# **Environmental Factors and Business Operations in Nigeria**

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#### Abstract

The paper sets out to establish the nexus between business operations (BO) and the economic environment in Nigeria from 1981 – 2013. Extant literature relating to inflation rate, interest rate, Unemployment rate, exchange rate as the independent variables and business operations as the dependent variable were reviewed. The ordinary least square method of analysis as well as appropriate statistical and econometrics tests of significance were used to analyse the longitudinal data 1981-2013 collected from the Central Bank of Nigeria (CBN) statistical bulletin2013 and world bank database. The results show that one percent rise in inflation rate reduces the output of BO by NGN0.000463bn or NGN463,000,but as interest rates increase, the contribution of BO to the overall output of goods and services improves and so does unemployment rate. The implication is that the economy grows at a declining rate and does not encourage middle economic status. It is necessary, therefore, that the government should have a rethink on its tacit financial support to business organizations if the current trend of uncompetitive economic environment must be reversed.

Keywords: inflation, interest, exchange, unemployment, business operations

#### 1. Introduction

Business operations (BO) abound in Nigeria. As businesses operate, their activities are buoyed by or spiked by the environment in which they are established. What affects the operations of any business may be internally or externally induced. Consequently, business environment (BE) is taken to be any institution, individual, group, force, policy, law, action or any of such things that creates opportunities or obviates the effective functioning of business organizations directly or indirectly. In essence, business environment deals not with geographical boundaries rather it is concerned with interactions between the business organization and its stakeholders. Usually, there are two shades of BE interactions. One is micro – comprising board of directors, employees, customers, suppliers and owners (BESCO). The other is the macro, made up of Act-of-God, legal, international, political, economic, socio-cultural, technological and demographic (ALI-PEST-D). Each of these sub-environments interacts with the business in unique ways and impacts on the operations of the business in like manner.

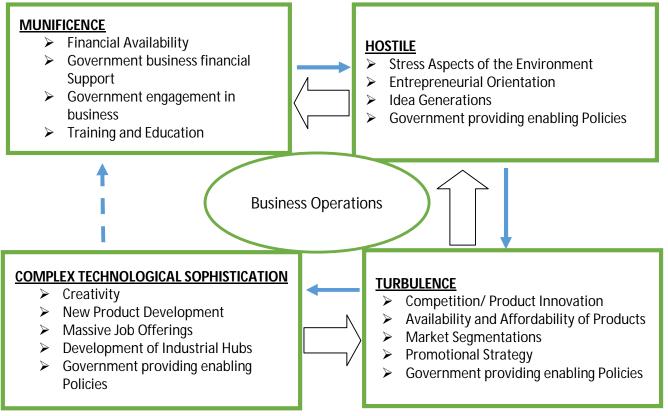
Business operations in Nigeria over the years have been affected by environmental factors in different dimensions such that scholars in the field have done a great deal of research to show empirically the nature of relationships. To Adeoye (2013) the interaction between the business and its environment is to give direction for growth and expansion of the business. ICAN (2009) views it that the relationship between business and its environment is one of mutuality: that is, the environment exerts pressure on the business while the business, in turn, influences some aspects of its environment. This is permissible in an enabling environment. The World Bank (2008) posits that improvements in the enabling environment leads to greater levels of investment by the private sector, more wealth, job creation and ultimately more poverty alleviation. As a result an economy devoid of enabling environment provides a platform for unemployment, lack of wealth creation and unleveraged BO

The paper is concerned with the impact of economic environment (EE) (interest rate, inflation rate, exchange rate and unemployment rate) on business operations in Nigeria from 1981 - 2013. The EE consists of external factors in a business' market and the broader economy that can influence a business and particularly that which affects an entire economy and all of its participants. The thrust of this paper on the EE is aroused on the grounds that unemployment in Nigeria increases at an increasing rate especially since 1999. The high unemployment rate seems to be orchestrated by high exchange and interest rates induced by high rate of inflation.

For instance, the National Bureau of Statistics in 2013 shows that overall unemployment rate reduced from 5.2 per cent in 1981 to 2.0 per cent in 1998 but increased from 6.6 per cent in 1999 to 23.5 per cent in 2013. Can the trend be revised if proper policy framework is put in place to upturn the current macroeconomic environment?

### 2 Research Justification

Despite the great deal of work done by scholars showing the relationship between environmental factors and business operations and how best to advance the course of business; the Nigerian business landscape still remains at the take-off stage – munificence stage. The technologically advanced countries of the world have experienced four dimensions of environmental influences in their business operations. The dimensions are munificence, hostile, turbulence and complex. Figure 1 has been used to express the relationship.



#### Figure 1: Dimensions of Environmental Influences

The munificence is characterised by financial availability, training and education, and government support. What exists is masked and guided private sector and as such government and her agencies drive the economy. The hostile environment deals with stress aspects of the environment – a situation in which government policies encourage real private business sector participation. The hostile dimension creates entrepreneurial orientation economy, characterised with idea generations and government providing enabling policies. The turbulence dimension throws up a competitive nature of the environment in which the real private sector drives the economy. Competition is the struggle among firms in the same industry over who takes a higher advantage of the market. The necessary tools of competition include being responsive to the needs of the society through innovation of right products, availability and affordability of quality products, proper market segmentation, efficient means of distribution, adequate promotional strategy and the like. One of the benefits of competition is job offerings. Attempts to remain competitive and be a market leader tomorrow lead to technological sophistication otherwise called complex dimension.

Business operations in Nigeria have not gone beyond the munificence dimension and as a result the economy has no job offerings, is not innovative, and manufactures little or nothing that the nationals need but rather depends on imported goods and services. This is so because the instability in the economic environment coupled with government tacit financial support rather than regulatory proclivity has significant impact on BO. The thrust of the present paper is to analyse the relationship between BO and EE in Nigeria so as to suggest policy frameworks that will provide contingency plans to meet with swift and radical changes in the environment.

### 3. Literature Review

The review of literature focuses on the nexus between the explanatory variables EE (independent variables) and the dependent variable (BO).

### **3.1 Inflation and Business Operations**

Individuals and businesses try to protect their wealth from inflation because inflation has been shown to affect BO in many ways. Inflation partly breeds inefficiencies and its attendant general decline in macroeconomic performance. To Jones & Manuelli, (2001), investors prefer to invest in assets that can hedge against inflation (property, equity) to productive assets such as plant and equipment. In terms of business competitiveness, Ambler (2003) posits that higher inflation reduces competitiveness in the goods sector with trading partners. In addition, with the reduced competition in international markets, profits in the traded goods sector will decline. In essence, resources will move away from the traded goods sector into the non-traded goods sector.

In another perspective, Stockman (2005) argues that when there is higher inflation there are several possibilities, the first is an increase in the growth rate because, as depreciation rises, the tax paid on capital is reduced. The second effect is a decrease in the growth rate. As the moneysupply increases, so do the nominal interest rates. Tax credits on depreciation are reduced, resulting in an increase in the cost of capital. Increase in the cost of capital slows down BO. The third is dependent on the impact of inflation on the labour-leisure choice. As Hodge (2006) puts it assuming cash goods and credit goods are substitutes for each other, increasing the price of cash goods will see consumption move away from cash goods and towards credit goods, causing the growth rate to first decrease then increase. Wiza (2014) adds that if cash goods and credit goods are complements, price increases in cash goods will result in consumption of cash and credit goods both decreasing and therefore increase the demand for leisure goods. This will cause a drop in the growth rate (Jones & Manuelli 2001).

Ho1: Inflation rate does not have positive significant impact on BO in Nigeria.

### **3.2 Interest Rate and Business Operations**

Technically, interest rate is fee charged by a lender to a borrower for the use of borrowed money, usually expressed as an annual percentage of the principal, the rate is dependent upon the time value of money, the credit risk of the borrower, inflation rate among others. Kimutai (2003) defines interest rate as the price one pays for using borrowed money (loans). Therefore interest rate can be expressed as the price lenders expect (and borrowers pay) for exchanging current claims for greater future claims to goods and services. Interest rates represent the cost of money. Ingram (2011) states that interest rates are important because they control the flow of money into BO. High interest rates curb inflation but also slow down BO. Low interest rates stimulate BO, but could lead to inflation. Zachary (2012) has observed that these effects, although certainly not direct, are enough to stimulate the market when interest rates are low. Low interest rates are not beneficial for lenders, who are seeing less of a return on their loan than in times when interest rates are high. However, it is beneficial to borrowers and the businesses they operate with it.

### Ho2: Interest rate does not have positive significant impact on BO in Nigeria.

### 3.3 Unemployment Rate and Business Operations

Unemployment exists when persons who are capable and willing to work are not able to be engaged resulting to labour wastage. The nexus of BO and unemployment is shrouded in ambiguity. On the one hand, reviewed literature suggests that increased unemployment will lead to an increase in start-up or entrepreneurial activity on the grounds that the opportunity cost of not starting a firm has decreased. On the other hand, the unemployed tend to possess lower endowments of human capital and entrepreneurial talent required to start and sustain BO (Lucas, 1978; Jovanovic, 1982), suggesting that high unemployment is associated with a low degree of entrepreneurial activities. A low rate of BO may also be a consequence of the low economic growth levels, which also reflect higher levels of unemployment (Audretsch, 1995). Entrepreneurial opportunities are not just the result of the push effect of (the threat of) unemployment but also of the pull effect produced by a thriving BO as well as by entrepreneurial activities in the past. In addition to unemployment leading to more or less BO, the reverse is also the case to some extent. Howbeit, unemployment slows down BO in one hand and BO reduce unemployment in another.

#### Ho<sub>3</sub>. Unemployment rate does not have positive significant impact on BO in Nigeria.

#### **3.4 Exchange Rate and Business Operations**

Exchange rate is the price of one country's currency in relation to another's. Iyoboyi & Muftau (2014) allude that in the era of trade liberalization, appropriate policy mix that ensures an effective rate of exchange is imperative because its variation has implications for business operations. Variation in exchange rate is an important endogenous factor that affects BO, due to its impact on macroeconomic variables like outputs, imports, export prices, interest rate and inflation rate. A sound exchange rate policy and an appropriate exchange rate are crucial conditions for improving BO (Chang & Tan, 2008).

#### Ho: Exchange rate does not have positive significant impact on BO in Nigeria.

#### 4. Empirical Review

Imoisi, Chika, and Moses (2012) had a study on an analysis of interest and exchange rates effect on the Nigerian economy. The study examined the impact of interest and exchange rates on the Nigerian economy from 1975-2008. CBN statistical bulletin was the source of data and were analysed with the ordinary least square (OLS) technique. The choice of the OLS was due to the fact that data were not stationary. From the findings it was discovered that an increase in interest rate retards investment and subsequently economic growth. The lag one of exchange rate showed the expected positive sign, implying that depreciation in exchange rate retarded growth from 1975 to 2008. Thus, interest and exchange rates exerted negative impact on the Nigerian economy during the period under review.

Adeove and Elegunde (2012) carried out a study on impact of external business environment on organizational performance in the food and beverage industry in Nigeria. The primary focus of the paper was to investigate the influence of economic and political environment on organizational performance. The questionnaire was the instrument of data collection and was analysed using multiple regression. The result establishes that external business environment (ALI-PEST-D) have impact on organizational performance (effectiveness, efficiency, increase in sales, achievement of corporate goals etc). Based on the result environmental scanning was recommended for organizations. Adeoye (2013) studied the impact of business environment on entrepreneurship performance in Nigeria. The paper examined the influence of the Nigerian business environment as it relates to the productivity of the entrepreneur operating in the country. Content analysis was the methodological approach adopted and in its discussions questioned the genuineness of most government economic programmes. The paper concluded that government is the vital organ that can lead to a beneficial business environment.

The effect of unemployment rate on gross domestic product: case of South Africa was carried out by Teboho (2013). The study observes that unemployment is the macroeconomic problem that affects individuals most differently and severely. It investigated the effect of unemployment on gross domestic product in South Africa. The annual time series used for the estimation cover the period 1980-2011. Using Augmented Dickey-Fuller (ADF) stationarity test, the variables proved to be integrated of order one. Johansen co-integration test was applied to determine the presence of co-integrating vectors in the variables. Also Granger causality test was applied, it was found that there is no causality found between unemployment rate and GDP growth. The study, therefore, encourages all policies on economic growth with the idea that growth will bring employment in South African economy.

Wiza (2014) investigated the relationship between economic growth and inflation in the South African economy. The paper had a triad objective. The study joined the debate on the relationship between inflation and economic growth as an important analysis for the conduction of monetary policy. The relationship of macroeconomic variables as critical factor for the proper formulation and implementation of effective monetary policy (Akinboade, 2002) was adopted. The study adopted a quantitative study design and determined the relationship between economic growth and inflation and as well explained variations between them. The study relies mainly on the quarterly secondary data. 18 years quarterly secondary data from 1993 to 2011 based on pre-inflation targeting 1993 to 1999 and post-inflation targeting 2000 to 2011 quarterly were accessed and used for the analysis. The data was obtained from various data sources and institutions, Stats South Africa and also on these websites: www.easydata.co.za and www.tradingeconomics.com. The estimated model also used to analyse the study was the linear regression model; hence relevant literature was reviewed concerning the relationship.

The robustness of the result was proved by the absence of heteroscedasticity in the estimated relationship which implies constant variance among the data sets used and which thus satisfies one of the crucial assumptions of the linear regression technique. The present study is keen on investigating how economic environment impacts on business operations in the Nigeria scene with a view to suggesting ways for improvement.

## 5. Ethical Consideration

The study was done by using reliable secondary annual data which was not manipulated.

### 6. Theoretical Review

The study is anchored on open system theory propounded by Biologist Ludwig von Bertanlanffy between 1930 and 1956. Open system is applicable to all facets of human endeavour and believes that the use of external resources by individual organizations in any form is the application of open system principles. The concept of open systems theory, Bastedo, (2004), views organizations as being strongly influenced by their environment which exerts various forces of an economic, political, or social nature and provides key resources that sustain the organization and lead to change and survival.

In the world of commerce and industry, business organizations regularly interact with its environment, and have permeable boundaries that allow feedback exchanges from inside and outside the business. With regular interactions, organizations develop different ways of solving particular goals in their existing environments. This is made possible using the open system eclectic concepts of subsystems, holism, input-transformation-out, system boundaries, negative entropy, steady state, feedback, hierarchy, internal elaboration, multiply goal seeking and equifinality (Kast andRosenzweig, 1985)

However, organizations exist in a society. Society has long recognized that it cannot leave economic interaction to the free play of market forces because this might not lead these organisations to pursue a course that will bring the greatest happiness to the greatest number. As a result the society through her agencies regulates the activities of business operations. In cases where the society disregards the principles of open system and engages actively in business operations the result can have a profound impact on organisations.

### 7 Methodologies

This section sets out the procedure used in the study. It shows the model of the study which was estimated using ordinary least squares (OLS) regression and evaluated using appropriate statistical and econometrics tests of significance.

### 7.1 Model Specification

The model of the study is as specified below.					
<b>RGDP</b> <sub>biz</sub>	=	f (Inf, Exch, Int, Une)			
Or,					
RGDP <sub>biz</sub>	=	$\beta_0 + \beta_1 Inf + \beta_2 Exch + \beta_3 Int + \beta_4 Une + \mu_t$			
Where:					
<b>RGDP</b> <sub>biz</sub>	=	Real output of business services			
Inf	=	Inflation rates			
Int	=	Interest rates			
Une	=	Unemployment rates			
$B_0 - \beta_4 \; = \;$	Parame	eters to be estimated			
$\mu_t$	=	error term			

In the model of the study, therefore, the interest is not only to examine the impact cost of capital has on BO but also to establish how such external factors as rising general price level of goods and services, exchange rate of the Naira vis-a-vis the US dollar and of course the levels of unemployment affect BO in Nigeria. As noted earlier, the model was estimated using ordinary least squares regression.

### 7.2 Method of Evaluation

The estimated model was evaluated by statistical tests of significance such as t-test, F-test, multiple coefficient of determination test and the Durbin Watson test of autocorrelation. The essence of these tests is to ascertain whether the impact or the relationship so established is statistically significant.

#### 7.3 Nature and Sources of Data

Five variables are used in the study. Data on real gross domestic product of BO, interest, inflation and exchange rates were gleaned from the Statistical Bulletin of Central Bank of Nigeria (available at www.cenbank.gov.ng) while that of unemployment was collected from the World Bank database. All the data are annual time series data as shown in table 1.

Table 1: Time Series Data 1981-2013

Table 1: Time Series Data 1981-2013							
YEAR	RGDP <sub>BIZ</sub> (N'b)	INF(%)	EXCR(N:\$)	INT(%)	UNE(%)		
1981	0.207	5.2	0.61	7.75	5.2		
1982	0.208	6.3	0.67	10.25	5.1		
1983	0.236	8.5	0.72	10	5.2		
1984	0.254	11.4	0.77	12.5	5.3		
1985	0.296	12.6	0.89	9.25	6.1		
1986	0.319	13.7	2.02	10.5	5.3		
1987	0.443	9.7	4.02	17.5	7.0		
1988	0.526	61.2	4.54	16.5	5.3		
1989	0.331	44.7	7.39	26.8	4.5		
1990	0.855	3.6	8.04	25.5	3.5		
1991	0.343	23.9	9.91	20.01	3.1		
1992	0.353	48.8	17.3	29.8	3.4		
1993	0.367	61.3	22.05	18.32	2.7		
1994	0.38	76.8	21.87	21	2.0		
1995	0.394	51.6	21.87	20.18	1.8		
1996	0.409	14.3	21.87	19.74	3.8		
1997	0.423	10.2	21.87	13.54	4.6		
1998	0.444	11.9	21.87	18.29	2.0		
1999	0.464	0.2	92.69	21.32	6.6		
2000	0.484	14.5	102.11	17.98	13.1		
2001	0.508	16.5	111.94	18.29	13.6		
2002	0.541	12.1	120.97	24.85	12.6		
2003	0.564	23.8	129.36	20.71	14.8		
2004	0.626	10	133.5	19.18	13.4		
2005	0.659	11.6	132.15	17.95	11.9		
2006	0.703	8.6	128.65	17.26	12.3		
2007	0.75	6.6	125.83	16.94	12.7		
2008	0.8	15.1	118.57	15.14	14.9		
2009	0.85	13.03	148.88	18.99	16.4		
2010	0.9	13.26	150.3	17.59	18.9		
2011	0.955	12.1	153.86	16.02	22.7		
2012	1.014	11.48	157.5	16.79	25.4		
2013	1.079	10.26	157.31	16.72	23.5		

Source: CBN Statistical Bulletin (2013) and World Bank Database

The relationship that exists between the variables of the study is further presented using the time series graph shown in figure 2. The essence is to pictorially show the trend of the relation of the variables of study for the past 33 years. Drawing from the graph it is observed that increment in exchange and interest rates are accompanied with a significant increment in unemployment.

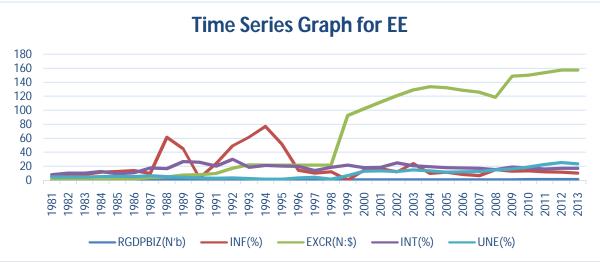
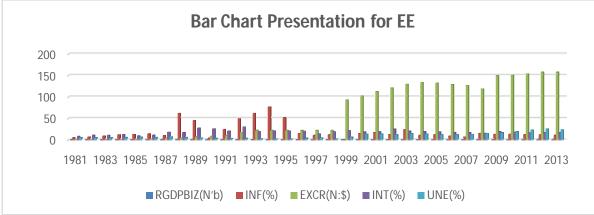
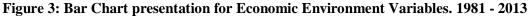


Fig 2: Time series graph for EE variables 1981 - 2013

The data may as well be appreciated using a bar chart as presented in figure 3





From the chart (Fig 3) Nigeria economic environment started experiencing significant exchange rate increases from 1999 and with it came unemployment and high interest rate. A causal inference from the graph shows that with significant increase in the exchange rate, other variables increased as well. The actual and real implications of the relationships are explicated with result of the regression model.

Variable         Coefficient         Std. Error         t-Statistic         Prob.							
Coefficient	Std. Error	t-Statistic	Prob.				
0.054276	0.109227	0.496906	0.6231				
-0.000463	0.001428	-0.324001	0.7483				
0.000332	0.000983	0.337535	0.7382				
0.012001	0.005758	2.083970	0.0464				
0.027486	0.008972	3.063443	0.0048				
0.751792	Mean dependent var		0.535909				
0.716333	S.D. dependent var		0.245574				
0.130794	Akaike info criterion		-1.091665				
0.478995	Schwarz criterion		-0.864922				
23.01247	Hannan-Quinn criter.		-1.015373				
21.20211	Durbin-Watson stat		1.554742				
0.000000							
	-0.000463 0.000332 0.012001 0.027486 0.751792 0.716333 0.130794 0.478995 23.01247 21.20211	0.054276         0.109227           -0.000463         0.001428           0.000332         0.000983           0.012001         0.005758           0.027486         0.008972           0.751792         Mean dependent var           0.716333         S.D. dependent var           0.130794         Akaike info criterion           0.478995         Schwarz criterion           23.01247         Hannan-Quinn criter.           21.20211         Durbin-Watson stat	0.054276       0.109227       0.496906         -0.000463       0.001428       -0.324001         0.000332       0.000983       0.337535         0.012001       0.005758       2.083970         0.027486       0.008972       3.063443         0.751792       Mean dependent var         0.716333       S.D. dependent var         0.130794       Akaike info criterion         0.496906       Schwarz criterion         23.01247       Hannan-Quinn criter.         21.20211       Durbin-Watson stat				

 Table 2: Regression Result of BO and EE

Source: Computed from Time Series Data 1981-2013.

		o. r resentation of Kesuus				
<b>RGDP</b> <sub>BIZ</sub>	=	0.0543 -	0.000463INF -	+ 0.000332EXCR	+ 0.012INT +	0.0275UNE
(SEE)	=	(0.109)	(0.001428)	(0.000983)	(0.00576)	(0.008972)
(t-stat)	=	(0.497)	(-0.324)	(0.008)	(2.084)	(3.063)
(Prob)	=	(0.6231)	(0.7483)	(0.7382)	(0.0464)	(0.0048)
R-Square	=	0.7518				
Adjusted R-S	qd =	0.7163				
<b>F-Statistic</b>	=	21.202				
Durbin-Watson Stat = 1.555						

# 8 Presentation of Results

#### 9. Interpretation of Results

The result shows a model in which the interest is on examining the impact inflation, exchange rate, interest rate and unemployment have on the real output of BO in Nigeria within the 33-year period 1981-2013. Recall that the data used to generate the result are measured in billions of Naira and percentages as the case may be. The result therefore shows that there is a negative relationship between inflation and output of BO but a positive relationship between each of exchange rate, interest rate and unemployment and the dependent variable. In the case of inflation one percent rise in inflation rate reduces the output of BO by NGN0.000463bn or NGN463, 000, on average and everything else remaining the same, within the period under review. Conversely with a fall in inflation by one per cent, real gross domestic product (RGDP) contribution of BO will rise, on average, by the same amount. The other results show that a unit increase (depreciation) in the Naira/Dollar exchange rate brought about, on average, a NGN0.000332bn or NGN332, 000 rise in the contribution of BO to the country's real gross production per annum.

The impact of changes in interest rates is positive also. With a one per cent rise or fall in the money market interest rate, real GDP of BO rises or falls by NGN0.012bn or NGN12,000,000 (twelve million Naira) per annum, everything else remaining the same. Surprisingly unemployment rate returns a positive impact on the contribution of BO to the country's output of goods and services in real terms. The result shows that a one per cent rise (or fall) in unemployment rate, on average, brought about NGN0.0257b (twelve million naira) or NGN0.0257b or NGN25,700.7000 increase (or decrease) in the contribution of BO to the overall real gross domestic product of the country.

In terms of magnitude it can be observed that unemployment has the greatest impact on the output of BO whereas domestic currency depreciation has the least impact on the dependent variable. Whereas the signs of the inflation and exchange rate variables conform with expectations, those of interest rate and unemployment are quite unexpected as the result shows that higher interest rates improves the contribution of BO to the overall output of goods and services and so does unemployment rate.

Before we provide discussions to substantiate the result it is necessary to first examine the significance of the result. As noted in the previous section, this will be done using the t-test, F-test, Durbin Watson test and of course the R-Squared test. Although the sample is fairly large (n = 33) we still employed the t-test because it is still valid for this not-so-large sample under consideration. The test is used to ascertain the significance or otherwise of each individual explanatory variable. The model has a dependent variable, four explanatory variables and 33 samples, so the degrees of freedom for the t-test, n-k, is 33-5 = 28. The test was conducted at the 5% level of significance and for a 2-tailed test the tabulated t-value is 2.048. Comparing with the estimated t-values of the explanatory variables we notice that interest rate and unemployment rate variables have estimated t-values greater than the tabulated counterpart and are therefore statistically significant. The F-Statistic is used to ascertain whether the overall regression estimates or the joint influence of the explanatory variables is statistically significant. Like the t-test, it was conducted at the 5% level of significance with degrees of freedom  $v_1 = k-1$  or 5-1=4 and  $v_2 = n-k$  or 33-5 = 28 for numerator and denominator respectively. The tabulated F-value therefore is 2.76. On the other hand the estimated F-Statistic is 21.202. We therefore conclude that the joint influence of the explanatory variables on the dependent variable is highly statistically significant.

Next we consider the matter of autocorrelation. This was verified using the Durbin-Watson statistic whose tabulated values are  $D_L = 1.19$  and  $D_U = 1.73$  at the 5% level of significance and n=33, k' = 4 degrees of freedom (where k' is the total number of parameters estimated excluding the constant term, which equals the total number of explanatory variables in the model).

The decision rule is as follows: (i) If the estimated D-W statistic is lower than the lower limit ( $D_L$ ) of the tabulated counterpart then there is autocorrelation in the estimated model (ii) If the former is greater than the Upper limit ( $D_u$ ) then there is no autocorrelation (iii) But if the estimated D-W statistic falls between the lower and upper limits of the tabulated counterpart, then there is inconclusive evidence as to whether autocorrelation is present. The estimated D-W statistic from the result is 1.56. By comparison it falls within the third category of the decision rule (i.e. 1.19 < 1.56 < 1.73), therefore the conclusion is that there is inconclusive evidence as to whether autocorrelation is present in the estimated model. But we bear in mind that when this is the case it is usually that there is a high likelihood that the estimated model is devoid of autocorrelation.

Finally the coefficient of multiple determinations (R-Squared) measures the proportion of the changes in the dependent variable that is attributable to changes in the independent variables. The regression result returns R-squared and Adjusted R-squared of 0.75 and 0.72 respectively or 75% and 72% approximately. This means that changes in inflation rates, exchange rates, interest rates and employment rates explained about 72% of the changes in the real output of BO in Nigeria between 1981 and 2013. The other 28% is attributable to the influence of other factors not captured by the study model but since the closer to one (1) the better, we conclude that the  $R^2$  of 0.72 is a good fit.

### 10. Discussion

The estimated relationship shows the average impact of the components of economic environment (EE) on business operation (BO) between 1981 and 2013 in Nigeria. The result shows that the EE have not enhanced business operations in the country. The adverse effect of inflation is readily noticed. General price level of goods and services in the country was highly unstable mid-way into the study period. For instance inflation rate was as high as 61.3% in 1993 and further increased to 76.8% in the following year. In the same vein negative relation between the two variables is clearly evident in the fact that when inflation rate rose from 3.6% in 1990 to 23.9% in 1991 the output of business operations in the country fell from NGN0.855 billion to NGN0.343 billion in the same period representing about 60% loss of growth in business operations. This corroborates the findings of Ambler (2003) and Jones & Manuelli (2001) who noted that rising inflation rates curbs economic growth.

Currency devaluation is thought to encourage especially non-oil exports but the benefits of devaluation policy have not been applied to Nigeria fully as the result shows that the policy has insignificant impact on business operations in the country. It is just as Aliyu (2007) noted that exchange rate significantly affects imports more than exports in Nigeria due largely to the monoculture nature of the country's exports and inexhaustible and multifarious nature of its imports which ultimately retard business operations in the country.

Businesses often rely on external sources of fund for expansion and this does not come without a price – the interest rate. High interest rates discourage new investment but with contractionary monetary policy entrepreneurs strive to put the limited fund available to them to the most efficient use. Our result shows that on average and everything else remaining the same, changes in interest rates moved in the same direction with changes in business operations within the period under review. This can be understood this way: businesses do not mind borrowing even at high interest rates as long as they make returns high enough to cover operating costs which necessarily include interest on borrowed fund. Our interest rates and contribution of business operation to the real gross domestic product data in recent times (2010-2013) have shown stability in interest rates and modest increase in the output of business operations in Nigeria. This goes to show that stability of the financial sector will to a great extent encourage business operations in the country (Ingram, 2011).

High unemployment rate theoretically reduces output and income but our result shows otherwise. Studies in Nigeria in recent times have shown divergent views on the subject. Bankoleand Fatai (2013) for instance concluded that unemployment and output are unrelated whereas Akeju and Olanipekun (2014) established that there is both the short run and long run relationship between unemployment and output growth in Nigeria in the macroeconomic scene. Since our model is adapted to capture the output of business operations, our finding might have revealed an interesting angle. Unemployment is high among graduate youths in the country and as a result self-reliance or entrepreneurship initiative is preached now more than ever before. The graduate unemployed from time to time do go into business and thus contribute to the enhancement of the business activities. Whatever the case our findings show a significant positive impact of unemployment on business operations in Nigeria perhaps because of inappropriate measure of the unemployment data as those regarded as `unemployed' usually are persons not working within the public or private sector.

### 11. Conclusion

The dynamism of environmental factors has negatively affected BO in Nigeria between 1981-2013. This is due largely to either poor economic policy formulation or implementation thereof. Despite the paradoxical relationship of unemployment and BO as obtained from the study, the fact remains that labour wastage (a situation in which people who are knowledgeable and willing to work are not economically engaged but engage themselves in subsistence living) exists which needs urgent attention. The observed interest rate stability (2010-2013) should be encouraged even as to get it to a single digit. The high inflation rate benefits established firms and discourages start-ups such that the economy remains at the munificence dimension. The same analysis holds for exchange rate. It is the concerned view of this paper, therefore, that government should concentrate on providing enabling economic policies to BO devoid of financial support/ financial availability, engagement in BO and education. Given the unexpected result that higher interest rates improves the contribution of BO to the overall output of goods and services and so does unemployment rate, a replication of the study in other climes is suggested.

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