

CURRENCY SWAP AND COMPETITIVE ADVANTAGE: A CASE STUDY OF NIGERIA AND CHINA

Okwurume, Clarence Nkasirim
Department of Business Administration
University of Port Harcourt
Tel: 08034251862
E-mail: oclarannc@yadoo.com

&

B.C. Onuoha (Ph.D)
Department of Business Administration
University of Port Harcourt
Tel: 08037078654
chimaonuoha@yahoo.co.uk

Abstract

This paper evaluates the competitive advantage potential in the impending currency swap agreement between Nigeria and China and seeks to demystify the concept and entrails of currency swap. The study also utilizes the historical and descriptive design to justify the advantage or disadvantage such currency swap might hold. Relevant recommendations and conclusions were made in this regards, Government must sit up and aggressively pursue export-based economic policies (including a predictable/secured business environment and reliable trade policy enactment) as well as technology transfer agenda capable of attracting and receiving Chinese and other investors to confidently engage the nation's economy for the expansion of their business interests.

Keywords: Currency Swap, China, Nigeria, Naira, Yuan.

1. INTRODUCTION

Recently, the CBN signed a 3-year \$2.4bn bilateral currency swap deal with the People's Bank of China (PBoC). This deal, like a typical currency swap deal, will bypass the use of the U.S. dollar and facilitate the direct exchange of the Naira and the Renminbi in relation to trade between Nigeria and China. Beyond enhancing currency market stability, this move would also further facilitate trade and investments between both countries (United Capital Research, 2018). The swap agreement allows for both Banks to among other purposes make available liquidity in their respective currencies for the facilitation and promotion of trade and investments across the two Nations, through the purchase, sale and subsequent repurchase and resale of the Chinese Yuan (CNY) against the Naira and vice versa. To achieve this, the CBN may conduct bi-weekly bidding sessions. The Bilateral Currency Swap Agreement (BCSA) is for a maximum amount of CNY 15 Billion for NGN 720 Billion with a 3 year tenor.

On the flipside, the relationship between China and Nigeria appears lopsided, and broadly in favor of China. As at 2017, Nigeria's imports from China stood at N1.8tn, representing 18.7% total imports while exports to China stood at N220.6bn, a mere 1.6% of total exports according to the NBS. Although the value of the deal places a cap on the volume of transactions, without the existence of proper measures by the CBN, the deal could widen the already large deficit while ultimately, accelerating China's vision to internationalize its currency. The currency swap agreement is clearly a strategic move by the CBN to boost FX stability, with China as Nigeria's largest import partner over the last five years.

Statement of the problem

While swap agreements greatly relieves two trading nations of the shortage of international liquidity, they have several implications for the countries issuing an international currency. Such agreements, by lowering the demand for an international currency, lower its relative price and, thereby, change the balance of payments and the real income of the nation issuing the currency (Adhikari, 2016). Since, the U.S. dollar dominates all other international currencies in trade settlement and in reserve composition of sovereign states, such swap agreements are expected to affect U.S. dollar's exchange rate, and, thereby, the U.S. balance of payments and real income.

The concept of swap is quite simple though often misunderstood by many. It is as simple as exchanging (swapping) items or cash flows between two parties (individuals or institutions). Basically, swap refers to a contract in which two individuals (or counterparties) agree to either exchange cash flows (that are linked to either interest rates, commodity prices, currencies or equities) within a specified period.

This is an agreement between two parties to exchange cash flows in different currencies at some predetermined rates for a specified period. It involves exchanging both the principal and the interest payments on a particular loan in one currency for the principal and the

interest payments for the equivalent of the same loan amount in another currency. It could also be an arrangement between counterparties in different countries aimed at financing economic activities (e.g. trade, business operations, etc.) in their local currencies at the pre-determined exchange rates, without bringing in a third country currency like the US Dollar. The parties to a currency swap usually exchange the principal at the beginning and at the end of the swap period.

Types of Currency Swap

There are three (3) main variants of currency swaps: fixed-for-fixed, fixed-for-floating and floating-for-floating. These forms of currency swaps are best illustrated with examples. Let us consider a four-year currency swap with a semi-annual payment involving a Ghanaian cedi based on a swap rate of 3.84% and a Nigerian Naira, based on a swap rate of 2.5%. The principal amount is N12.71 million which is equivalent to GHC 10.00 million at a spot exchange rate of 0.79 (GHC /N). At the beginning of the contract, the counterparties will exchange the two principal amounts. In this regard, Party One sends GHC10.00 million to Party Two, while receiving N12.71million from Party Two.

Let us consider the variants of currency swaps using the background information above.

Fixed-for-fixed: In this variant, payments in both currencies are based on the associated fixed interest rates. From the preceding illustration, Party One receives from Party Two Ghanaian cedi interest payment based on a 3.84% fixed rate applied to the notional amount of GHC10.00 million over the duration of the swap. Similarly, Party Two receives from Party One Nigerian Naira interest payments based on a 2.50% fixed rate the notional amount of N12.71million over the lifespan of the swap. At maturity, and regardless of whether there was an initial exchange, the counterparties exchanges the original principal amounts. Party One receives GHC10.00 million from Party Two and returns N12.71million to Party Two.



Figure 1: Fixed-for-fixed currency swap

Fixed-for-Floating: This entails the payment of a fixed interest rate on one currency and the receipt of a floating interest rate on another currency. Referring to the earlier background information, Party One receives from Party Two Ghanaian cedi interest payments based on a 3.84% fixed rate on a principal amount of GH¢10.00 million over the lifespan of the swap. On the other hand, Party Two receives from Party One Nigerian Naira interest payment based on a floating or market-determined rate on the principal amount of N12.71million. At maturity, the original principal amounts are re-exchanged between the two parties.

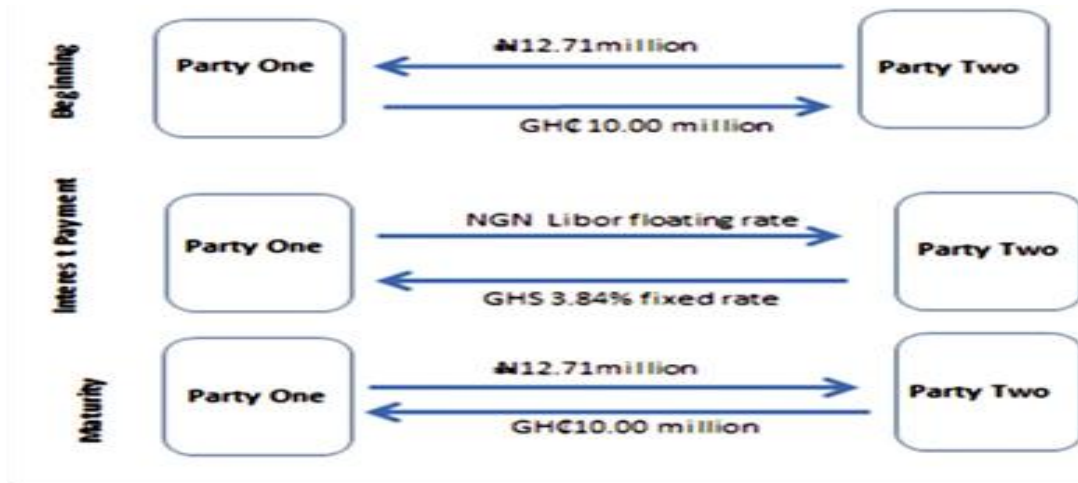


Figure 2: Fixed-for-Floating currency swap

Floating-for-Floating: Under this arrangement, the interest rates applied on the two currencies are market-determined (floating rates). Following our background information, both parties receive interest payments on the principal amounts (GH¢ 10.00 million, for Party One and N12.71 million for Party Two). As typical of other forms of currency swap, regardless of whether there was an initial exchange, the counterparties would re-exchange the original principal amounts.



Figure 3: Floating-for-Floating Currency Swap

Purpose of the Bilateral Currency Swap (BCS)

The BCS shall be used for the following purposes only:

- (a) To finance trade and direct investment between The Peoples' Republic of China (PRC) and the Federal Republic of Nigeria (FRN);
- (b) Maintain financial market stability; and
- (c) For other purposes that both parties may agree upon.

Methodology

In this paper, annual data was used in the analysis. Historical and Descriptive design methodology is utilized and used for inferences. It is also used to capture the intention and monetary policies of the monetary authority in Nigeria over the sample period in respect to Currency Swap. All the data were sourced from Central Bank of Nigeria Statistical Bulletin (2016) from the period of 1986 to 2016. The choice of the sample period is due to the significance of dollarization in Nigeria brought about by the introduction of Structural Adjustment Programme (SAP) in 1986.

Data Analysis and Inferences

Graphical evaluation of recent historical trend of the naira to the Yuan

Below is a pictorial representation of the strength of the Nigerian Naira to the Yuan.



Figure 1: NGN CNY Historical Charts (5 years – 1825 days)

The above trend shows that Nigerian naira as appreciated in light of the Yuan, which is evident in the decreasing trend. Although, the current exchange rate as at July 2018 is 1 naira is 0.02 Yuan. The appreciating value of the naira in light of the Yuan makes Nigeria a formidable currency swap partner which holds great advantage.

Advantage of the Currency Swap

The swap is to provide adequate local currency liquidity to Nigerian and Chinese businessmen. The deal is also to assist other local businesses by reducing the difficulties usually encountered in search of third currencies. The idea to diversify foreign reserves was first mooted in 2004 by the CBN to increase the percentage of Yuan in Nigeria's foreign reserves from two percent to about seven percent. However, the initiative seemed to have been subdued until about two years ago when the Governor of the Central Bank of Nigeria (CBN), Godwin Emefiele, and the Peoples Bank of China revived the initiative which is now a reality. Since 2014, Yuan, the Chinese currency has assumed greater prominence in world trade with some countries seeing it as a global reserves currency. With the deal, Nigeria became the fourth country in Africa (after Ghana, South Africa and Zimbabwe) to sign on to Yuan for its trading and financial market transactions. Emefiele and his Chinese counterpart, Yi Gang signed the agreement in Beijing on Friday, April 27, 2018 with some officials of the two apex banks acting as witnesses. Though divergent views have greeted the deal, and irrespective of the supposed trade imbalance in favour of China, however, the deal has opened a fertile ground for mutual international trade and businesses between the two countries. What may be unknown to many is that since the CBN, under Emefiele, resuscitated the idea about two years ago, his team did not relent until it was sealed to engage in painstaking negotiation, taking into consideration Nigeria's interest, particularly on the 41 items restricted from accessing forex from the Nigerian foreign exchange window. The deal could not have come at a better time than now with the country's exit from recession, impressive Foreign Direct Investment (FDI) through the establishment of the Importers and Exporters (I&E) window, resulting in steady reserves accretion. It must also be noted that, between 2016 and November 2017, the volume of bilateral trade between Nigeria and China grew by 30 percent, valued at about \$12.3 billion. With the exit from recession and impressive foreign reserves accretion, Nigeria has become an attractive investment destination to every genuine investor and China is not excluded. According to the CBN spokesperson, "with the operationalization of this agreement, it will be easier for most Nigerian manufacturers, especially, small and medium enterprises (SMEs) and cottage industries in manufacturing and export businesses, to import raw materials, spare parts and simple machinery to undertake their businesses by taking advantage of available RMB liquidity from Nigerian banks without being exposed to difficulties of seeking other scarce foreign currencies". The CBN position may have, however, allayed the fears of those who felt Nigeria may not actually benefit from the deal, if the nation's export volume does not increase. Some are of the view that, the sign-on may be the death knell of some budding or revived industries the CBN policy on 41 items and I&E window helped to give life. The swap agreement will reduce the strain on Nigeria's foreign reserves denominated in dollars, as it is set to take an important place in global trade, and boost mutually beneficial business transactions between the two countries and Asian countries interested in trading or investing in Nigeria. What people should understand about the Emefiele led-CBN is that, the CBN under his watch would not do what will hurt Nigerians or the economy. He promised on

assumption of office that all policies of CBN under his purview will be people-oriented and he has not deviated from that pledge. He rebuffed foreign financial institutions' anti-people prescriptions for the economy, but opted for a home grown treatment and the gains are visible today. The Naira exchange rate has been stable and almost gaining its real value. The CBN came out with a policy suspending 41 items which can be produced in Nigeria from the inter-bank forex window, and hell was let loose. However, the positive effect of that policy is evident today. The Bank established the Anchor Borrowers Programme (ABP), rice is now produced in the country in large quantity and has saved Nigeria from huge drain on its reserves. Jobs and wealth have been created in the rice value chain. Some forex management policies were enunciated to arrest the enterprise of bettors and speculators, but the one that has proven to be the magic wand is the Investors and Exporters Window. This window was not given any hope of success, yet it became the magic wand among other policies that helped pull the economy out of recession. While the CBN efforts should be commended in redirecting and ensuring that the economy stays on the path of sustainable growth, some people are doubtful of the gains. The agreement will assist the two countries in managing their reserves, especially Nigeria by reducing the exposure of foreign reserves to the volatility risk of a single currency, the dollar. Nigeria will gain from the technical know-how and ingenuity of the Chinese in the area of information technology, not to mention other benefits yet to be unveiled by the two countries. Furthermore, the deal will help in smoothening the bilateral trade relationship between Nigeria and China, as China is believed to be Nigeria's largest trading ally. And more importantly is that, China's acceptance to swap its currency with Nigeria's Naira is an expression of confidence in the Nigerian economy, which is a good signal that Nigeria is back in business.

Nigeria's Competitive Advantage

Based on evaluation, the secured agreement would help in providing adequate local currency liquidity to Nigerian and Chinese Industrialists and other businesses, thereby reducing the demand for dollar and the attendant difficulties encountered in the search for third currencies. This smart move which is long overdue, in NANTS estimation, would ease the lingering exchange rate crisis which has been heightened by the country's high volume of imports. We therefore see the deal as a strategic move that would gradually strengthen the Naira against the US dollar and certainly reduce attention to and/or the unwitting 'dollarization' of the nation's economy. While we do not have anything against the US dollar, we however note that its scarcity has remained a nightmare and punishment to the average Nigerian trader.

Statistically, we note that in 2015, Nigeria's trade volume with China rose to \$14.94 billion, representing 22.2% of the \$78.56 billion it traded with her eight biggest partners. At present, about 78.1% of the nation's import of consumables come from the Asian Tiger, and these are items that flow into the market space in large volumes and turnover. As the umbrella body of Nigerian traders, it is worthy of note that in our calculation close to 68% of traders regularly leaving the shores of the country at the various airports for imports on daily basis are heading towards the Chinese market. It therefore makes a lot of sense to tie the nuts with the Chinese

currency not only to facilitate seamless transactions but also to reduce the multiple jeopardy faced by traders and importers who would exchange the local Naira to Dollar and from Dollar back to Chinese Yuan, thereby losing currency value at two poles. More so, the currency swap implies that Chinese Yuan is free to flow among different financial institutions in Nigeria just as is the case with the US dollar, Euro and Pounds Sterling, and to that end, Nigerian businesses could transfer funds to China in the local currency without the hassles of passing through Bureau de Change or creating unnecessary stress for the CBN.

Furthermore, this deal which makes Nigeria become the third African country to have such an agreement in place with China will make it easier for Chinese manufacturers seeking to buy raw materials from Nigeria to obtain enough Naira from Banks in China to pay for their imports from Nigeria. In summary, the Naira is expected to appreciate against the US dollar in the short-term as the demand for dollar eases. It will encourage Nigerian importers to open Letters of Credit (L/Cs) in Yuan for the importation of raw materials, equipment and machinery from China. It will facilitate greater foreign exchange transactions and promote bilateral trade relations between Nigeria and China; eliminate the cost of exchange rate differential caused by dollar exchange conversion and scarcity; ease the pressure on Naira and potentially stabilize Nigeria's forex market; help to conserve Nigeria's forex reserves and shore up the value of the Naira in the foreign exchange market. It is hopeful that the deal as an instrument of bilateral relationship could encourage China to increase their imports from Nigeria, especially in crude oil, solid minerals and other raw materials, thereby closing the huge trade gaps between the two countries.

Other Currency swap potentials in Nigeria

The collapse of crude oil prices from over \$110 per barrels between 2003 and 2014 to all time low \$40 per barrel drastically depleted the external reserves from \$62billion in 2008 to \$37billion in 2015. The dip in dollar reserves is the principal cause of the recent recession. CBN's response through cumulative depreciations of the Naira had attendant negative implications for inflation, purchasing power and domestic capacity utilization. CBN under Godwin Emefiele managed the limited dollars inflows through creative measures that included the restriction of scarce allocation to some 41 items.

Table 1: Currency Swap potentials summary

	US	Pound	Deutsche	Japanese	CFA	French	Swiss	Dutch	Euro
Year	Dollar	Sterling	Mark	YEN	Franc	Franc	Franc	Guilder	Euro
1981	0.6100	1.2495	0.2699	0.0028	0.0022	0.1122	0.3106	0.2445	
1982	0.6729	1.1734	0.2773	0.0027	0.0020	0.1024	0.3314	0.2520	
1983	0.7241	1.1216	0.2836	0.0030	0.0019	0.0950	0.3450	0.2537	
1984	0.7649	1.0765	0.2688	0.0032	0.0018	0.0875	0.3255	0.2384	
1985	0.8938	1.1999	0.3036	0.0037	0.0020	0.0995	0.3638	0.2691	
1986	2.0206	2.5554	1.8010	0.0226	0.0120	0.5497	2.1723	1.5931	

1987	4.0179	6.5929	2.2374	0.0279	0.0221	0.6693	2.6985	1.9854	
1988	4.5367	8.0895	2.5801	0.0354	0.0141	0.6395	3.0978	2.2955	
1989	7.3916	12.0695	3.9349	0.0537	0.0226	1.1504	4.5186	3.4518	
1990	8.0378	16.2419	5.5624	0.0639	0.0315	1.6516	6.5159	4.9337	
1991	9.9095	17.4955	5.9484	0.0716	0.0344	1.7542	6.9119	5.2754	
1992	17.2984	27.8684	11.1327	0.1367	0.0656	3.2887	12.3858	9.8885	
1993	22.0511	33.2522	13.3871	0.1988	0.0776	3.9064	14.9480	11.9034	
1994	21.8861	33.4252	13.5230	0.2088	0.0437	3.9367	15.9333	12.0307	
1995	21.8861	34.5240	15.0895	0.2429	0.0438	4.3445	18.2195	13.3844	
1996	21.8861	34.1229	14.5962	0.2049	0.0463	4.2906	17.8798	13.0228	
1997	21.8861	35.7698	12.6511	0.1815	0.0376	3.7577	15.0985	11.2420	
1998	21.8860	36.2166	12.4587	0.1679	0.0372	3.7170	15.1267	11.0822	
1995	81.0228	128.1561	57.0692	0.864	0.1646	16.4614	69.6084	50.9396	
1996	81.2528	126.4165	53.8450	0.7462	0.1585	15.8460	65.6449	48.0489	
1997	81.6494	133.7389	47.1927	0.6779	0.1402	14.0176	56.3134	42.03	
1998	83.8072	142.6141	51.2761	0.7106	0.1530	15.2940	62.6576	45.4813	
1999³	92.3428	156.4345	50.9023	0.9181	0.1510	15.1775	62.3621	45.1776	
2000	100.8016	149.5363		0.9419	0.1369		59.3603		94.8200
2001	112.0252	161.1049		0.9220	0.1530		66.4247		100.2389
2002	120.9793	182.0578		0.9696	0.1748		78.1799		114.6076
2003	129.4323	211.1999		1.1217	0.1744		96.2913		146.4369
2004	133.5001	244.5238		1.2350	0.2395		107.5181		165.8525
2005	131.6391	238.7723		1.1933	0.2491		105.8397		163.3386
2006	127.3824	234.7363		1.0953	0.2427		101.9105		160.0152
2007	124.6118	249.4231		1.0585	0.2589		103.9041		170.6511
2008	117.6937	218.2469		1.1433	0.2672		113.6073		173.0047
2009	147.3958	230.6475		1.5761	0.3146		135.8851		205.4110
2010	148.8127	230.0907		1.6988	0.3004		142.9937		197.5873
2011	152.3297	244.2600		1.9111	0.3220		172.1703		212.1039
2012	155.9402	247.0583		1.9552	0.3046		166.3568		200.4325
2013	155.7537	243.6730		1.5960	0.3141		168.0644		206.9213
2014	156.9828	258.5762		1.4860	0.3169		171.6641		208.5872
2015									
Q1	181.2433	274.9241		1.5432	0.3092		190.7295		204.4555
Q2	196.9708	301.6954		1.6229	0.3308		208.9383		217.6021
Q3	196.9881	305.3198		1.6128	0.3329		204.3579		219.1639
Q4	194.0041	294.5499		1.5968	0.3229		195.6781		212.3568
2016									
Q1	197.0000	281.9358		1.7096	0.3300		198.0524		217.1768
Q2	208.5871	298.9743		1.9368	0.3537		214.8617		235.4467

Q3	303.1759	398.5272		2.9575	0.5139		310.6444		338.4652
Q4	305.2060	378.8639		2.7961	0.4961		304.8862		329.3904

Source: CBN Statistical Bulletin (2016).

It is however much more commendable that CBN had made a bold move to think outside the dollar dependency with the recent Nigeria-China currency to facilitate transactions with China without the dollar high cost. Lest we forget; the move towards foreign reserves diversification is long dated. The decision to include the renminbi (Chinese Yuan) in Nigeria’s foreign exchange reserves was taken in 2011 by the CBN during the tenure of its former Governor, Sanusi Lamido Sanusi. The former CBN Governor announced a switch of “between 5 and 10 percent of its dollar buffers into Yuan as part of plans to diversify the reserves away from the dollar”.

It is remarkable that the two countries had given effect to the deal of April 2016, during President Muhammadu Buhari’s visit to Beijing. According to the CBN spokesman, Isaac Okorafor, the agreement provides naira liquidity to Chinese businesses as well as provides RMB liquidity to their Nigerian counterparts in return to improve the speed, convenience and volume of transactions between the two countries. CBN governor, Godwin Emefiele, led the Nigerian delegation to sign the agreement on behalf of the federal government while PBoC governor, Yi Gang, led the Chinese team.

The recent move shows that there are indeed many options for nation states within the current international financial architecture. Of course the devil is in the details. Given the existing trade imbalances between Nigeria and China, will the new currency swap deal not further fuel import dependency of Nigeria? Will it promote domestic industrialization? Again against the background of the ongoing international trade war, is Nigeria doing quality control of its trade relations with China? I certainly share the optimism of Mr Okoroafor that: “With the operationalization of this agreement, it will make it easier for most Nigerian manufacturers, especially small and medium enterprises (SMEs) and cottage industries in manufacturing and export businesses to import raw materials, spare-parts and simple machinery to undertake their businesses”.

However this optimism is based on the assumption that Nigeria has aligned its monetary and trade policies with its industrial policies. There is no doubt that the CBN has done its side of the bargain by ensuring RMB liquidity from Nigerian banks without being exposed to the difficulties of seeking “other scarce foreign currencies, which attract higher interest rate charges”. But the fiscal authorities and trade and investment ministries must now ensure that the ease of transactions promotes domestic production (not the same criminal frivolous consumption of at time fake products from China!).

The deal must also foster employment generation as contained in the Economic Recovery and Growth Plan (ERGP). What is clear is that CBN has shown that there is certainly an alternative to the existing Dollar/Euro dependency. Nigeria must simply come to terms with the simple fact that currency crises and volatile capital flows are regular features of the

existing rapacious present global financial system. Only nations that are audaciously creative could weather the regular storms of periodic crises caused by speculation. China has shown that for a developing nation to make a sustainable difference in the existing trade arrangement, there must be creative smart measures in managing critical factor of limited foreign exchange just as CBN has done.

For as long as there has been little progress made by developing countries on the demand for greater stability of the exchange rates of the three major currencies (US, Japan, Europe), developing countries must take advantage of domestic policy space to initiate measures such as Nigeria- China currency swap.

Disadvantages

The currency swap deal (with its unrestricted access to the Yuan, at an overvalued Naira exchange rate, (N30/Yuan)) has the propensity to trigger increased volume of imports to the country. The surge in Chinese imports if unchecked, especially given the history of appetite of Nigerians for imported goods, would negate the Federal Government's import Substitution Agenda, stifle domestic production and place local industries in a pitiable and vulnerable condition with attendant effects that would defeat government's efforts at job creation.

The CBN must ensure that constant oversight and regulation is at its peak so that the rise in demand for the Yuan will not result in a possible depreciation of the Naira against the Chinese currency and further widen the gaps in trade balance and balance of payments in favour of China.

Government Agencies such as the Standards Organization of Nigeria (SON), the National Agency for Food, Drugs Administration and Control (NAFDAC), the Consumer Protection Council (CPC) to be alert and ready for combat to ensure that the currency swap deal and its possible attendant surge in imports does not turn the country into a dumping ground for inferior/substandard Chinese products. The existing trade deal between Nigeria and China must be revisited and retooled at this moment to strengthen control and sanction mechanism against irregular and sub-standard exports from China targeting the Nigerian market.

Nigerian business actors and the Nigerian Export Promotion Council (NEPC) in particular have an urgent call to duty against the realization that the currency deal not only opens the vista for imports from China but also throws open the window of opportunities for Nigerian exports to China that must be explored. In practical terms, NEPC must therefore step up the collaboration with Nigerian traders and the Nigerian representative/Diplomatic offices in China to identify such local commodities and items that could be exported to the Asian Tiger.

The swap would ensure that majority of the country's foreign trade deals were channeled to the Chinese economy.

This will lead to economic dependence despite that Nigeria is a sovereign nation. The policy will lead to the influx of Chinese goods into our country considering that we are contending

with weak regulation. Similarly, many experts hold that the deal was only good on its surface value and that in the long run, the initiative would allow the Chinese to compete with our local businesses, thereby, impeding the growth of indigenous firms.

Recommendation

In light of the above, I place caution on over-reliance on temporary measures and emphasize the need for bold and export-driven reforms to boost Nigeria's trade position and provide a more stable support for the Naira in the long term.

Government must sit up and aggressively pursue export-based economic policies (including a predictable/secured business environment and reliable trade policy enactment) as well as technology transfer agenda capable of attracting and receiving Chinese and other investors to confidently engage the nation's economy for the expansion of their business interests.

References

- Adhikari, D. R. (2016). Effect of China's new trade settlement policy on the value of dollar. *Journal of Applied Business and Economics*, 18(7), 23-31.
- Aizenman, J., & Gurnain K. P. (2010). Selective swap arrangements and the global financial crisis: Analysis and Interpretation. *International Review of Economics & Finance*, 19(3), 353-65.
- Aizenman, J. Y. J. & Donghyun P. (2011). International Reserves and Swap Lines: Substitutes or Complements? *International Review of Economics & Finance*, 20(1), 5-18.
- Bank of Korea. (2012). Introduction of Korea-China Currency Swap-Financed Trade Settlement Facility. Ministry of Strategy and Finance, The Bank of Korea.
- Chen, X., & Yin-Wong, C. (2011). Renminbi Going Global. *China & World Economy*, 19(2), 1-18. Cheung, Yin-Wong and Risto Herrala. 2014. China's Capital Controls: Through the Prism of Covered Interest Differentials. *Pacific Economic Review*, 19(1), 112-34.
- Cheung, Y., Jakob de Haan, X, & Shu Yu. (2012). China's Outward Direct Investment in Africa, with, *Review of International Economics*. 20 (May), 201-220.
- Cheung, Y., & XingWang Qian (2009). Empirics of China's Outward Direct Investment, *Pacific Economic Review*. 14, 312-341.
- Cheung, Y. G. M & Robert N. M. (2011). Renminbising China's Foreign Assets. *Pacific Economic Review*, 16(1), 1-17.
- United Capital research (2018). The China-Nigeria currency swap deal, whose odds? *Daily Market Commentary*. 5(7). 1-2.