoo.com;*

Keywords: Balance of payments; institutional quality; exchange rate; price level and interest rate.

1. INTRODUCTION

The consequence of the balance of payments (BOPs) situation of every nation at any given point in time cannot be overemphasized. The balance of payments which described as "the record of all economic transactions between the residents of a country and the rest of the world in a particular period usually one year" is a strong indicator of a country's growth status as well as its international [1] competitiveness. It is also linked to the economic policies of a government and the country itself [2]. Balance of payments represents one of the single most important indicators of a country's overall health. The prevalence of balance of payments crisis is a proof of structural bottlenecks existing within its domain. It is also a reflection of deep seated economic crisis. It has, to an extent, served as a benchmark for most economists contemplating economic intervention.

Given the importance of the BOP position of a country in her economic performance, every economy strives to maintain a favourable balance of payments position. The successive Nigerian governments from Tafawa Balewa to date have aimed at maintaining favourable balance of payments. As a result, a number of policies and programmes were adopted. Amongst the policies and programmes are; the adjustment of bank rates, government expenditure patterns, export rebates, money supply control and regulations, taxes and to an extent extreme austerity measures [3].

Nigeria like most countries in Sub-Saharan Africa (SSA) has faced economic crisis since the onset of the 1980s notwithstanding her huge resource endowments. Despite its admirable growth rate particularly in the era of the oil boom, the current account component of the BOP has been in deficit. In fact, evidence from World Bank economic indicator database from 1977 till date indicates balance of payments deficit of US$158.49 million in the fourth quarter of 2014. This goes to suggest that the management of the country's balance of payment is a major problem faced by the Nigerian government.

Despite the various fiscal and monetary policy strategies adopted by the government to control the challenges of BOP deficit, the problem still persists and till date constitutes a major impediment to inflow of much needed foreign capital. There is agreement in the literature that quality of institutions plays major role in the balance of payments position of every nation. It was revealed that adverse external developments that are not within the control of the apex bank and the government such as fluctuations in international oil prices, external debt servicing, increased trade protectionisms on the part of developed trading partners and recession in other internal factors such as exchange rate valuations are all responsible for balance of payments disequilibrium [4,5] and [6]. There is however little evidence as to the role that institutions play in this regard. Batini [7] concludes that in open economies like Nigeria where international capital flows are rampant, it becomes difficult to attain the objectives of exchange rate stability, balance of payments equilibrium, price stability and sustainable economic growth in the presence of weak institutions as a result of government ineffectiveness, weak property and contract right as well as corruption.

It is thus essential to consider the impact of the quality of institutions on the balance of payments. The question is, would adjustment of institutional quality and certain macroeconomic variables be effective in bringing about favourable balance of payments equilibrium in Nigeria? Specifically, how have price level, interest rate, institutional quality and exchange rate fluctuations affect the balance of payments equilibrium in Nigeria? This investigation intends to provide answers to these questions.

2. LITERATURE REVIEW

The relevance of the balance of payments position on economic performance of nations abounds in literature. Scholars like Afolabi [8] and Adebayo [9] elucidate the importance of BOP position in attaining the macroeconomic objective of economic stabilization. However, some researcher among others opine that institutional qualities like corruption among others has adverse effects on balance of payments position. Hence, the need to review some conceptual and theoretical issues on quality of institutions in relation to balance of payments position [4,5] and [6].

Hence, deficit or surplus on an economy's BOPs are necessitated by some factors which include the state of economic and political development,

technological advancement, the rate of inflation, level of interest rate, exchange rate, structural defects, corruption, general preference for imported goods and foreign obligations. However, adverse BOPs in any country can be corrected by the application of policy options which are import restrictions, export promotion, currency devaluation, attracting foreign investments, improved foreign exchange management, fiscal discipline, and restrictive monetary policy [8] and [9]. According to Clague et al. [10] and Boschini et al. [11], contract intensive money (CIM) index, is a recent, handy and purposeful indicator of the enforceability of contract and safety of property rights. CIM is used as a measure of institution because quality institutions effect policy change in a system that can bring about security of property rights and contract enforcement. According to Addison and Baiamoune [12] property and contract rights are essential investment reaction that is projected from every transformation that changes relative prices in product market. It could be financial reform which reduces entry costs on establishing private bank, or trade reform which lifts restriction on the operation of private enterprise.

A number of investors have deserted Nigeria due to frail property rights and business law, while those still in the country “mostly confining themselves to low capital and short term investments, protected through institutions outside the formal system, such as kin, ethnicity, and localized relations” [13]. This has submissions above that of every private enterprise as it influences Nigeria's BOP. Infrastructure is a notable hindrance to Nigeria’s economic diversification. Just 15 per cent of the nation's roads are smooth, and the country has been projected to spend three per cent of GDP every year on roads due to insufficiency of the road system [13]. The power availability is unreliable and not across the board [14]. Insufficient wharfs as well as insecure offshore seas introduce extra discouragement for firms which desire to connect with global markets. Theft has been a stable danger to ships and their freights [15]. Global trade demonstrates exorbitant and critical slacks are discovered in the import/export process. Typically, it takes twenty-five and forty-two days to organize an export and import, respectively [14]. In the presence of these situations which point to weak institutions, BOP must remain persistently in deficit.

The worth of a nation’s currency in relation to another nation is known as exchange rate. Opined by Soderstine [16] it is the measure of the legal tender of a foreign nation that might be purchased for a unit of the local currency or the price in home currency of buying a unit of the foreign currency. It indicates the extent to which a particular currency trades for another, and it is employed to describe the global monetary framework [17]. In 1994, Anifowose [18] portrays external trade as money-related resource utilized on regular basis to offset global trade as well as financing a nation’s BOP deficit. He regards external trade control as a mindful endeavor to manage and utilize accessible foreign exchange ideally whilst guaranteeing to develop foreign resources so as to evade external shocks that are caused by falling receipt of foreign exchange. As observed by Obaseki [19] nations can obtain foreign currency exporting goods and services, FDI or foreign loans, aids in addition to grants that can be utilized in paying global debt. In a situation of BOP misalignment due to insufficient supply of services from abroad, there may be increased burden foreign reserves. This may subsequently result in BOP crisis if the foreign reserve is not sufficient. Thus, efficient control of a country’s foreign reserve is crucial in order reduce the impact of instability of foreign exchange.

Obadan [20] opined that few nations whose BOP are in deficit employ various exchange rate schemes as another option to devaluation, which is seen as excessively expensive through a political or social point of view. They emphasized that an efficient and appropriately controlled double exchange rate framework might be useful to emerging nations for guaranteeing the utility of essential wants, guaranteeing constant and BOP feasibility as well as the mobilization of common resources.

Contemporarily, the contribution of institutions in economic advancement has gotten consistently expanding consideration from investigators, policymakers as well as development experts. Institutions are "limitations that people force on themselves" [21]. In this perspective, institutions disallow, allow or entail particular sort of conduct, i.e. social, political or financial, that is vital for lessening transaction expenditure, for enhancing information streams and for characterizing and upholding property rights. In the majority of the contemporary studies, institutions are found in a more extensive view, connecting diverse measures of the class of institutions to

advancement results from different perspectives and fields [22]. According to North [21], institutions are the organizations in which people relate to one another. Institutions comprise of official composed tenets and ordinarily unwritten implicit rules that trigger and complement official guidelines. Official guidelines and limitations are comprised of: constitutions, laws, property rights, sanctions, bye-laws, statute and normal laws, regulatory enforcement features and so forth. Casual principles constitute expansions, embellishments, adjustments of formal guidelines, socially endorsed standards of conduct (traditions, taboos and customs) and inside endorsed standard s of behavior.

Williamson [23] gives a contrasting option to the grouping of institutions. He suggests a categorization design in light of four diverse progressive levels. Level one institution to Williamson is situated at the social embeddedness level. Social standards, traditions, customs among others are situated at this level. Level two institutions relate to the rule of the game. Their fundamental aim is to characterize and implement property rights. A large number of them are formal establishments similar to convention or laws. Level three institutions relate to governance. These institutions make laws and redesign motivating forces, in this way making the administration structure of a general public and prompting the invention of particular establishments similar to the district or federal government, state offices, non-governmental associations. Level four institutions characterize the degree to which modification happens via prices or volumes, and establish the asset allocation tool. Institution hypothesis posits that nations with weak quality of institutions will probably experience the ill effects of BOP deficit [24,25].

3. METHODOLOGY

3.1 Model Specification

The model for this exploration is anchored on the monetary and elasticity approaches to the BOP as well as institutional quality theory. These theories formed the synthesis of the theoretical background for the model of the study. From the viewpoint of the monetary approach, BOP misalignment is occasioned by misalignment in of the demand for money together with the supply of money. This hypothesis is premised on the examination of the general equilibrium. The elasticity approach opines that devaluation causes a variation in comparative prices. In other words, devaluation leads to increase in a nation's exchange rate. Thus, devaluation increases prices of imported goods relative to domestically produce goods, thus, increasing demand for domestic products. Increment in prices of import causes decline in import demand and makes domestic products relatively cheaper than its competitor's products in the international markets. Consequently, exports are stimulated and more foreign exchange is earned [26]. Institutional quality theory posits that nations that have weak institutional quality are prone to experience deficit in their BOP [24] and [25].

Among the measures of institutions listed corruption and contract intensive money are used in this study as measures of institutional quality. Other measures (ease of doing business and government effectiveness) do not have sufficient data to cover the period of the study. Thus, they are not included in the estimated model but they are discussed because of their importance in determining the quality of institutions.

According to Nyong [27] the monetary approach shows that under the assumption of equilibrium for demand and supply for money, a country's foreign reserves (R) is a function of output (Y), Price level (P), interest rate (I) and domestic credit (D). That is;

$$R = f(Y, P, I, D) \quad (3.1)$$

Consequently, [27] shows that changes in R is equal to balance of payments hence, we can say that;

$$BOP = f(Y, P, I, D) \quad (3.2)$$

However, the elasticity theory suggests that exchange rate rather than output influences balance of payments in that; excess money demand in a predetermined exchange rate system promotes variations in foreign reserve inflows, domestic monetary growth and restoration of BOP equilibrium [28]. Also in the synthesis of the theory of institutional quality, quality of institution will promote efficiency of BOP. In the credit demand in the market (credit market) is determined by lending rate while the supply is determined by deposit rate. Thus, the spread of interest rate captures the effect of domestic credit and hence, it is posited that;

$$BOP = f(CIM, EXR, SPREAD, CPI) \quad (3.3)$$

Where;

BOP = balance of payments
CIM = institutional quality proxied by contract intensive money
CPI = consumer price index
SPREAD = interest rate spread
EXR = exchange rate

Econometrically, the model can be expressed as

$$BOP_t = \alpha_0 + \alpha_1 CIM_t + \alpha_2 CPI_t + \alpha_3 SPREAD_t + \alpha_4 EXR_t + \mu_1 \quad (3.4)$$

Where; α_0 is the constant parameter and α_1 to α_4 are the coefficients of the estimates while μ_1 is the stochastic error term. α_2 and $\alpha_3<0$ while α_1 and $\alpha_4>0$. This implies that the expected signs of the coefficients of CPI and EXR according to the prescriptions of economic theory are negative while the expected signs of CIM and SPREAD are positive.

3.2 Description of Variables

CIM: Contract intensive money (CIM) index is used to capture institutions in this study. According to Clague et al. [10] as well as Boschini et al. [11] contract intensive money is a new and easily assessed measure of enforceability. The index ranges from zero to one. A higher score entails increased safety of property rights and implementation of agreements and small score suggests reduced safety of property and agreement rights. Thus, the expected a priori sign for CIM in this study is positive. CIM is expressed as:

$$CIM = \frac{M2 - Co}{M2}$$

Where, M2 = broad money supply and Co = currency in circulation [29].

EXR: Exchange rate (EXR) denotes the price of a currency relative to another. According to the elasticity approach to the BOP, a positive connection links EXR with the BOP. Thus, the theoretical expected sign of exchange rate for this study is positive. It has been established in the theory that exchange rate depreciation discourages import and encourages export.

SPREAD: interest rate spread is used as a measure of interest rate in the study. It is the difference between lending rate and deposit rate. According to Keynes hypothesis, its expected sign is negative but McKinnon and Shaw opined a positive sign.

CPI: Consumer price index (CPI) is employed in this study as a measure of price level. Its expected sign is negative according to the MABP theory.

3.3 Estimation Method

This study employed unit root test, co-integration technique and error correction methodology to approximate the specified model. Co-integration and error correction technique was used because they integrate long-run equilibrium with short-run changes; consequently, the association among economic variables can be predicted with certainty.

3.4 Overview of the Trend Analysis of Selected Variables

3.4.1 Balance of payments in Nigeria

Statistics show that between 1970 and 2014, Nigeria has witnessed thirty-one years of BOP deficit and fourteen years of balance of payments surplus. The first half of 1970's marking the era of oil discovery and exploration in Nigeria was characterized by BOP surplus as the balance of payments rose from N46.6m in 1970 to N3, 102.20m in 1974 though in 1975 it decreased to N157.5m. But 1976 to 1778 were marked by BOP deficit [30]. This era (70's) was dominated by military regime and BOP in most part of the period was in surplus. Also within this period, institutional quality proxied by contract intensive money was on the increase in accordance to the expectation of the theory. With the interest rate liberalization policy of the structural adjustment programme of 1986 [30] one would have expected enhancement in the BOP, but that was not the case as BOP's trend continued in negative. Since 2005, Nigeria's balance of payments has almost been on deficit. This may be attributed to high levels of interest and inflation rates experienced in the economy. Stability in these two variables (inflation and interest rates) is the responsibility of the monetary and fiscal authorities, respectively, in the country. Fig. 1 illustrates the trend behaviour of balance payments in Nigeria from 1970 through 2014.

3.4.2 Contract intensive money in Nigeria

Nigeria has witnessed various phases of military and civilian regimes in the country since her independence in 1960. These political events affected the security of contracts and property rights of citizens resulting in changes in the ratio

of contract intensive money (CIM). From 1970 to 1979 marked by military regime, contract intensive money increased from 0.53 percent to 0.71 percent. The balance of payments within the period also improved from N46.6m to N1, 868.90m. The positive connection linking BOP and contract intensive money in Nigeria within the period conforms to the theoretical proposition. During the second republic that started in October 1979 till 1983, CIM was on the average of 0.70 percent lower than the 1979 level while BOP also decreased to N301.3m. This evidence indicates that the economy performed better within the military regime than the civilian era. This contradicts the general belief that democratic government is better than military rule. However, despite further rise in CIM as the military took over in 1983, the balance of payments continued declining, while CIM moved up to 0.76 percent in 1986. From 1990 to 1994, contract intensive money depicted a downward trend as it fell from 0.69 percent to 0.58 percent, respectively. Since 1999, the country has enjoyed series of consecutive democratic transitions and CIM was on the increase as depicted in Fig. 2 till 2014 when it started declining, but the nation's BOP has been in deficit except in 2000, 2001 and 2016.

3.4.3 Interest rate and exchange rate in Nigeria

As illustrated in Fig. 3, interest rate spread remained constant at four per cent from 1970 to 1974. However, from 1975 interest rate spread started declining up to -0.25 percent and one percent in 1985 and 1986, respectively. This may be attributed to the abysmally low interest rate that hit the economy within the period, thus, interest rate had no positive impact on the BOP. With the deregulation of interest rate occasioned by the introduction of SAP in 1986, interest rate started increasing up to 13.7 per cent in 1992. Following the interest rate rise, the state of the BOP worsened as it was constantly in deficit within the period. Since the bank consolidation policy introduced in 2004, there has been upward and downward movement in the level of interest rate in Nigeria.

The trend of exchange rate is illustrated in Fig. 4. The data show that from 1970 to 1984, one naira exchanged officially for one USD. Since the inception of SAP in 1986, however, the exchange rate has been on the rise, indicating a depreciation in the rate. As at 2014, the exchange rate depreciated to N174.8 for each unit of the US dollar. The depreciation has persisted as witnessed in 2016, with a dollar exchanging for N253.49 in the official foreign exchange market. Contrary to the expectation that exchange rate depreciation discourages import while encouraging output as well as export; hence, resulting in improvement in the BOP, the reverse has been the case in Nigeria.

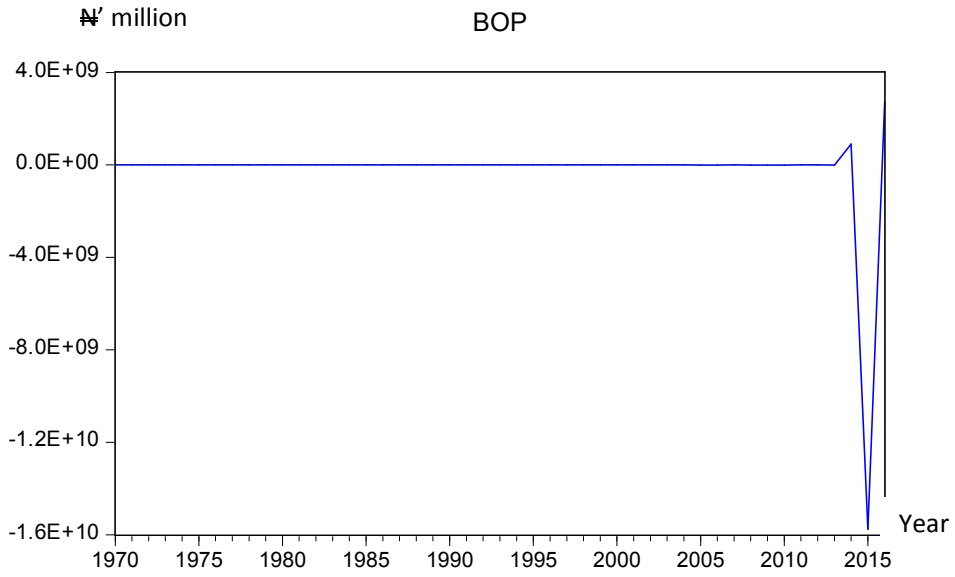

Fig. 1. Balance of payments in Nigeria (1970-2016)
Source: Author's computation (2018)

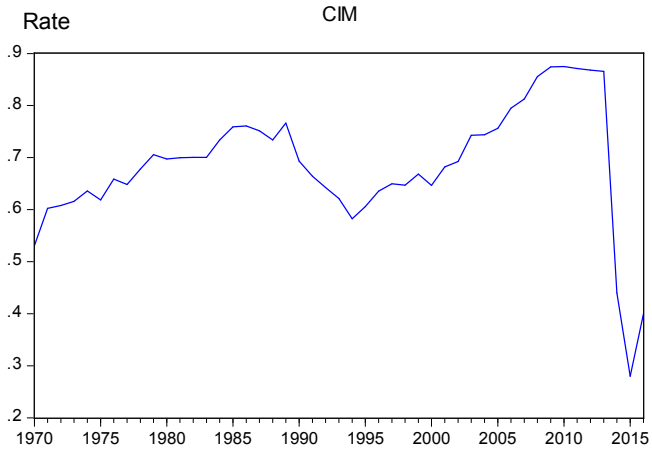

Fig. 2. Contract intensive money in Nigeria (1970-2016)
Source: Author's computation (2018)

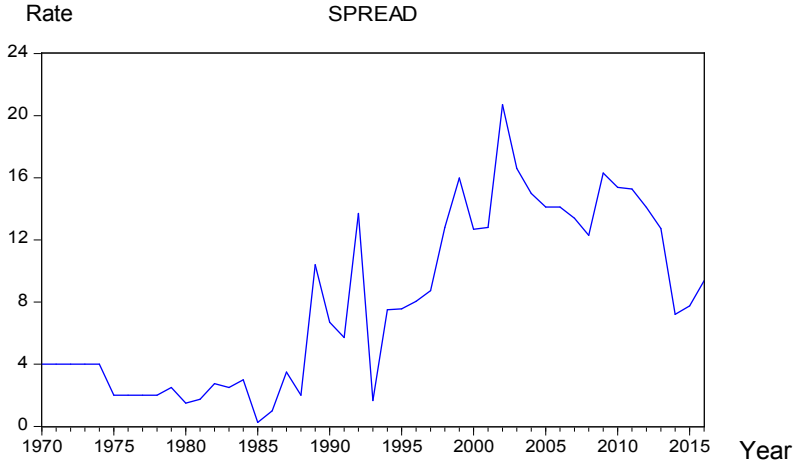

Fig. 3. Interest rate spread in Nigeria (1970-2016)
Source: Author's computation (2018)

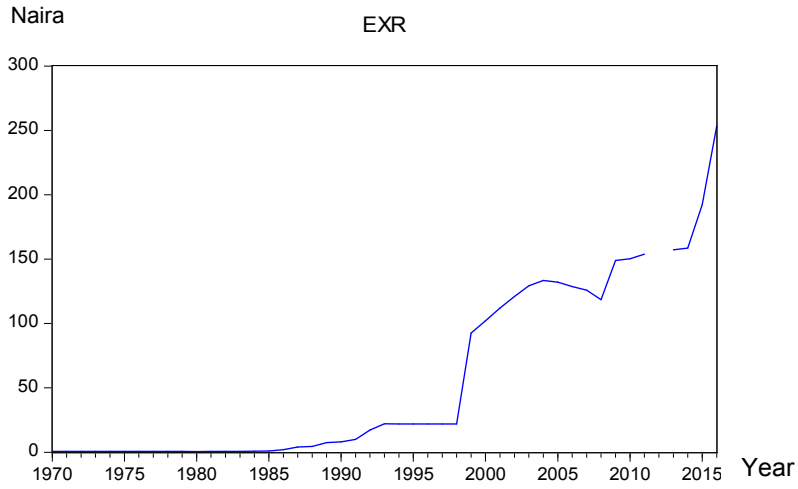

Fig. 4. Exchange rate in Nigeria (1970-2016)
Source: Author's computation (2018)

4. RESULTS AND DISCUSSION

4.1 Analysis and Interpretation of Findings

4.1.1 Unit root test

The stationarity of the data on the variables in the specification was tested using the Augmented Dickey Fuller (ADF) and the Philip-Perron (P-P) techniques. The outcomes of the tests, reported in Tables 1a and b indicate each variable in the model became stationary after the initial difference i.e. they are integrated of order one (I(1)) using both the ADF and the P-P tests. This implies that the variables have stable trend within the period of this research, thus the null hypothesis of non-stationarity of the variables is refuted. Since the variables are stationary, the study proceeded to ascertain if long run association exist amongst the variables in the co-integration model.

4.1.2 Co-integration result

The outcome of the co-integration analysis in Table 2 show the presence of two co-integrating equation at five percent level of significance using the trace statistic besides maximum eigen value statistic, correspondingly. The outcome implies the existence of long run relationship connecting the regressand (BOP) and the regressors (CIM, CPI, SPREAD and EXR). Given the existence of at least one co-integrating equation which is prescribed by the theory, the study affirms that there is co-integration amongst the variables in the specified model.

4.2 Interpretation of Results

The parsimonious result reported in Table 3 indicated that all the variables of the estimate are correctly signed in line with the *a priori* expectations. As established in the result, a positive relationship exists between quality of institutions and the balance of payments in Nigeria. This is premised on the positive sign of the coefficient of CIM whose magnitude implies that a unit improvement in the quality of institution in the economy will strengthen the BOP by about N1.2. The outcome portends that improvement in the quality of the nation's institutions will strengthen her balance of payments position. Institutional quality is significant in terms of statistics, at five per cent level. The outcome indicates the critical role of institutional quality in influencing the position of the nation's BOP. The result shows that though statistically infinitesimal, a positive relationship exists between interest rate (spread) and BOP in Nigeria. The magnitude of the coefficients indicates that one unit increase in interest rate at one period lag, on the average, will result in improvement in the balance of payments by about N0.25. This suggests that bridging the gap between lending and deposit rates by moderately increasing deposit rate will encourage to save more thus, making available investible funds that enhances output and improves the position of the BOP through its multiplier effect. The sign of the coefficients of price level complies with prescription of the theory given that it is negatively signed. The outcome shows that a unit increase in price level in the will bring about deterioration in BOP by almost N0.26. This suggests that price increase of discourages local and foreign demand for the nation's commodities, hence, aggregate investment, output and income are undesirably affected with a consequent unfavourable BOP position. Price level is statistically significant, this entails that the variable plays a vital role in determining the position of the BOP of the country and has to be taken into consideration while making policies that concern the nation's BOP status. The size of the coefficient of exchange rate is compatible with the a priori expectation as well.

Table 1a. ADF unit root results

Variable	Level constant	1st difference constant	Order of integration
BOP	-0.0143	-2.9094	I(1)
CIM	-2.1323	-5.2725	I(1)
EXR	0.7070	-6.0728	I(1)
SPREAD	-0.8464	-7.5249	I(1)
CPI	-2.7558	-6.2697	I(1)

1 percent level = -3.8573, 5 percent level = -3.0403, 10 percent level = -2.6605
Source: Author`s computation (2018)

Table 1b. Philip-perron unit root results

Variable	Level constant	1st difference constant	Order of integration
BOP	-2.5720	-13.562	I(1)
CIM	-1.4987	-6.4369	I(1)
EXR	0.6842	-6.0715	I(1)
SPREAD	-1.8099	-11.561	I(1)
CPI	-1.5957	-6.2790	I(1)

1 percent level = -3.5966, 5 percent level = -2.9331, 10 percent level = -2.6048
Source: Author`s computation (2018)

Table 2. Johansen cointegration test result

Unrestricted cointegration rank test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.0500 Critical Value	Prob.**
None *	0.9815	225.439	69.8188	0.00
At most 1 *	0.5517	57.8395	47.8561	0.00
At most 2	0.3597	24.1413	29.7970	0.19
At most 3	0.0921	5.41365	15.4947	0.76
At most 4	0.0317	1.35417	3.84146	0.24
Trace test indicates 2 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted cointegration rank test (Maximum eigenvalue)				
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.0500 Critical Value	Prob.**
None *	0.9815	167.600	33.8768	0.00
At most 1 *	0.5517	33.6981	27.5843	0.00
At most 2	0.3597	18.7277	21.1316	0.10
At most 3	0.0921	4.05948	14.2646	0.85
At most 4	0.0317	1.35417	3.84146	0.24
Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Source: Author`s computation (2018)

Table 3. Parsimonious ECM regression result

Dependent variable: D(BOP)				
Variable	**Coefficient**	**Std. error**	**t-statistic**	**Prob.**
C	-0.9566	0.2332	-4.1018	0.00
D(CIM)	1.2567	0.2117	5.9362	0.00
D(CPI(-2))	-0.2578	0.0975	-2.6441	0.00
D(EXR(-1))	-0.8866	0.1468	-6.0395	0.00
D(SPREAD(-1))	0.2496	0.1723	1.4487	0.15
ECM(-1)	-0.4701	0.0774	-6.0736	0.00
R-squared	0.8660	Akaike info criterion		2.4959
Adjusted R-squared	0.7910	Schwarz criterion		2.7492
F-statistic	19.148	Hannan-Quinn criter.		2.5875
Prob(F-statistic)	0.0000	Durbin-Watson stat		1.7236

Source: Author`s computation (2018)

From the outcome, one per cent appreciation in exchange rate will result in deterioration of the BOP position by almost N0.90 The ECM is well behaved, given that it is negatively signed, fractional and statistically significant. The magnitude of 0.47 shows a relatively slow speed of adjustment and implies that about 47 per cent of the disequilibrium in the short run will be corrected in each period in the long run. The F-statistic of 19.14 shows that in overall, the variables of the estimate are statistically significant. The result showed that about 79 per cent of the variations in the balance of payments in Nigeria are caused by variations in price level, quality of institution, exchange rate and interest rate as indicated by the adjusted R-squared of 0.79. Hence, the model is fairly a good-fit. The Durbin-Watson statistic of 1.72 is close to the theoretical accepted region of 2.0. Thus, the possibility of the existence of autocorrelation is minimal in the model. Furthermore, the stability test conducted using CUSUM and CUSUMSQ reported in Figs. 5a and 5b indicate that the variables were stable within the period of the study. This is because the trend moves within the ±5 per cent CUSUM and the CUSUMSQ bound. Therefore, the model is stable and reliable and can be used for economic policies and predictions.

The normality test in Fig. 6 shows that the Kurtosis coefficient is 3.38, that is, 3.00 by approximation. The absolute value of the skewness coefficient is 0.20, this figure is close to zero and the Jarque-Bera statistic of 0.51 is close to one with a high probability of 0.77. Given the conformity of the results to the theoretical prediction, the study concludes that the error terms of the model estimates are normally distributed.

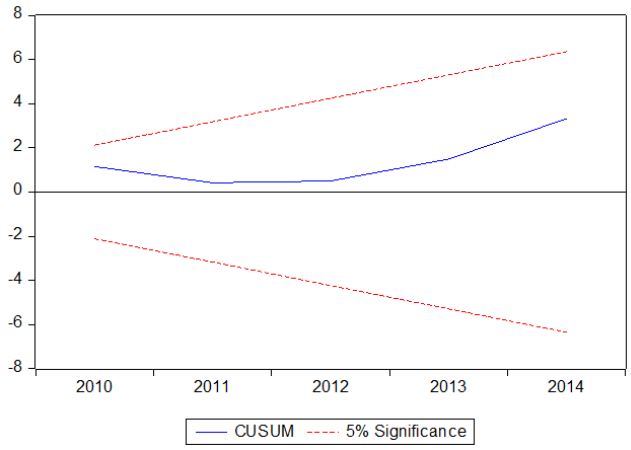

Fig. 5a. CUSUM test

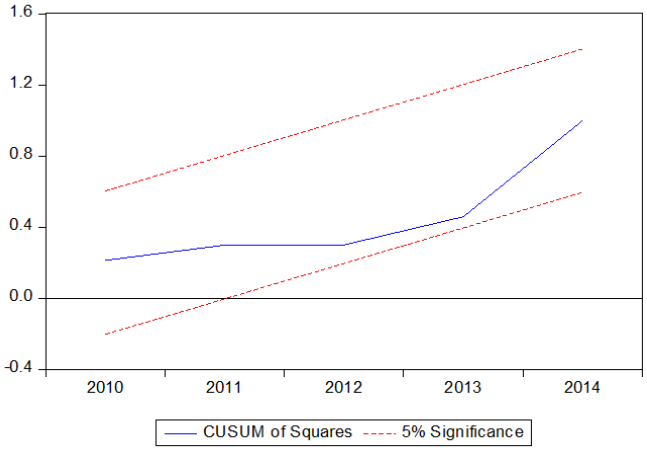

Fig. 5b. CUSUMSQ test
Source: Author`s computation (2018)

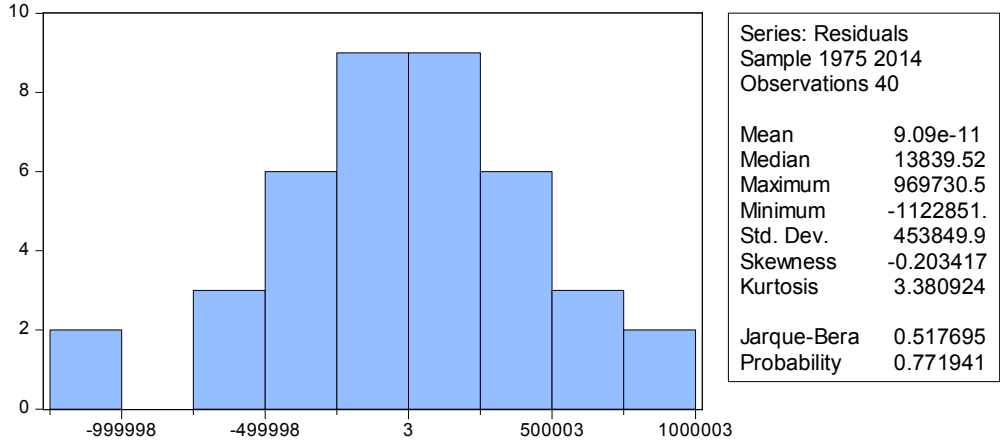

Fig. 6. Normality test
Source: Author`s computation (2018)

5. CONCLUSION

The research explored the effect of institutional quality on balance of payments in Nigeria from 1970 through 2014 and found that improved institutional quality exerts desirable effect on the balance of payment's position of Nigeria. This conclusion is occasioned by the outcome of the data analysis that exhibited a positive and significant coefficient of the institutional quality variable.

In accordance with the findings of the study, it is recommended that rules and regulations guiding proper accountability in trade operations should be intensified by the government. By this, the use of anti-graft agencies such as the EFCC and ICPC is encouraged. Also, given that increase in price level (CPI) affects the balance of payments adversely in Nigeria, the government should encourage a moderately reduced rate of inflation to encourage demand for the nation's products. By so doing, investment and production will be boosted, hence, export which enhances BOP position. Deposit rate should be kept moderately high while lending rate is kept moderately low to ensure availability of credit to investors this will enhance the contribution of credit to the balance of payments as local production will increase in export over import. And, moderate exchange rate depreciation should be encouraged to further reduce the intensity of import dependence which deteriorate balance of payments in Nigeria.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

1. Mathur BL, Raman KD. International trade and finance. New York: Wide vision; 2012.
2. Mavi AK, Sharma N. Macroeconomic determinants of balance of payments in India. International Journal of Science and Research. 2012;3(258):1703-1708.
3. Imoisi AI. Trends in Nigeria's balance of payments: An empirical analysis from 1970-2010. European Journal of Business and Management. 2012;4(21):210-217.
4. Cartan T, Chaffin J. Bribery has been used to land international contracts. Financial Times. 2003;19.
(Accessed 8 May 17)
Available:http://www.interperona.psychopen.eu/article/view/151/168
5. Odugbemi S. The anti-corruption pincer. The comet. London Reportage Section of the Foreign Affairs Column. 2000;11.
6. Wraith R, Simpkins E. Corruption in developing countries, tribalism might as well remain the greatest obstacle to tackle official corruption in Nigeria. The Journal of Modern African Affairs. 1983;21:5-13.
7. Batini N. Achieving and maintaining price stability in Nigeria. International Monetary Funds Working Paper WP/01/97; 2004.
8. Afolabi L. Monetary economics. Revised edition. Lagos: Top Golden Nigeria Ltd; 1999.
9. Adebayo A. Economics: A simplified approach. Lagos: African International Publishing Ltd; 1999.
10. Clague C, Keefer P, Knacks S, Olson M. Contract intensive money: Contract enforcement, property rights and economic

performance. Journal of Economic Growth. 1999;4(2):185-211.
11. Boschini A, Petterson J, Jesper R. Resource curse or not: A question of appropriability. Stockholm: Stockholm University Press; 2003.
12. Addison S, Baliamoune LM. The contribution of income, social capital and institutions to human wellbeing in Africa; 2003.
(Accessed 15 December 2017)
Available:http://www.europeancenterforeducation.org
13. World Bank/DFID. Country partnership strategy for the Federal Republic Nigeria; 2005.
(Accessed 2 June 2015)
Available:http://fromwww.worldbankdfid.org
14. World Bank. Global competitive report. Geneva: SRO-Kundig; 2009.
15. CIA. CIA World Factbook: Nigeria. 2008. (Accessed 12 June 2016)
Available:http://www.cia.gov/library/publications/theworldfactbook/print/ni/html
16. Soderstine BO. International finance. 2nd ed. London: Macmillan Educ. Ltd; 1998.
17. Iyoha MA. Macroeconomic policy management of Nigeria's external sector in the post SAP period. Nigeria Journal of Economic and Social Studies. 1996;38:1.
18. Anifowose OK. Allocation and management of foreign exchange: The Nigerian experience. The CBN Bulletin. 1994;18:4.
19. Obaseki PJ. Foreign exchange management in Nigeria: Past, present and future. CBN Economic and Financial Review. 2007;29:1.
20. Obadan MI. Impact of external sector policies on Nigeria's economic development. Central Bank of Nigeria Economic and Financial Review. 1996;34(4):21-32.
21. North DC. Institutions, institutional change and economic performance. New York: Cambridge University press; 1990.
22. Johannes PJ. Institutions and development: A critical review; 2003.
(Accessed 12 June 2017)
Available: http://www.oecd-ilibrary.org
23. Williamson OE. The new institutional economics: Taking stock, looking ahead. The Journal of Economic Literature. 2000; 38(3):595-613.
24. Sachs DJ, Warner AM. Natural resources abundance and economic growth. NBER Working Paper. 1995;5398.
25. Auty RM. Introduction and overview. In: Auty RM, editor. Resource Abundance and Economic Development. Oxford: Oxford University Press; 2001
26. Okpara GC. Money finance and banking in theory and practice. Aba: Chiwins Educational Consultancy and Publishing (Nig) Ltd; 1997.
27. Nyong MO. International economics: Theory, policy and application. Calabar: Wusen Pulbishers; 2005.
28. Oladipupo AO, Onotaniyohuwo FO. Impact of exchange rate on balance of payments in Nigeria. African Research Review. 2011; 5(4):73-88.
29. CIA. CIA World Factbook: Nigeria; 2011.
(Accessed 23 January 2018)
Available:http://www.cia.gov/library/publications/theworldfactbook/print/ni/html
30. Central Bank of Nigeria. Statistical Bulletin; 2015.
(Accessed 20 January 2018)
Available:http://www.cenbank.org/documents/statbulletin.asp

APPENDIX

Regression Data

Years	BOP	CIM	CPI	EXR	SPREAD
1970	46.60	0.53	0.16	0.71	4.00
1971	117.40	0.60	0.19	0.70	4.00
1972	57.20	0.61	0.19	0.66	4.00
1973	197.50	0.62	0.20	0.66	4.00
1974	3102.20	0.64	0.23	0.63	4.00
1975	157.50	0.62	0.31	0.62	2.00
1976	-339.00	0.66	0.38	0.63	2.00
1977	-527.20	0.65	0.44	0.65	2.00
1978	-1293.60	0.68	0.54	0.61	2.00
1979	1868.90	0.71	0.60	0.60	2.50
1980	2402.00	0.70	0.66	0.55	1.50
1981	-3020.60	0.70	0.80	0.61	1.75
1982	-1398.30	0.70	0.86	0.67	2.75
1983	301.30	0.70	1.06	0.72	2.50
1984	354.90	0.73	1.25	0.76	3.00
1985	-349.10	0.76	1.34	0.89	0.25
1986	-4099.10	0.76	1.42	2.02	1.00
1987	-17964.80	0.75	1.58	4.02	3.50
1988	-20795.00	0.73	2.43	4.54	2.00
1989	-22993.50	0.77	3.66	7.39	10.40
1990	-5761.90	0.69	3.93	8.04	6.70
1991	-15796.60	0.66	4.44	9.91	5.72
1992	-101404.90	0.64	6.43	17.30	13.70
1993	-41736.80	0.62	10.10	22.05	1.66
1994	-42623.30	0.58	15.86	21.89	7.50
1995	-195216.30	0.61	27.41	21.89	7.57
1996	-53152.00	0.64	35.43	21.89	8.05
1997	1076.20	0.65	38.45	21.89	8.74
1998	-220671.32	0.65	42.29	21.89	12.80
1999	-326634.28	0.67	45.09	92.69	15.99
2000	314139.15	0.65	48.22	102.11	12.69
2001	24729.90	0.68	57.32	111.94	12.80
2002	-563483.90	0.69	64.70	120.97	20.70
2003	-162298.24	0.74	73.78	129.36	16.60
2004	1124157.20	0.74	84.84	133.50	14.99
2005	-2394864.30	0.76	100.00	132.15	14.12
2006	-2206500.50	0.79	108.24	128.65	14.12
2007	-1811849.40	0.81	114.07	125.83	13.39
2008	-2458305.40	0.86	127.27	118.57	12.30
2009	-3920547.10	0.87	141.96	148.90	16.31
2010	-2298564.40	0.88	161.43	150.30	15.38
2011	-1100000.00	0.87	178.93	153.86	15.28
2012	-1008685.40	0.87	111.85	157..50	14.09
2013	-4352826.20	0.87	134.92	157.31	12.73
2014	899199600.00	0.44	145.80	158.55	7.21
2015	-15763230000.00	0.28	158.94	192.44	7.75
2016	2713370000.00	0.40	183.89	253.49	9.37

Peer-review history:
The peer review history for this paper can be accessed here:
http://www.sciencedomain.org/review-history/24264