

*Full Length Research Paper*

# Impact of foreign trade and investment on Nigeria's textile industry: The case of China

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The textile industry in Nigeria is the third largest in Africa after Egypt and South Africa. It is the largest employer of labour in the manufacturing sector. The industry is mainly controlled by large private-sector firms, often with substantial foreign participation. Low productivity levels limit Nigeria's export possibilities. Nevertheless, the substantially liberated economic environment and the opportunity Nigeria offers to avoid quota restrictions under the Multi Fibre Agreement (MFA), which is not applicable to Nigeria have induced some foreign entrepreneurs, mostly from Asian countries, to establish export-oriented plants. The bilateral trade between Nigeria and China has grown steadily since 1971 as the volume of trade between the two countries in 2009 hit \$6.373billion. In order to analyze the effects of higher imports over exports on the textile industry and the aggregate economy, the complete structural model is constructed with market equilibrium identity, such that total supply of agricultural, industrial, and oil sectors equal aggregate demand. The effect of imports on other macroeconomic variables was tested using nth order vector-regressive model. More private investments are highly needed in the Nigerian textile industry to make it internationally competitive.

**Key words:** Competition, innovation, dependency theory, price stabilization, economic growth, research and development, investment, imports.

## INTRODUCTION

Despite criticisms of Chinese foray into the African market, the trade relations between China and Nigeria are becoming more significant than before the establishment of the forum on China-Africa Cooperation in 2000. The bilateral trade between Nigeria and China has grown steadily since 1971 as the volume of trade between the two countries in 2009 hit \$6.373billion, in favour of China (Djeri-wake, 2009). Giving a breakdown of the trade relationship between the two countries, China's export to Nigeria stood at \$5.476 billion, while import from Nigeria was \$0.897 billion, Nigeria having trade deficits. The figures represent an increase of 76.3% compared to 2008. The most important reason for China's trade surplus with Nigeria is due to the different economic structures of the two countries. Manufacturing is an important part of China's economy, while in Nigeria; oil industry is the prime sector (although most of the oil is

exported to the West). This naturally creates the imbalance of the trade. One of the items of trade that tops the list of China's trade with Nigeria is textile.

Traditional textiles have been produced in Nigeria for many years, but real industrial activity in textile production is comparatively recent. After some minor attempts, the Kaduna Textile Mills was established in 1956, followed by Nigerian Textile Mills in 1962 (Jamie, 2007). From inception, these companies were conceived as vertically integrated mills; to convert locally available raw materials- mainly cotton - through spinning for the production of yarn, weaving for the production of grey cloth, and dyeing, printing and finishing, for the production of finished textiles. Today, the sector has developed to incorporate fibre production, spinning, weaving, knitting, lace and embroidery makings, carpet production, dyeing, printing and finishing. The sector produces a varied series of fabrics annually, ranging from African prints, shirting, embroideries, etc., to Guinea brocades, wax prints, jute and other products (Jetter, 2002). According to Nina (2010), the Chinese now have

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textile networks of the so-called African prints. There has been emerging voices to step up imports restrain (Ron and Hannah, 2011) and increase surveillance on dumping, given the intensifying trade with China where shoes, bags, apparels from China and other countries are dwarfing Africa's textile industry, including Nigeria. China is making it harder for Africa to diversify from its natural resource-based exports profile into manufacturing sector.

The textile industry of Nigeria is the third largest in Africa after Egypt and South Africa (MNT, 2007). The industry, which currently accounts for about 25% of manufacturing value added, has passed through various phases of growth. Import substitution policies induced steady growth in the 1960s, which gave way to rapid growth, averaging 12.5%, in the 1970s; when the economy was booming. The recession of the early to mid-1980s took its toll: the cumulative textile production index (1972 = 100) declined from 427.1 in 1982 to 171.1 in 1984 (Jamie, 2007). The industry recovered in the late 1980s, achieving an annual growth of about 67% between 1985 and 1991, with synthetic textiles alone accounting for about 80% of the recorded growth. The industry is the largest employer of labour in the manufacturing sector. It accounted for about 25% of total manufacturing employment between 1986 and 1991 due to improved capacity utilization (MNT, 2007). And, with the backward integration programme instituted by many firms in the industry following the strict government directive on the issue in the mid-1980s, the level of domestic sourcing of raw materials was put at about 64% in 1991, a steady improvement from 52% in 1987 and 57% in 1988. The industry is mainly controlled by large private-sector firms, often with substantial foreign participation. Nigerian law has limited this to 60% of the total equity of textile sector firms but the drive for more capital inflow under the present management philosophy lead to an upward revision of the ceiling.

The major foreign investors within the industry are from Hong Kong, India, the UK, Liechtenstein, the Netherlands, the US, Japan and China. These are private capital investments for profits, except for China where most of the firms are State and Provincial enterprises. As at 1987, the 37 textile firms in the country were operating 716 000 spindles and 17 541 looms. However the output of the sector has never exceeded 55% of annual domestic consumption, allowing for a thriving trade in imported (mostly smuggled) textiles. Technological gaps in the industry are illustrated by the fact that 12 mills, representing 61% of the total capacity, spin only cotton. Although, nearly 25% of existing mills are integrated mills, modernization of spinning capacity is generally lagging behind technological improvements in the weaving mills. Labour productivity in spinning operations is not high because of low capacity utilization and inadequate provision for on-the-job training. Low productivity levels limit export capacities. Nevertheless, the substantially liberated economic environment and the

opportunity Nigeria offers to avoid quota restrictions under the Multi Fibre Agreement (MFA), which is not applicable to Nigeria; have induced some foreign entrepreneurs, mostly from Asian countries, to establish export-oriented plants.

### **Background of foreign trade in Nigeria**

Economic imperialism is not the ownership of colonies; it is rather the assertion of the economic hegemony of one nation over another from which, the hegemon profits. It may be asserted through conquest, enslavement, various forms of colonialism, tributes, taxes (including customs), trade, investment of various kinds and magnitude, land grab, "landlordism", financial manipulations (including foreign exchange and credit manipulations), "monopolism", threat, and war. It began in the 1880s with the then industrialized or fast industrializing capitalist countries as the hegemons. They needed assured markets and raw materials sources. Not only did each competitor have to look for markets and sources of raw materials; it had to secure these against encroachment by other capitalist fortune hunters, (Toyo, 2000). It is this way that modern imperialism arose as a stage in the development of capitalism, leaving the world in an uneven technological, industrial, investment, trade and military power. However, according to Walter (1973), there is no neo-colonialism without local allies to major powers, who profit by the socio-economic miseries of their states. The impact is always negative for a developing country like Nigeria.

The abolition of the slave trade and the subsequent emergence of "legitimate trade" in the 19th century, along with such other external pressures brought about significant changes in Nigeria's trade, (Adeleye, 1973). The British established a formal foothold in Lagos and the activities of overseas traders increased. The turn to exports of palm oil, cotton, cocoa, rubber and groundnut in the 19th century had more positive impact on incomes, (World Bank, 1994). Cotton and indigo fed into a vibrant textile industry around Kano that produced luxury clothes for exports across the Sahara, mainly on donkeys and with the help of slave labour, to North Africa (Carl, 1980). Leather goods too, were produced for export. Overall however, contact with European economies was minimal-evidenced by the survival of Kano textiles.

The British introduced the indirect rule, besides the political impact of indirect rule, the other main agents of change, especially during the early colonial phase, were trading interests and mission, (Ohiorhenuan and Poloamina, 1991; Mutumwa, 2009; APLE, 2003; CIPS, 2012). New politics and traders helped to link Nigerian economy to international markets, promoting mainly a commodity-export economy with its well known disadvantages. The trend of taxing foreign trade began and grew sharply. One of the major sources of public revenue

was custom duties on imports, averaging some 20 to 30% at this early stage, and this was well before there was any talk on infant industries or import substitution. Exports were also taxed, both directly and indirectly. This indirect taxation through the institution of Marketing Boards (MBs) was substantial, with long term harmful consequences. To ensure a steady supply of industrial inputs within planned expenditures, British authorities during the 2nd world war started purchasing Nigeria's exports at fixed prices, (Bradford, 1990). From there, it was only a short step to the introduction of permanent marketing boards to control prices paid to peasant producers. While the main rationale for MBs was price stabilization, their main utility over time became revenue collection. The crude underlying mechanism was just one more means of appropriating agrarian supply. MBs would buy exportable commodities from peasants at a fixed price and then sell them internationally, often at a higher price and keep the balance. The pernicious MBs not only squeezed the already poor peasantry but over time also generated incentives against agricultural production.

Finally, the MBs resources also became a source of corruption and wasteful spending by the elites. The long run implication is that the objective of price stabilization was not achieved, the Nigerian economy became imports-dependence and highly vulnerable to external economic and political forces (Eneji et al., 2010).

### **Chinese trade and investment on Nigeria textile industry**

The relations between Nigeria and China were established in 1971. From 1978, China has gradually moved to a socialist market economy, where stringent measures that restricted trade have been dismantled. In this historic opening up and reforms, commodity exports, capital, labour, services and technology markets have since emerged in China. In 2006, Nigeria and China became strategic partners following the signing of memorandum of understanding (MOU) on strategic partnership under President Olusegun Obasanjo. The MOU covers all areas of Nigeria's cooperation with China, which include trade cooperation, cultural exchanges, one China policy, science and technology, investment, agriculture and poverty reduction, energy, power and environment. Presently, Nigeria is China's second largest trading partner in Africa, after South Africa. Chinese investments in Africa have come under increasing scrutiny because of Africa's lessons from Western imperialism (The west came to Africa for mercantile reasons and is still there for the same purpose). It has faced accusations of propping up rogue governments in order to gain access to some of the continent's most promising deposits of oil, minerals and markets. China has faced the same criticism and suspicion, but has also played a crucial role in the development of oil in Sudan, where the government was

engaged in a brutal civil war with rebels in the Darfur region. It plays crucial role in oil in Libya and Angola. It has also sought to expand its presence in mineral-rich Zimbabwe, long considered a pariah; the less controversial investments in Zambia copper mining sector have also aroused opposition. Even China's construction of the historical Tanzam railway has not happened without western criticism and opposition. However, there are complaints of a dysfunctional relationship between investors and local communities; especially the local employment content is questionable. Evidently, Africa has investment deficits (The Economist, 2006). Although, China's investment is also widely welcome in the continent, more consideration should be given to a value-added approach, to investment in infrastructure and transportation. Chinese companies ought to be more transparent in their investment in Africa.

### **Trade**

In 1986, export of China's textile and clothes surpassed that of oil for the first time, changing China's export structure from resource product to labour-intensive manufacturing like textile and clothes. In 1995, exports of mechanical and electronic products surpassed that of textile and clothes, changing China's exports structure from traditional products to modern industrial products. Basically, processing trade essentially is an effective combination of international capital and China's cheap labour cost. Three strategies of China's international trade development since 1979 are:

1. 1979 to 1991; this is the initial stage of opening-up. The government incubated market economy initiatives by decentralization, and introducing international competitors by attracting FDI, developing an export-oriented economy mechanism by regional opening up.
2. 1992 to 2001; was the critical stage of establishing an export-oriented economic mechanism which is based on the market (Zhao, 2009; Ravallion, 2008; Rozelle et al., 2000).
3. 2001 till date; this is a new stage for establishing an open economic mechanism which is consistent with international trade standards.

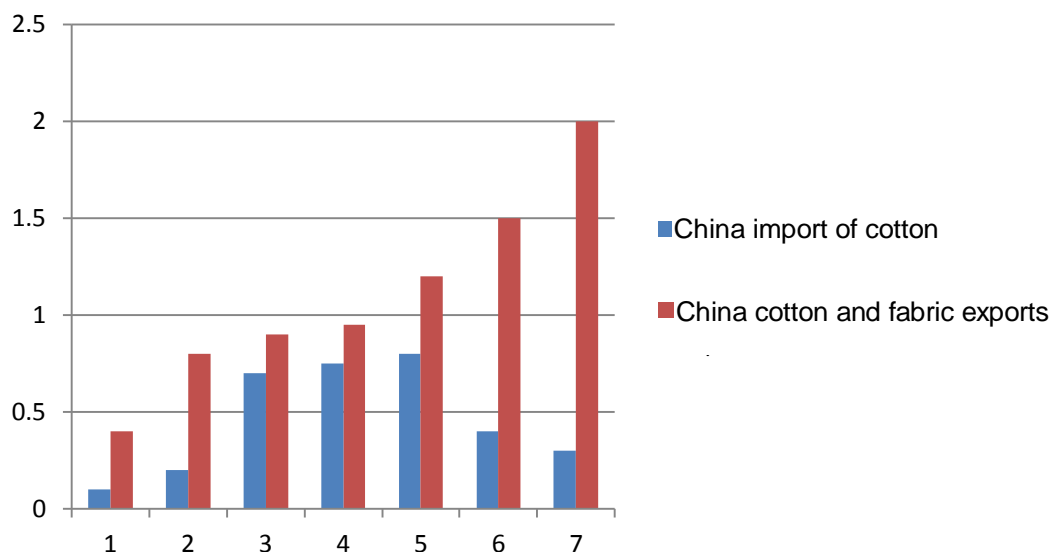
In 2008, overall volume of China's processing trade accounted for 41.1% of its international trade, with volume of exports by processing trade accounting for 47.3% of overall exports volume. China's trade surplus in terms of processing trade was 296.78 billion USD, which basically was equal to China's overall trade surplus (Table 1).

The trend in China's exports to Africa suggests that there are imports substituting opportunities in Africa for agricultural products. China is the world's largest producer and importer of cotton. Africa is a modest producer

**Table 1.** China's international trade (USD 100 Million).

Year	Overall volume	Volume of imports	Volume of exports	Trade surplus
2005	14221.2	6601.2	7620	1018.8
2006	17606.9	79.6.1	9690.8	1774.7
2007	21768.4	9588.2	12180.2	2592
2008	25616.3	11330.9	14285.5	2954.6

Source: COMTRADE, IPRCC working papers.

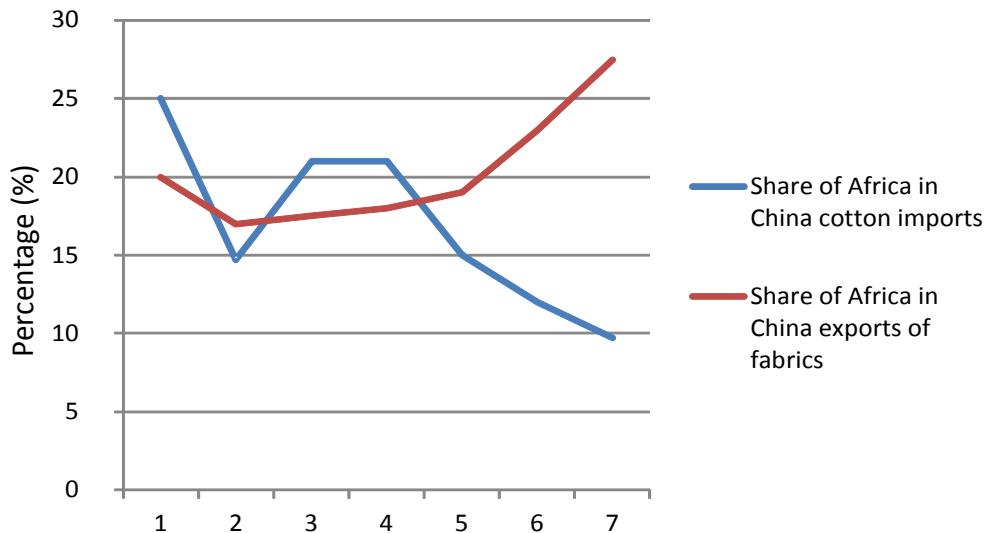


**Figure 1.** China imports of African cotton and China exports of yarn and fabrics to Africa.

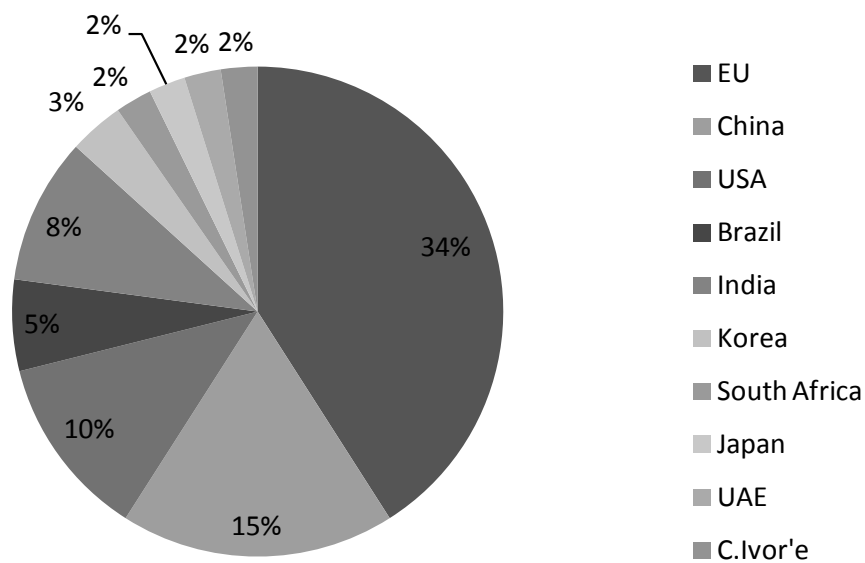
that exports a large part of its production as it has not been able to develop a competitive textile industry. According to ICAC, Chinese cotton imports increased rapidly between 2003 and 2006 and have diminished both in value and in volume. During the same period, African cotton exports decreased from 1 million tons to 0.5 million tons. China is the largest market for African cotton and these imports are processed into yarn and fabrics. A significant part of China exports of both yarn and fabrics go to Africa where they are used by the garment industry and by the informal sector. Thus, while the share of African cotton diminished from 25% in 2005 to 9% in 2008 of China's imports, the share of Africa's market in China's exports of cotton yarn and cotton fabrics rose to 26% in 2008 (Figures 1 and 2).

If one takes a comprehensive view of textile trade between China and Africa shown above, from cotton production to weaving, Africa's deficit has considerably increased as in 2008, Africa exported 180,000 tons of cotton to China (300 million USD) and imported 118000 tons of cotton yarn and fabrics (2 billion USD) from China. The deficit would be more important if one took into consideration China's exports of garments (made with cotton) to Africa. The rapid increase of Chinese exports of textile products to Africa is detrimental to the

survival of Nigeria's textile industry. The general China-Africa trade patterns have not directly benefited Africa's industrial development (Fan, 2010; Chaponniere et al., 2010). It shows that there exists a potential for import substituting activities by entrepreneurs in Nigeria and other African countries, rather than importing, foreign direct investment (FDI) in Africa's industrial sector would create employment. The dependence of Nigeria textile businessmen on liberal imports from China and other countries does not necessarily lead to growth in the Nigeria Textile Industry. It is to the advantage of the foreign countries' advanced textile industries. This kind of possibility was not predicted by neoclassical theory, which assumed that international trade was beneficial to all. However, the gains are not at "pareto optimum", the ratio of the benefits is skewed in favour of a more technologically innovated textile industry like China than Nigeria. Nigeria's quantum production in textiles, whether cotton textile, synthetic fibres or garments systematically declined every year (as shown in the appendix, Table 1). The textile industry performance is dismal. Hence, some form of trade protectionism is needed for the development of the domestic textile factories. Imports substitution in Nigeria textile industry is highly desirable. Dependency of the industry on foreign apparels is causing job losses,



**Figure 2.** Africa's share of China's cotton imports and exports of yarn and fabrics. From COMTRADE (fabrics made of cotton +85%) in IPRCC (2010) working paper series.



**Figure 3.** Nigeria's sources of imports 2007.

shrinking revenue and poverty. Policy of self-reliance and controlled interactions with China and other world textile industries must be seriously implemented.

Analysis of trade flow data in figure 3 reveals the increasing share of China in Nigeria's trade particularly as a major source of Nigeria's imports. China has increased its market share in Nigeria at the expense of the traditional trading partners as seen in the pie chart above. Traditionally, China was not a major destination of Nigeria's import, but its share has dramatically risen. In so far as some of the products exported by China to Nigeria are produced locally, and given the low level of competition of Nigerian producers due mainly to blinding

infrastructural constraints; displacement of local producers is evident.

Although, information about Chinese activities in Nigeria points to increasing economic (trade, and investment), social (health and education) and technical relations, the composition of Chinese FDI into Nigeria is fragmented. According to statistics, China has set up over 30 solely owned companies or joint venture in Nigeria actively involved in the construction, oil and gas, technology, services and education sectors (Ogunkola, 2006). The increased Chinese economic interests in

Nigeria can be broadly classified into two; private and public. According to information obtained from the Nigeria

Investment Promotion Commission (NIPC, 2009), Chinese private FDI is composed of agro-allied industry, manufacturing and communication sectors.

### Foreign direct investment (FDI)

UNCTAD “2010 World Investment Report” reveals that, in 2009, FDI flow to China reached 95 billion USD, occupied the second position in the world, only next to USA. In 2010, global FDI inflow was expected to rise up to 1200 billion USD; and in 2012, up to 1600 to 2000 billion USD. Today, China faces a new situation: as it has moved to a market-based socialist economy, government overwhelming control of the economy is criticized and enterprises are privatizing or becoming much more heavily influenced by market pressures. Issues related to domestic and international competitiveness are growing in importance. Entry into the World Trade Organization (WTO) in 2001 introduces new rules and new challenges for China’s industries, (Mao and Kang, 2005; Li, 2002). At the same time, production of industrial materials is growing faster than ever experienced before (In 1995, Nigeria joined the World Trade Organization (WTO) and the floodgates opened to second-hand clothing from the United States and Europe. As more and more used clothing came into Nigeria, more and more textile-related jobs are lost). Stable political environment, cheap labour and specifically favourable policies as well as tremendous market demand enabled China to be a country with the strongest commercial attraction worldwide (Gao, 2005), with lots of foreign direct investment (FDI). China’s rapid social and economic transformation benefited from economic globalization due to its diversifying manufactures and exports of cheap industrial finished goods, taking advantage of cheap labour supply. The opposite holds for Nigeria that has been concentrating on the export of primary products.

A sharp contrast exists between China and Nigeria and the rest of African states for the use of FDI. While China is strongly attracted to FDI, Nigeria is not. From 2000 to 2005 (see table 3), China attracted 326.8 billion USD of FDI accounting for 23% of the FDI flowing to developing countries. During the same period, sub-Saharan Africa attracted 71.5 billion USD of FDI, accounting for 5.07% of the FDI flowing to developing countries. Furthermore, the FDI rushing into China in large amounts since the 1980s did not only promote the transfer of surplus labour of China especially rural labour force, but also directly promoted China’s economic structural adjustment and technological progress, improving competitiveness. However, even with low FDI flow to Nigeria, it is for the extension of industries of developed countries which have failed to optimize the structure of the Nigerian economy. According to statistics of the ministry of commerce of China, the total contracted FDI in China was 1.4979 trillion USD by 2006, of which 956.38 billion

USD flew to manufacturing, accounting for 63.85%. Most of them went into traditional labour intensive industries such as textile, garment, shoe making and portable electronics with strong trade and employment creation effects (Jean-German, 2006). This shows that foreign capital has significant role in economic growth, which is essential for poverty reduction.

### Theoretical underpinning

This paper attempts to employ and apply the dependency and liberal economic theories to demonstrate how these theories help in the accurate analysis of the dependency of the Nigerian economy on international competitive economic systems over which Nigeria has little control. First, dependency theory is predicated on the notion that there is a “center” of wealthy nations and a “periphery” of poor and underdeveloped states, (Vincent, 2006). Resources are extracted from the periphery and flow towards the center in order to sustain the economic growth and wealth of the latter, and the poverty of the former. The main point here is that the economic development of the periphery is rendered impossible by the domination of the global economy by the already industrialized capitalist powers. Second, the major argument of the liberal economic theory is that economic liberalization will help in the increase of flow of foreign investment into developing countries, as a result of the easing of trade and exchange restrictions. The notion is that, in the process of homogenizing the political economy of every member state of the international community, the objective of creating a market society in a global scale is within reach (Biersteker, 1993). Again, one of the major objectives of liberalization is to reduce the resource gap in the LDCs, by improving the trade balance and encouraging a net capital inflow. Thus, the growing importance of international organizations such as the G7, IMF, WB, and WTO is indicative of the influence of liberal economic internationalism in the post-cold war period (Van and Biessen, 1996). However, these powerful transnational bodies, which embody free trade liberalism as their governing ideology, impose free market structures on developing societies. Liberalism creates dependency and stifles the infant industry in the periphery to the advantage of the centre. Since they are the primary organizations which formalize and institutionalize market relationships between states; they lock peripheral states into agreements, which force them to lower their protective barriers (GATT and NAFTA for instance), thereby preventing developing nations from developing trade profiles which diverge from the model dictated by the supposed “comparative advantage” (Burchill, 1996). All these were part of the factors that made the Nigerian textile industry and economy weak and therefore necessitate excessive dependence on imports of manufactures and exports of raw materials.

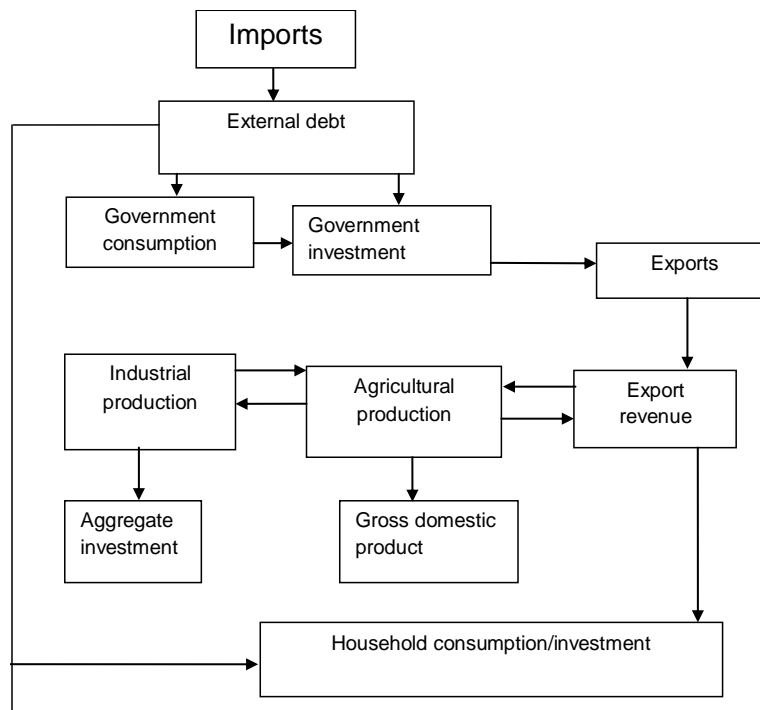


Figure 4. Macroeconomic effects of imports.

China takes advantages of its sophisticated infrastructure, surplus capital, cheap and surplus labour, textile innovation and weak Nigeria textile industry to export cheaper African prints, creating net negative impact on Nigeria.

**METHODOLOGY**

In order to analyze the effects of higher imports over exports on the textile industry and the aggregate economy, the complete structural model is constructed with market equilibrium identity, such that total supply of agricultural, industrial, and oil sectors equal aggregate demand.

$$PCRGDP = PCNC + PCNS + PCGDI + PCIO + PCX - PCIMP \quad (1)$$

Equation 1 represents a macroeconomic model, a structural model constructed with market equilibrium identity covering the micro elements of agricultural, industrial and oil sectors' demand. It is an identity, which shows that aggregate demand equals aggregate supply in the assumed three sectors. Where,

- PCRGDP = Per capita real GDP,
- PCNC = per capita national consumption,
- PCNS = Per capita national savings,
- PCGDI = Per capita national investment,
- PCIO = Per capita industrial output,
- PCX = Per capita exports, and
- PCIMP = Per capita imports.

From the model, we find that imports affect the national economy through various channels. It affects PGRGDP through import demands/expenditures. Consumption, investment, agricultural and industrial production are all affected through government and private sector import expenditures, which all have negative implications for per capita domestic productivity. The household

also pay indirect tax on imports, which on the aggregate causes inflation as shown in equation (2) below. This is because the transaction cost on imported goods, custom or import duties are transferred by the profit-seeking businessmen indirectly to consumers, per unit commodity sold. Greater chunk of the tax proceeds goes to the manufacturer, and not to the domestic government for infrastructural development. Uncontrolled taste for foreign apparels and other goods and services therefore causes domestic inflation.

**Inflation**

The inflation equation combines elements of monetarist, Keynesian and Structuralist explanations of the nature and causes of inflation. The inflation (INFLA) equation is specified as;

$$INFLA = f(BDFY, PCRGDP, PIMP) \quad (2)$$

Where,

- BDFY is budget deficits to GDP ratio,
- PCRGDP is per capita real GDP indicating productivity, and
- PIMP is import unit price.

Budget deficit to GDP in Nigeria has been financed by monetary expansion, which has inflationary consequences and also draws down on foreign reserves (Nyong, 1999; CBN, 2005; Oladipo and Akinbola, 2011). High imports (huge amount spent on petroleum subsidy) results in unmanageable public debts. Employment is also negatively affected in Nigeria by excessive imports because it depends on capacity utilization and aggregate demand. Imports and hence imports expenditures affect virtually all aspects of economic activity in Nigeria as seen in Figure 4.

The unidirectional link from external debt to government consumption and investment, from consumption and investment to exports represent the respective demand and supply functions. The bi-directional linkages between export revenue, agricultural and

**Table 2.** Sectoral distribution of some Chinese FDI in Nigeria 2006 to 2008.

Year/sector	2007 to 2008		2007	2007	2008	2008
	No. of firms	Capita N. million	Employment	Capita N. million	Employment	Employment
Oil, quarrying and mining	5	82	95	30	80	
Manufacturing	15	160	6455	30	365	
Agriculture	2	-	-	12650	100	
Building and construction	5	115	853	20	40	
Trading	14	78	433	62	140	
Services	7	17	670	30	210	
Lumbering and Timber	1	10	80	-	-	
General	11	128	1310	44	800	
Total	60	590	9896	12866	1735	

Source: NIPC (2009).

**Table 3.** FDI that china actually made use of (100 Million USD).

Year	Total	Foreign loans	Direct investment	Other investment
1979 to 1982	130.00	106.90	17.69	6.01
1983	22.61	10.65	9.16	2.80
1985	47.60	25.06	19.56	2.98
1990	102.89	65.34	34.87	2.68
1992	192.03	79.11	110.08	2.84
1995	481.33	103.27	375.21	2.85
2000	593.56	100.00	407.15	86.41
2001	496.72	-	468.78	27.94
2002	550.11	-	527.43	22.68
2003	561.40	-	535.05	26.35
2004	640.72	-	606.30	34.42
2005	638.05	-	603.25	34.80
2006	670.76	-	630.21	40.55
2007	783.39	-	757.68	35.72
2008	952.53	-	923.95	28.58

industrial production as well as government investment represent the respective production functions. Government investment is here indirectly linked through subsidies and industrial policies. The key to industrial development lies in the private sector. Thus agricultural and industrial outputs are determined on the supply side. The model also indicates that there is bi-directional relationship between aggregate investment and GDP on one hand and industrial and agricultural production on the other. This explains the relationship between cotton production (an agricultural activity) and textile manufacturing (an industrial activity).

Finally, there is unidirectional causality between household consumption/investment with export revenue and external debts, with GDP and with agricultural and industrial sectors given that household provide labour (labour-intensive manufacturing). Labour supply exceeds labour demand (in both agricultural and industrial sectors) in the case of excessive imports. Per capita productivity is negative, net exports is negative while external debts and inflation swell. Employment generation by the textile industry is highly constrained by imports, there is more lay off, most of the textile industries either closed down or grossly underutilized their capacities for more than 20 years. In the next section, the causality properties of the macro model are tested empirically and analyzed using a small vector auto-regressive system.

## EMPIRICAL RESULTS AND DISCUSSION

Data for this study were assembled from Central Bank of Nigeria (CBN) Statistical bulletin from 1988-2008. Annual time series data are used. The effect of imports on other macroeconomic variables was tested using nth order vector-regressive model of the form:

$$\Delta \ln Y_t = \beta + \sum \theta \Delta (\ln Y)_{t-1} + \sum \phi_i \Delta (\text{PCIMP})_{t-1} + \mu_t \quad (3)$$

Where  $\Delta$  indicates change or the first difference;  $\ln$  denotes Log value, PCIMP is the per capita import in Naira (Nigeria currency);  $Y$  denotes other types of macroeconomic variables namely; PCRGDP, PCNC, PCGNS, PCGDI, and PCIO. PCIO in index form (1995 = 100).

Table 4 reports the unit root tests for each of the 9 variables including imports in logarithm and in first difference. ADF is the augmented Dickey-Fuller test,



**Table 4.** Results of tests for non-Stationarity in the logarithms of the data series (unit Root test).

Variable (in log)	Optimal lag length	ADF	pp
LPCGDI	3	-0.426(0.986)	-6.432(0.711)
LPCRGDP	3	-2.275(0.447)	-15.09(0.183)
LPCNC	3	-2.942(0.144)	-0.640(0.879)
LPCIMP	3	-2.455(0.351)	3.823(1.052)
INFLA	2	-5.107(0.0001)	-4.669(0.201)
UNEM	2	3.165(1.00)	-8.360(0.644)
LPCIO	3	-1.614(0.787)	-14.552(0.208)
LPCGNS	1	-1.067(0.934)	-8.331(0.599)
LPCX	2	2.494(0.483)	-5.647(0.813)
<b>In first difference</b>			
$\Delta$ LPCGDI	0	-6.228(0.001)	-48.663(0.0064)
$\Delta$ LPCRGDP	0	-3.469(0.028)	-24.352(0.050)
$\Delta$ LPCNC	1	-3.266(0.084)	-18.464(0.078)
$\Delta$ LPCIMP	2	-5.482(0.008)	-25.456(0.018)
$\Delta$ INFLA	2	-4.293(0.097)	-20.524(0.0308)
$\Delta$ UNEM	1	-3.221(0.203)	-12.082(0.196)
$\Delta$ LPCIO	1	-4.540(0.006)	-18.668(0.063)
$\Delta$ LPCGNS	2	-5.440(0.011)	-20.611(0.062)
$\Delta$ LPCX	0	-4.183(0.000)	25.808(0.021)

(Green, 2002; Said and Dickey, 1984; Elliot and Rothenberg, 1996). PP is Phillips and Peron (1988) test. They correspond to the root test with trend. Optimal Lag length is obtained from Akaike information criterion (AIC) embedded in the TSP COINT command. Values in brackets are the corresponding p-values. The results indicate that the variables are non-stationary in logarithm. With respect to the first difference, the results show that all the variables are stationary according to both the ADF and PP tests. Consequently, we deduce that generally the variables are stationary in the first differences of their logarithms. The results indicate negative relationships between excessive imports and other macroeconomic variables. This result confirms our earlier argument about the net negative impacts of the theory of liberalism and economic dependency on the economies of the periphery nations. Although there are causal relationships between PCIMP and the macro economy, the effect is negative on the Nigerian textile industries.

## CONCLUSION AND RECOMMENDATIONS

Rapid growth in China's manufactured exports has reduced African manufacturers' market share in both domestic and foreign markets for clothing industries as confirmed by Villoria (2009). Besides, China's apparel manufacturing sector is supported by low wages and an enormous potential labour pool with higher levels of innovation than Nigeria or any other African country.

Nigeria is a net loser in textile trading with China. Although Nigeria has a rich textile history, Imports of cheap textile, (used and new), is grossly responsible for the decline in textile production in Nigeria. These imports have undermined both hand and mechanized textile production in the country which endangers the self-sufficiency of the Nigerian people. The Keynesian Multiplier theory underlying fiscal policy, claimed to be used through government lavished expenditure or taxation by the marketing boards have not worked successfully in the Nigerian textile industry. Fluctuations are often the result of exogenous factors over which domestic policies have no control, leading to intractable and unpredictable price fluctuations. The structural model employed above explains the structural imbalances associated with liberalism in terms of imports, exports, inflation, budget deficits, slow GDP growth rate etc. The concepts of liberalism are free trade, supply, demand and laissez-faire government. It was believed that the liberal market produces higher incomes, which in turn generate more demand for products, greater growth, and more jobs. However, it has brought stiff market competition at the expense of the Nigeria textile industry. Dependency theory is an explanation of the economic development of a state in terms of the external influences-political, economic and cultural, on national development policies. It argues that such influences favours the centre and limits the development possibilities of the subordinate (periphery) economies. Both dependency and liberal theories are subsets of economic theory in favour of

globalization which have not impacted favourably on the Nigeria textile trade with China. Liberalism creates dependency of weaker industries on the stronger ones, hence, making the latter richer and the former poorer.

As the global economic landscape is experiencing rapid changes, globalization is creating more liberalism, dependency, opportunities and challenges. The potential impact of science and technology innovation on Nigeria's cotton exports is negative. This is consequent upon the substantial research on alternatives to cotton. Chemical and fibre make up that have the same quality may make cotton to be less competitive. So the issue of land restriction may not be so relevant to China in the future for the production to cotton alternatives. What is also needed to make a modern Nigeria is indigenous manufacturing through science and technology innovation for both domestic and international markets. Chinese-made chemical fibre manufacturers now use chemical fibre as suitable for women's blouse, Paper, gifts and shopping bags, chemical fibre ropes, shoes, belt, table tennis set, thermal underwear etc. It is a challenge for Nigeria and other African countries to also be proactive in science and technology innovation, research and development in the textile industry.

Technology transfer and diffusion should be an important component of the national science and technology innovation policy. Mechanisms for the promotion, commercialization and diffusion of locally developed textile technologies should be introduced with a drive to develop small, medium and large scale industrial firms. These firms should be encouraged to utilize, adapt, diffuse and replicate imported and local technologies that are cost effective (in product, process and administrative innovation) without compromising quality.

More private sector initiative is highly needed in the Nigerian textile industry to make it internationally competitive. Nigeria is to potentially follow in the footsteps of BRICS economic development, with a focus on manufactured exports. The key stepping stones toward this advancement are -infrastructure development, availability of export markets and manufacturing know-how must be achieved. Nigeria must first overcome its inadequate supply of energy, roads, rail and ports infrastructure. Africa's competitiveness in cotton production and textile industry in the long run will be boosted by China's constraints in cost of land for cotton and industry productions, water shortage and drought, rapid urbanization.

There is need for Nigeria to lessen export-import dependence through the diversification of domestic production of some products (textile products etc) currently imported. Exports dependence tends to make the Nigerian economy less competitive and vulnerable to those external occurrences of the effect of commodity price instability much beyond her control. Diversification of production means that adverse market conditions in one commodity tend to be softened or counterbalanced

by gains from other commodity trade. Per capita productivity would increase, leading to gains in income generation and income stabilization. It will further lessen proneness to economic instability. Nigeria and most African countries export raw materials and thus remain economically and politically weak. Policies that will radically increase the power generation and consumption, and strengthen port reforms are needed; not only increases in productivity and revenue of ailing industries to generate improved supply. Increased trade with China and the rest of the world, especially in value-added exports is recommended.

## REFERENCES

- Adeleye RA (1973). The Sokoto Caliphate in the nineteenth century, In: Ajayi JFA and Crowther M (Eds), *History of West Africa*; New York, Columbia University Press.
- African Post-colonial Literature in English, APLE (2003) Sankore Publishers, Lagos.
- Biersteker TJ (1993). *Dealing with Debt: International Financial Negotiations and Adjustment Bargaining*. Westview Press, Oxford.
- Bradford C (1990). Policy Interventions and Markets: Development Strategy Typologies and policy options, In: Gary G and Donald W (Eds), *Manufacturing miracles; paths of industrialization in Latin America and East Asia*. Princeton University Press pp. 32-54.
- Burchill S (1996). *Theories of International Relations*. Macmillian Press Limited, London.
- Carl L (1980). The Influence of colonial policy on the growth and development of Nigeria's industrial sector, In: Lidholm and Eicher (Eds), *Growth and Development*, Michigan State University Press.
- CBN (1998-2008). Central Bank of Nigeria Publications, <http://www.cenbank.org/documents/statbulletin.asp>. Accessed July, 2011.
- CBN (2005). Budget Deficits and Inflation, "Statistical Bulletin" Vol. 16. Abuja.
- Centre for Imperial and Post-colonial Studies (2012). *British Decolonization in Africa*. University of Southampton.
- Chaponniere O, Gabas J, Zheng H (2010). China and Africa in Agriculture: A Background on Trade. Conference paper, IPRCC, Beijing.
- Djeri-wake N (2009). Impact of Chinese investment and trade on Nigeria economic growth. African Trade Policy Center (ATPC) Working Paper, Economic Commission for Africa pp.1-38.
- Elliot G, Rothenberg T (1996). Applied Econometrics, Model and Analyze Financial and Economic Systems using Augmented Dickey Fuller (ADF) Test.
- Eneji MA, Guo Z, Odey FA (2010). Impact of globalization on minority ethnic group-The case of Niger-Delta. LWATI, J. Contempor. Stud. 7(3):146-163.
- Fan S (2010). China's Agriculture and Rural Development; Implications for Africa. Conference paper, IPRCC, Beijing.
- Gao B (2005). Loss of Local Protectionism and Market Barriers. China Ind. Econ. 3:69-76.
- Green WH (2002). *Econometric Analysis*. Fifth Edition, Prentice Hall: New Jersey ISBN 0-13-066189-9.
- IMF (2012). Africa's Regional Outlook (Data and Statistics). [www.indexmundi.com/Nigeria/inflationrate.html](http://www.indexmundi.com/Nigeria/inflationrate.html). Accessed May 2012.
- IPRCC (2010). China Africa in Agriculture-a background paper on trade, investment and aid in agriculture.
- Jamie NS (2007). Threadbare: the used-clothing trade and its effects on the textile industries in Nigeria and other sub-Saharan African nations. *Contemporary Perspectives* 3(5):1-20.
- Jean-German G (2006). The role of capital accumulation, adjustment and structural change for economic take-off. Empirical evidence from Africa growth episodes. *World Development* No.2.
- Jetter J (2002). The dumping Ground" Washington Post (22 April);

- A0122 October 2007 <http://www.washingtonpost.com>.
- Li X (2002). Opening address at the China international energy and environmental protection exhibition and workshop; State Economic and Trade Commission (SETC), Beijing, November 5.
- Mao P, Kang SY (2005). Building up a circular economy model with Chinese characteristics. *Green Economy* pp.56-60.
- Modern Nigerian Textiles (MNT) (2007). National Gallery of Arts, Nigeria <http://www.gov.ng> Accessed July 2011.
- Mutumwa M (2009). Defining the Role of the State in Post-colonial Africa. [newsdesk@newzimbabwe.com](mailto:newsdesk@newzimbabwe.com). Accessed May 20, 2012.
- Nina S (2010). Chinese Devils? Perceptions of the Chinese in Lome's Central Market. *African Affairs* 99:217-267.
- NIPC (2009). Nigeria Investment Commission; Consolidated 2006-2008 Report at, [www.nipc.gov.ng/importantdocument/2006-2008](http://www.nipc.gov.ng/importantdocument/2006-2008). Annual Report.
- Nyong MO (1999). The Macroeconomic Effects of Fluctuations in oil revenue in Nigeria (1970-1996) *Journal of Economics*, University of Calabar 2(1):27-37.
- Ogunkola EO (2006). An Empirical Evaluation of Trade Potential in the Economic Community of West African States. AERC Res Paper 84.
- Ohiorhenuan JFE, Poloamina ID (1991). Building Indigenous Technological Capacity in African Industry: the Nigerian case, in Stewart et al. (eds), *Alternative Development Strategies*; New York, Oxford University Press pp.294-320.
- Oladipo SO, Akinbola TO (2011). Budget Deficit and Inflation in Nigeria; A Causal Relationship. *J. Emerg. Trends Econ. Manag. Sci. (JETEMS)* 2(1):1-8.
- Philip PCB, Peron K (1988). Testing for Unit Root in Time Series Regression. *Biometrika* 75:335-400.
- Ravallion M (2008). Are there lessons for Africa from China's success against poverty? *World Bank Policy Research*; working paper series.
- Ron S, Hannah P (2011). Regulatory Reforms in West Africa Cotton Trade. *OECD Working Party of the Trade Committee*.
- Rozelle SA, Huang J, Jin H (2000). Bureaucrat to Entrepreneur-the changing role of the state in China's transitional commodity economy. *Economic Development and Cultural Change* 48(2):227-252.
- Said E, Dickey AD (1984). Testing for Unit Roots in Autoregressive Moving Average Models of Unknown Order. *Biometrika* 71:599-607.
- The Economist (2006). Africa's Economy; A glimmer of light at last? 24-30 June pp.47-48. [www.economist.com/node/7089006](http://www.economist.com/node/7089006), accessed October, 2011.
- Toyo E (2000). Background to Globalization. Academic Staff Union of Universities (ASUU) publications. University of Ibadan press.
- Van BC, Biessen G (1996). Trade Possibilities and structure of foreign trade: the case of Hungary and Poland. *Comparative Economic Studies* 38(2,3):1-19.
- Villoria NB (2009). China and the Manufacturing Terms of Trade of African Exporters. *J. Afr. Econ.* 18(15):781-823.
- Vincent F (2006). *Dependency Theory: An Introduction*. Mount Holyoke College, South Hadley, M.A.
- Walter R (1973). *How Europe Underdeveloped Africa*. Bogle-L' Ouverture Publications, London and Tanzania Publishing House, Dar-Es-Salam.
- World Bank (1994). *Nigeria: Structural Adjustment Program, policies, implementation and impact*. Washington DC. World Bank Press.
- Zhao X (2009). The sustainability of cotton production in China and Australia: comparative economical and environmental issues. *University of Queensland Working Paper* pp.1-17.

## Appendix

**Table 1.** Major indicators of declining performance in Nigeria's textile industry from 1997 to 2010.

Year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Capacity utilization	50.0	33.4	20.4	21.4	31.8	35.	34.6	30*	48*	56*	40	38.6	35.2	32.5
Output of cotton (textiles)	10 822 03	10 665 098	10 390 434	10 626 065	34 912	35 119	34 840	34 953	34 967	30 826	38 122	42 628	35 884	36 190
Output (synthetic fibres)	3 370 593	3463 098	3 336 095	3 356 637	612 463	609 855	605 220	528 346	620 750	590 628	540 883	659 110	582 714	508 608
Garments (dozens)	400 141	290 516	274 589	288 445	26 164	26 164	26 890	26 855	30 286	31 335	30 194	33 552	29 185	33 440
Exports (textiles)	1 540.5	876.0	1 259.4	1 100.8	3 293.8	16 497.3	1 338.2	1 000.1	690.3	2 439 0	1 280.0	1 105.2	905.5	1200.8
Imports (textiles)	5 517.0	5 646.3	4 897.7	7 518.0	28 480.3	16 454.0	24 201.0	27 775.7	24 267.0	16 433.9	25 668.9	30 954.3	42 856.2	50 726.4
RGDP	150.20	155.29	160.19	163.89	184.5	212.3	260.6	232.8	271.7	315.8	325.7	361.3	398.9	463.5
MVA	169.4	147	154.6	166.4	148.7	140	150	195.8	218.7	194.2	180.8	184	198.5	243.4
Inflation	10.67	7.86	6.62	6.93	18.87	12.88	14.03	15.00	17.86	8.22	5.41	11.58	12.54	13.72

NBS annual abstract of statistics, 2006, 2010; Central Bank of Nigeria (CBN) 2000 to 2010 statistical bulletin; International Monetary Fund (IMF) 2011 World Economic Outlook.

\*CBN figures are estimates and subject to verification after surveys.

MVA, Manufacturing Value-added; RGDP, Real GDP.