# Trade Liberalization - Implication for Informality in Nigeria

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**Abstract**

This study examined the dynamic response of informality to the openness of the Nigerian economy over the period 1970 to 2011. The study used ordinary least squares (OLS) methodology. The results of the long-run model indicate that openness (though not statistically significant) increases informality, while state regulatory activities impact significantly and positively on informality in Nigeria. The study recommends that policies that encourage openness in Nigeria should be carefully implemented so that informal activities in the external sector (which are predominantly illicit) can be curtailed. Also, excessive/repressive state regulatory activities that could drive economic units underground should be avoided.

**Keywords:** Trade Liberalization; Informality; OLS; Cointegration; Nigeria

## Introduction

The informal sector can be defined as market-based production of goods and services, whether legal or illegal, that escape detection in the official estimates of gross domestic product (GDP). The activities in this sector cover almost every field of economic activity, ranging from petty trading and personal services to informal construction, manufacturing and repairs (Smith, 1994; Ajakaiye & Akerele, 1996; CBN/FOS/NISER, 2001; Oduh et al, 2008). In Nigeria, the activities in this sector include several small and unregistered sole proprietor businesses, and in some instances, joint-partnership businesses which can be found both in rural and urban settlements across the country. However, the nature of the economic activities engaged in varies considerably from one locality to another. For example, in the rural areas, farming activities and allied occupations such as hunting, fishing, weaving, blacksmithing, basket and pot making as well as leather works are more prevalent. However, in urban centres like Lagos, Enugu, Abuja, Port Harcourt, and Kano, informal economic activities include trading, small scale manufacturing and repairing industries, such as carpentry, upholstery, furniture making, woodworks, metalworks, bakery, goldsmithing, tailoring, bricklaying, and printing. Those in the repairing occupations include, among others, the automobile mechanics, electricians, clock and watch repairers, and cobblers, (Olowu & Okotoni, 1996).

Apart from the economic activities enumerated above, numerous informal sector activities in contemporary Nigeria are illicit, especially those conducted on the external scene. These activities include drug peddling/trafficking, currency trafficking, money laundering, smuggling, advance fee fraud (419), over invoicing / under invoicing, ‘crude oil bunkering’ or theft, kidnapping for ransom, illegal arms trade, human trafficking, among others. Ezeobi (2012) estimated that Nigeria lost about $7 billion to crude oil theft in 2011. Obviously, the main feature of the enterprises in this sector is that they

typically operate outside the regulatory capture (that is, not registered with the Corporate Affairs Commission and so do not subscribe to both corporate income tax and Pay-As-You-Earn tax), and hence could significantly reduce potential state revenue (Fleming, Roman & Farrell, 2000; Gbanador, 2007).
From the foregoing, it can be deduced that the increasing quest for trade liberalization or openness of the Nigerian economy to international trade can encourage the emergence and growth of the illicit activities of the Nigerian informal sector. In other words, it is expected that the more open the economy is the higher the size of the informal sector. Unfortunately, none of the existing studies on informality in Nigeria has empirically examined the response of the informal sector to trade liberalization. This study seeks to address this research gap. Specifically, the objective of this study is to determine the impact of trade liberalization on informality in Nigeria in order to provide evidence based policies that will enhance the growth and development of the Nigerian economy. This study is therefore a major step towards eliminating dualistic markets and promoting a well functioning national economy in Nigeria.

**Theoretical Literature (Theories of Informality):**
Several theories have been developed in the attempt to understand the concept of informality. These include: modernization, dependency, structuralism and neo-liberalism theories (Yusuff, 2011).

**Modernization Theory:** The main proponent of the modernization theory is Rostow (1960). He characterized informality in the less developed countries largely as a "social problem" internal to and caused by the backward socio-economic systems of individual countries. According to him, the policy prescription was for these countries to acquire "modern" values, "modern" legal institutions and political systems, and "modern" capitalist economies. In most cases, the "modern" was understood as being synonymous with western values, institutions, and market economies. In essence, the issue of informality is not rooted in capitalist exploitation and extraction (as argued successively by neo-Marxist and dependency theorists), rather these countries had not yet been sufficiently incorporated into the modern world or the international economy. Thus, it is only a matter of time and these countries would "take-off" and "catch-up" with the developed countries. Proponents of modernization theory saw the informal sector as a remnant of traditional, pre-capitalist modes of production and subsistence strategies common to isolated rural communities such that informal sector economic units were trapped outside the modern economy because they lacked proper education, skills, and value orientations. The main weakness of the modernization theory is that the informal sector is neither seen as an important component of the overall economy that can engender economic growth, nor as a reservoir of entrepreneurial training and talent. It is seen as a problem to be solved and not a development strategy to be harnessed and promoted.

**Dependency Theory:** It was the pioneering works of ILO (1972) and Hart (1973) that crystallized the phenomenon of unregulated economic activity into the term "informal sector". Hart's contribution had such a broad and original impact because he focused on the complex, organized, and dynamic income generating activities of informal enterprises. In effect, he found that informal activities were not a mere extension of traditional subsistence strategies and that participants in these unregulated activities were not universally condemned to poverty and marginality. However, other scholars working within the dependency tradition had characterized informal workers as universally poor and emphasized the sector's supposed marginal position vis-à-vis the modern capitalist sector (Portes & Schauffler, 1992). Furthermore, in terms of developing a systematic definition of what constituted the informal sector, proponents of the dependency theory (such as Tokman, 1978; PREALC, 1978), often described the many common characteristics of enterprises in the sector. These characteristics include: little capital, low technology and production, little profits, utilization of unpaid family labour, easy entry and exit, low efficiency and competition. Furthermore, the dependency approach saw the goal of informal activities as mere survival, not profit maximization. Informal firms were often characterized as taking advantage of their ability to avoid taxes and regulations and exploiting niche areas overlooked by larger and less flexible firms. The weakness of the dependency theory is that it sees the informal labour arrangement as taking place largely outside the exploitative formal relations of production. As such, the informal sector was viewed largely with suspicion as a mere transposition of the rural subsistence sector into the urban environment.

**Structuralism:** Structuralists insist that informality is not simply the result of excess labour supply, or over-regulation. Instead, the central element of the structuralists' theory is the insistence that informality is in essence an alternate form of labour utilization (and often exploitation) by capital. Put differently, Maloney (2004) stated that informal sector workers are not just there by some accident or flaw in capitalist development. Instead, these workers are actively "informalized" by capital under the logic of peripheral capitalist accumulation. A critical shortcoming of this theory is that while industrial subcontracting is a central feature of informal activities in Latin American cities, it is a comparatively insignificant feature of informal sector activities in developing countries like Nigeria. The common feature in African informal sector is the 'subsistence' informal economy in which economic actors are fully occupied in informal means of income generation (Capecchi, 1989; Ishola, 2008).

**Neo-liberalism Theory:** Neo-liberalism is an ideology based on economic liberalism. The ideology favours economic policies that minimize the role of the state and maximize the private business sector. Neo-liberalism seeks to transfer control of the economy from public to the private sector under the belief that it will produce a more efficient government and improve the economic health of the nation. According to De Soto (1989), a key proponent of this ideology, the informal sector is a response to excessive state regulations and other unfavourable macroeconomic conditions. This theory subscribes to the notion that the informal sector comprises entrepreneurs who choose to operate informally in order to avoid the costs of formal registration and other unfavourable conditions in the business environment. Proponents of neo-liberalism believe that entrepreneurs would continue to produce informally so long as government procedures are cumbersome and costly, property rights remain deficient and accessibility to productive resources like finance and technology remain elusive. Under this ideology, those entrepreneurs who generate income for themselves and their families in the informal sector are regarded as the 'real revolutionaries', who heroically stand up to the tyranny of excessive state regulations; those informal workers are the real seeds of the free market (deregulatory) doctrine.

**The Concept of Trade Liberalization**

In general, trade liberalization has been viewed as a deliberate and persistent effort to open up a country's economy for freer trade across borders such that countries become more interdependent (Krueger, 1999; Greenaway, 1998). In this study, however, we define trade liberalization as the removal of barriers to trade such as quotas, import and export restrictions, and exchange rate controls (Obokoh, 2008). Even though there are several measures of trade liberalization in the literature, this study adopted the trade dependency ratio, which is the ratio of exports and imports to GDP.

Nigeria's experience of trade liberalization has been manifested in the policies that encouraged increased openness, capital account liberalization, establishment of free trade zones, regional integration, bilateral and multilateral trade agreements, among others. Nigeria's trade policy favoured import substitution in the period 1960 to early 1980s. This period witnessed huge investments in state-owned enterprises. Unfortunately, the economy went into rapid economic recession towards late 1970s and early 1980s due to fall in oil prices (Alao, 2010; UNEP, 2005).

Following the introduction of Structural Adjustment Program (SAP) in 1986, the economy witnessed increased liberalization. The liberalization policies led to the removal of all forms of protections and subsidies, relaxed exchange controls, increased privatization and deregulation policies, and establishment of World Trade Organization (WTO) in 1993 that replaced General Agreement on Tariffs and Trade (GATT) of 1947 (Alao, 2010). These policies point out the unrelenting quest by the federal government to open up the economy through bilateral and multilateral cooperation, agreements and trade interests. The objectives of these policies are to create favourable markets for the country's export products, acquire appropriate and sustainable technologies, promote regional integration and cooperation, and take advantage of the opportunities and concessions in international trade relations. Nigeria is also taking full advantage of the African Growth and Opportunity Act (AGOA) and the new EU-African, Caribbean and Pacific Agreement (UNEP, 2005).

Despite the above expected positive effects of the trade liberalization policies in Nigeria, some researchers still believe that the beneficial effects of these policies remain significantly limited (Obokoh, 2008; Iyanda, 2003; UNEP, 2005). The economy is still largely dependent on oil for foreign exchange. Share of imported consumer goods, and imported raw materials have been on the increase, while inflation and unemployment have remained problematic. Exchange rate depreciation has continued to increase the overall cost of production. All these indicate that Nigeria may not have been so successful in her acceptance of the mutual benefits from trade across borders based on the theory of comparative advantage. This study is therefore aimed at empirically establishing the impact of trade liberalization on the informal sector in Nigeria.

**Empirical Literature**

Schneider (2007) used the DYMIMIC and Currency Demand Methods to estimate the informal economies of 145 developing, transition, and highly developed OECD economies over the period 1999 to 2005. The study found that an increased burden of taxation and social security contributions, combined with labour market regulations are the main causes of informality in those economies. Furthermore, the results show that the informal economy reduces corruption in high income countries, but increases corruption in low income countries.

Oduh et al (2008) used the general MIMIC methodology to estimate the determinants of the informality in Nigeria over the period 1970 to 2005. The study found that declining income, high tax burden, high black market premiums, and government control of the economy are some of the most important drivers of informality in Nigeria.

Salisu (2001) utilised the MIMIC approach in the study of the hidden economy in Nigeria. The study found that tax rate, inflation and declining per capita income are the major determinants of informality in Nigeria.

Ariyo and Bekoe (2012) estimated the informal sector in Nigeria over the period 1975 – 2010 using the currency demand approach. They found that tax rate, inflation, interest rate, high income inequalities, low productivity of the Nigerian tax system due principally to deficiencies in tax administration and collection systems, and complex legislation are the main drivers of informality in Nigeria.

Ogbuabor and Malaolu (2013) examined the size, development, and causes of the informal sector of the Nigerian economy. They found that unemployment, tax burden, government regulation, and inflation are the most important drivers of informality in Nigeria.

Adenikinju and Chete (1995) examined productivity, market structure and trade policy reforms in Nigeria. They found that import liberalization has a negative impact on total factor productivity in the manufacturing sector.

Nwosa, Saibu and Fakunle (2012) examined the relative contribution of trade liberalization on trade tax revenue in Nigeria for the period 1970 to 2009 using secondary data. The study found that trade liberalization, public debt, trade openness, gross domestic product and labor force impacted positively on trade tax revenue while exchange rate had negative effect.

Matthew (2011) examined the role of trade liberalization on the formal-informal sector of Nigeria by investigating whether or not the trade liberalization process has any effect on both the reduction in the wage differential between registered and non-registered (roughly formal and informal) workers and the fall in the proportion of registered workers. The results suggest that the fall in the wage gap between registered and non-registered workers in the manufacturing sector was affected by trade-related variables, particularly, by the import penetration ratio. However, the study did not find robust evidence that trade liberalization had a substantial effect on the fall in the proportion of registered workers.

Urama, Nwosu and Aneke (2012) sought to find out the possibility of recovering the tariff revenue that will be lost in the process of liberalization through restructuring of the domestic tax system in Nigeria by examining the buoyancy and elasticity of the tax system. Using the dummy method, commonly known as the Singer approach, the Nigerian tax system as a whole was found to be relatively buoyant but not elastic. The results further confirmed the ineffectiveness of the various reforms and domestic tax systems (DTMs) in enhancing the productivity of the tax system.

Manni and Afzal (2012) assessed the impact of trade liberalization on Bangladesh economy between the periods 1980 to 2010, using simple Ordinary Least Squares (OLS) methodology. They found that GDP growth increased owning to liberalization. They also found that trade liberalization does not seem to have affected inflation in the economy while both real export and imports have increased with greater openness.

**Research Gap / Contribution to Knowledge**

In spite of the numerous empirical studies on the determinants of informality in Nigeria including the ones enumerated above, no empirical study known to the authors of this paper has examined the dynamic response of informality to openness in Nigeria. This study is therefore a pioneer empirical attempt to fill this gap in the literature. Furthermore, this study will deepen our understanding of the phenomena of trade liberalization and informality in Nigeria.

**Methodology**

This study adopted time series analysis, using simple ordinary least squares (OLS) methodology. Our estimation procedure began by pre-testing the time series properties of the data using the Zivot–Andrews unit root test technique since most economic variables have been shown to be non-stationary. The Zivot–Andrews technique provides a more robust result than the usual Augmented Dickey Fuller (ADF) test and also accounts for structural break (Andrews & Zivot, 1992). The test of stationarity was then followed by the Johansen cointegration test which sought to establish whether or not the dependent variable (informality) is cointegrated with the explanatory variables. Here, the confirmation of cointegration relationship means that the long run model cannot be spurious (Johansen, 1998).

The study covered the period 1970 to 2011 (a total of 42 observations) in line with the availability of data. Most of the data were collected from CBN Statistical Bulletin, 2011 as well as Ogbuabor & Malaolu (2013). Following Ogbuabor and Malaolu (2013), we specify our model as follows:

$$\mathbf{INFO = \alpha_0 + \alpha_1 UNEM + \alpha_2 TAXB + \alpha_3 RGC + \alpha_4 INFR + \alpha_5 OPEN + \alpha_6 CIC + \mu} \quad \ldots \quad \mathbf{(1)}$$

Where: INFO = size of informal sector in %GDP (obtained from Ogbuabor & Malaolu, 2013);

UNEM = unemployment rate;

TAXB = burden of taxation (measured as ratio of total tax to GDP);

RGC = real government consumption in %GDP (proxy for state regulatory activities);

INFR = inflation rate;

OPEN = trade liberalization/openness (measured as total trade in %GDP);

CIC = currency in circulation (M1) in %GDP; $\alpha_i$ are the parameters of the model while μ is the error term. Our a priori expectations include $\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5, \alpha_6 > 0$.

## Results and Discussions

The results of the Zivot-Andrews unit root tests indicate that while some of the variables (INFO, RGC, INFR) are stationary at levels, others (UNEM, TAXB, OPEN, CIC) are stationary after first differencing. The Johansen test for cointegration also indicates that there are at least four cointegrating vectors. In other words, a stable long-run relationship exists between the series. The result for the long run relationship is now presented in Table 1below:

**Table 1: Estimated Long Run Regression Result for the Informality model**

| Variable | Coefficient | t-statistic | Probability |
|---|---|---|---|
| Constant* | 59.56126 | 12.41 | 0.000 |
| UNEM | -0.1103273 | -0.50 | 0.617 |
| TAXB* | -0.8955294 | -1.95 | 0.059 |
| **RGC*** | 0.0467699 | 2.84 | 0.008 |
| INFR | 0.0183643 | 0.30 | 0.765 |
| OPEN | 0.0006427 | 0.35 | 0.729 |
| CIC | 0.4112438 | 1.22 | 0.229 |

Key: * Significant at 10% level; $R^2$ = 0.2919; F( 6, 35) = 2.40; Prob > F = 0.0474;
Source: Author's computation using STATA 11

The results in Table 1 above indicate that all the variables conformed to a priori expectations except unemployment rate and tax burden. Even though the coefficient of the openness variable (OPEN) is not statistically significant at 5% level, a 1% increase in this variable leads to a 0.064% increase in informality in Nigeria. The implication is that any policy that encourages trade liberalization in Nigeria must be carefully implemented in order not to encourage unreported economic activities. The real government consumption (RGC) coefficient is statistically significant at 1% level; and a 1% increase in RGC leads to 4.7% increase in informality in Nigeria. Overall, the model is statistically significant as seen from the probability of the F-statistic. The $R^2$ of 29% indicates that the two significant regressor variables have explained about 29% of the overall variations in the dependent variable.

## Conclusion and Policy Recommendations

Following the lack of empirical evidence on the dynamic response of informality to openness in Nigeria, this study examined the impact of trade liberalization on informality in Nigeria for the period 1970 to 2011 as a means of providing evidence based policies that will enhance the growth and development of the Nigerian economy. The estimation results of the long run model indicate that openness of the Nigerian economy (though not statistically significant) increases informality. The results further indicate that state regulatory activities impact significantly and positively on informality in Nigeria.

A major policy recommendation which can be drawn from the above findings is that any economic policy that encourages openness in Nigeria should be carefully implemented and monitored so that informal activities in the external sector (which are predominantly illicit) can be curtailed. Also, state regulatory agencies should avoid repressive economic policies that could drive economic units in Nigeria underground. Indeed, the economy cannot function without regulation, but excessive regulation could also be detrimental as seen from Table 1 above. Government is therefore advised to moderate regulations so that dualistic markets can be eliminated in Nigeria.

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