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Inflation and Small and Medium Enterprises Growth in Ogbomoso Area, Oyo State, Nigeria

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Abstract
The main purpose of this study is to ascertain impact of inflation in the growth of small and medium enterprises in Ogbomoso area of Oyo State, Nigeria. The data considered was secondary as obtained from Central Bank of Nigeria and Federal Office of Statistics. The results showed that the parameters estimates associate with the independent variable inflation rate is positive (i.e. $0.164X_1$). Also, there is a positive relationship between parameter estimate associate with capacity utilization (i.e. $0.048X_2$) and parameter estimate associate shows positive relationship with environmental factors. It is conclusive that there is a direct relation between growth rate in real GDP (i.e. productivity) and inflation rate in Nigeria.
Keywords: Inflation, growth of SMES, Ogbomoso area, Nigeria.

Introduction
There is a high level consensus among many economist, central bankers, policy makers and credit administrators that one of the fundamental aim of microeconomics policies in both developed and developing economies is to achieve high economic growth and check the inflationary trend or at best reduce it to the barest minimum. This is because many of the underdeveloped countries are being pressed by high level of inflation which act as an obstacle to the smooth functioning of a market economy (Krugman, 1995). At individual level, the burden of inflation exerts a heavy toll on those with fixed income and favours debtors at the expense of the creditors.
Nigeria has been experiencing economic hardship which are characterized by a high inflation rate over many years. High interest rate make borrowing of capital expensive, resulting in low levels of investment and a weaker currency which makes the importation of raw materials difficult and expensive at the same time.
Despite the dominant importance of the Small and Medium Enterprises in Nigeria, poor access to both formal and information credit has been affecting the growth of the sector. Poorly functioning financial systems can seriously undermine the micro-economy fundamentals of a country, resulting in slower growth in income and employment. For instance, the baseline economic survey of Small and Medium Industries (SMI) in Nigeria in 2004 indicated that the 6,498 industries covered, employed a little over a million workers considering the fact that 18.5 Nigerians are unemployed.
In order to exploit the benefit of economic growth in Nigeria, the disinvestment by the stakeholders due to high inflation and interest rate which makes investment costly should be reduced to barest minimum. Since the economy is characterized by high unemployment rate, closure of businesses, declining economic growth and declined standards of living, it is therefore, pertinent to examine the relationship between inflation and productivity of Small and Medium Enterprises and provide an environment conducive for the growth.

2. Literature Review
Economic factors have a direct impact on the potential attractiveness of various strategies and consumption patterns in the economy and have significant and unequal effects on organization in different industries and in different locations. Economic variables such as fiscal and monetary policies of the government, inflation, interest rates and foreign exchange rates. These variables influence the demand for goods and services and hence the growth of new SMEs (Ehlers and Lazenby, 2007).
Anyanwu (1993) defined inflation as a state of affairs in which there is excess demand for commodities in the economy as a whole. This suggest that, the level of spending being concentrated towards home produced goods, which can be attainable in the long-run, giving existing productive resources.
Inflation reflects a situation where demand for goods and services exceeds their supply in the economy (Hill, 1982). It causes could be triggered by the private sector and the government spending more than their revenue, or by short falls in output. Price increases could also be triggered by increases in cost of production. For instance, increases in price of imported raw materials will cause inflation if not managed.

However, inflation affect the growth of the economy in many ways, it's burden has been shifted on retired people whose income are fixed. When prices for goods and services increases these individual cannot buy as much as they could previously. This discourages savings and reduces economic growth because the economy needs a certain level of savings to finance investment which boosts economy growth. Besides its burden on investment makes it to plan for what to produce, where to produce and for who to produce in future because business cannot predict the demand for their product due to the higher prices they will have to charge so as to cover their cost. It also causes uncertainty about future prices, interest rate, and exchange rates, and this in turn increases the risks among potential trade partners, discourage trade. The effect of inflation on investment occurs directly and indirectly. It increases transaction and information which directly inhibits economic development. For instance, when inflation makes nominal value uncertain, investment planning becomes difficult. Individual may be reluctant to enter into contracts when inflation cannot be predicted making relative prices uncertain. This reluctant to enter into contracts over time will inhibit investment which will affect economic growth. In this case inflation will inhibit investment and could result in financial recession (Hellerstein, 1997).

Sustained inflation is damaging to long-run growth and the financial system in general. Increase in inflation lead to lower real returns not just on money, but on all other assets too. These low returns interfere with the functioning of financial markets and the allocation of investment. Low real returns have the effect of severely damaging the credit market. As a result, higher inflation contracts the supply of credit available to fund capital investment damaging the economy (Blume, 1978). This implies that inflation affects investment in several ways mostly inhibiting economic growth. The source of inflation is money and the supply of it. Investors need to be able to expect returns in order for them to make financial decisions. If people cannot trust money then they are less likely to engage in business relationship. This results in lower investment, production and loss socially positive interactions. Among other effects, people may start to attempt to trade by other, less efficient, means in order to avoid the unpredictable price levels due to inflation.

3. Materials and Methods

The study was carried out in Ogbomoso area of Oyo State, Nigeria. The data considered was secondary and this was obtained from Central Bank of Nigeria (CBN) as well as Federal Office of Statistics (FOS).

In order to examine the stated objective of the study, relevant factors that affect productivity (i.e. growth rate in real GDP) has been identified. These include inflation rate, capacity utilization and environmental factor. Although, priority shall be on the effect of inflation rate on productivity while, environmental factor shall be treated as dummy variable. The environmental factor shall be taken to include, infrastructural facilities, technological development and political stability. Using incremental approach, period with growth rate in real GDP below the average for whole period covered (i.e 2.83%) shall be taken as unfavourable and denoted by (0) while periods with growth rate in real GDP above the average shall be taken as favourable and denoted by (1).

The model is specified thus:

$Y = (X_1)$

From the above functional relationship, the following linear model can be gotten:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + U$$

And estimated model will be

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + U$$

Where

Y = Growth rate in real GDP (i.e national productivity)
β_0 = estimated intercept term
β_1 β_2 β_3 = Parameter estimate of the corresponding variables that affect growth rate in real GDP
X_1 = Inflation rate
X_2 = Capacity utilization
X_3 = Environmental factor
e = estimate of error term

A – Periori Expectation:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

$\sigma Y/\beta X_1 > 0$ i.e β_1 is positive

$\sigma Y/\sigma X_2 > 0$ i.e. β_2 is positive

$\sigma Y/\sigma X_3 > 0$ i.e. β_2 is positive.

4. Results and Discussion

Summary of the results show three relationships as shown by the estimated parameter associated with the individual explanatory variables. Firstly, the parameters estimate associate with the independent variable inflation rate is positive (i.e. $0.164X_1$). This implies that there is a direct relationship between growth rate in real GDP (i.e. productivity) and inflation rate by extension; the higher the rate of inflation, the higher the growth rate of real GDP and vice versa (ceteris paribus). This relationship satisfies economic A-priori expectation. However, based on standard error test, the parameter estimate (i.e. β_1) is statistically insignificance since (Se = 0.087) is grater than ½ (β_1) i.e. 0.082. Also at 5% level of significance, the 'T' test shows that the parameter estimate is statistically insignificant (i.e. $t = 1.896 < t^*_{0.05} = 2.11$). However, the parameter estimate becomes statistically significant at 10% level of significance i.e. $t = 1.898 > t^*_{0.10} = 1.74$).

The second discernable relationship is that shown by the positive parameter estimate associated with capacity utilization (i.e. $0.048X_2$). This shows that there is a direct relationship between growth rate in real GDP (i.e. productivity) and capacity utilization. Plausibly, the higher the level of capacity utilization, the higher the rate of growth in real GDP and the reverse could also hold ceteris paribus. This relationship confirm with Economic A-priori expectation. Based on the Standard Error test however, the parameter estimate is not statistically significant since (Se = 0.097 is greater than ½ (β_2) i.e. 0.024. This verdict is supported by the 'T' test since the parameter estimate remain statistically insignificant at both 5% and 10% level of significance (i.e. $t = 0.499 < t^*_{0.05} = 2.11$ and $t = 0.499 < t^*_{0.10} = 1.74$).

The positive reason for this insignificant parameter estimate could be linked to the phenomenon of over-flowing warehouses of most manufacturing concerns. There seems to be a weak demand for manufactured goods due to low purchasing power of consumers. Thus, forms accumulate stock of unsold goods. In this regard, therefore, the effect of changes in capacity utilization on growth rate in real GDP becomes infinite similarly small. The third observable relationship is that parameter estimate shows that there is a direct and positive relationship between growth rate in real GDP (i.e. productivity) and Environmental Factors. This connotes that a favourable environmental factor will enhance higher growth rate in real GDP but otherwise is true for an unfavourable environmental factor ceteris paribus. This relationship conforms with Economic A-priori expectation. This Standard Error test shows that the parameter estimates is statistically significant given the fact that (Se = 3.16) is less than ½ (β_3) i.e. 6.78. The 'T' test supports this verdict since the parameter estimate is statistically significant at both 5% and 10% level of significant (i.e. $t = 4.29 > t^*_{0.10} = 1.74$). We thus accept H; (i.e. β_3 is statistically different from zero). The preceding discussions centre on the sign and statistical significance of the parameter estimate associated with the explanatory variables. However, to ascertain the goodness of fit reliability and significance of the entire estimated regression model: R^2F and DW values are discussed as follows: R (i.e. co-efficient of determination) value is 0.5284. This indicates that changes in the explanatory variables account for 52.84% of the total variation in the growth rate of real GDP (i.e. productivity). This is a fairly good fit. F-value is 6.273. This indicates that the estimated regression model is significant. And that the parameter estimates are stable. DW (i.e. Durbin Watson) value is 2.278. This shows that there is no serial correlation in the estimated regression model.

5. Conclusion:

In summary, the study showed that (i) there exist direct and significant relationship between growth rate in real GDP (i.e. productivity) and inflation rate in Nigeria, (ii) Economic factors (Fiscal and monetary policies, inflation, interest rates and foreign exchange rates) have a direct impact on the potential attractiveness of various strategies and consumption patterns in the economy and have significant and unequal effects on organizations in different industries and in different locations, (iii) in an inflationary environment intermediaries will be less eager to provide long-term financing for capital formation and growth, (iv) sustained inflation is damaging to long-run growth and the financial system in general. Against this background the following recommendations are suggested:

- Central Bank of Nigeria should review their policies (Fiscal and Monetary) on economy to promote economic stability, growth and enhance the development of SMEs in the Country.
- Provision of infrastructural facilities such as electricity, pipe borne water, good roads, telecommunication services etc should be put in place to stimulate economic activities and attracting foreign investment into the economy, thereby gearing economic performance and competitiveness of Small and Medium Enterprises.

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The regression results are presented thus:

β_0 β_1 β_2 β_3
Y = 0.990 + 0.164 X_1 + 0.048 X_2 + 13.567 X_3
Se = (7.06) (0.087) (0.097) (3.16)
T = (-1.416) (1.896) (0.499) (4.29)
R^2 = 0.5284 (i.e. 52.84%)
R = 0.4416 (i.e. 44.16%)
F-value = 6.273
DW = 2.278

Analysis of Variance

Source Prob.>nf	DF	Sum of Squares	Mean Square	F-Value
Model 0.0046	3	857.3474	285.7835	6.273
Error	17	774.539.78	45.56116	
C Total	20	1631.88952		

Root MSE: 6.74990 R-square 0.5284
Dep. Mean 2.80476 AdjR-sq 0.4416
C.V. 240.65861

Result of Regression Analysis SAS
Parameter Estimate

Variable P.ob.>|T|	DF	Parameter Estimate	Standard Error	T for H_0: Parameter = 0
Intercept	1	-9.98726	7.05880310	-1.415
X_1 0.0751	1	0.164293	0.08666632	1.896
X_2 0.6241	1	0.048284	0.09674467	0.499
X_2 0.0005	1	13.557281	3.15996018	4.290

Durbin – Watsin D (for number of Obs.)