

MINIMUM WAGE: TRENDS AND PRICE LEVEL DYNAMICS IN NIGERIA

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ABSTRACT

The consequences of wage increase on macroeconomic variables have been enormous and worrisome and yet the phenomenon has not been well documented for Nigeria as little information currently exists especially on the linkage between wage increase and inflation and how policy can effectively influence real wage in Nigeria. Consequently, this paper illustrated how wage increase might be linked to the price level dynamics in a small structural model of analysis of an emerging economy. The paper employed standard methodological approach, Vector Autoregressive Model, to determine the sources of shock to price level in Nigeria. The Variance Decomposition results showed that increases in the minimum wage have contributed significantly to shocks in employment and inflation rate. It shows that shocks in wages cause unemployment and are necessarily inflationary in Nigeria. The findings and the conclusion of the study suggested the need for the policy makers to curtail excess liquidity in Nigeria and enforce the respect of monetary requirements and fiscal discipline. In the light of this suggestion, the policy makers should evaluate the productivity of labor and ensure that the aggregate supply is increased to offset the increase in minimum wage.

Keywords: Minimum wage, Price dynamics, unemployment, Civil Service, and excess liquidity.

1. INTRODUCTION

Civil service in Nigeria is characterized by wage agitation, strike actions, wage review and wage increase. This phenomenon has followed a unique trend since the period of colonial rule. Either as a result of agitation for higher wages or as result of the discretion of the government to review wages and salaries, Civil Service Reform Commissions are usually set up with the mandate to provide recommendations for reforming the civil service. Thus, Public Sector Reform programmes are direct outcomes of Civil Service Reform Commissions. Although recommendations from Civil Service Reform Commissions are meant to bring about improvement in overall facet of civil services, wages and salaries increase has become a sensitive part of such recommendations. Once recommendations for increase in wages are made, wage negotiation committees, that is, Wages and Salaries Committees are then set up, which would come up with a collectively agreed salary structure. Wage negotiation committees are bi-partite in nature where government representatives engage in dialogue with organized labour union representatives (Owoye, 1994). The usual outcome of such exercise is wage and salary increase. Prominent example of this is the popular Academic Staff Union of University (ASUU) strikes and ASUU-Federal Government dialogues over the years.

Beginning from 1934 to 2011 about 18 Civil Service Reform Commissions, decrees and wage commission act have been set up by different administrations; with a view of achieving the best from the Nigeria's civil service (see Table 1). Each of these Commissions, decrees or acts

has come up with different wide-range prescriptions for transforming the civil service. Two of the commissions, the Adebo led Commission of 1970 and Udoji led Commission of 1972, actually set the pace for persistent review of wages and salaries. These Commissions, especially Udoji's Commission, recommended comprehensive salary review for all categories of government workers in the form of a basic minimum wage, and further put forward framework for regular updates of wages and salaries. Also the Minimum wage legislation Acts especially Act 2000 raised the minimum basic salary of the lowest cadre worker in the Federal civil service to 5,500 naira, while the Minimum wage for State and Local government workers was set at 4,500. The Minimum wage Act also made provision for a review of the Minimum wage every two year. Towards the end of 2001, the Minimum wage was again reviewed upward to 7,500 naira and 6,500 naira for Federal and State Government workers respectively. In year 2002 when the government reneged on its promise to review salaries of workers, the Nigerian Labour Congress (NLC), the umbrella organization for all labour unions, called for a nation-wide strike, demanding for a 25 per cent salary increase for Nigerian workers. After a prolonged industrial dispute and negotiation, the Federal Government in September 2003 announced a regressive wage increment for Federal Government civil servants. The new salary scale took the form of 12.5 percent increase for lowest paid workers, while those at the top were to get 4 percent. Thus since early 1970s, there has been increase in nominal wages in Nigeria in both private and the public sectors; although the real wages have been declining ever since. This is consequent upon the high rate of inflation and almost constant money wages. For instance the aftermath of implementation of the Udoji's recommendation was a jump in general price level, which eventually eroded the increase in nominal wages and brought about reduction in workers' purchasing power. The decline in real earnings was largest between 1989 and 2004 owing to more rigorous implementation of the structural adjustment programmes. This decline in real wages was more pronounced in the public sector than in the private sector.

The trend of wage legislation in Nigeria suggests that there would be no end to wage agitation, strike actions, wage review and wage increase not until the government should find lasting solution to fundamental causes which are hyper inflation and volatile fluctuations in foreign exchange rate which usually erodes the purchasing power. In my own view what should actually be reviewed are the inflation and the foreign exchange rate volatility.

Table 1: Civil Service Reform, Wage Commissions and Decrees in Nigeria, 1934-2005 Commission

Commission	Year
Hunts Commission	1934
Harragin Commission	1945
Pillipson-Adebo Commission	1948
Gorsuch Commission	1954
Mbanefo Commission	1959
Morgan Commission	1963
Eldwood Commission	1966
Adebo Commission	1971
Udoji Commission	1972
Dotun Phillips Panel	1985

Ayida Review Panel	1994
National Minimum Wage Legislation (Amendment) Act	2000
National Minimum Wage legislation (Amendment) Act	2001
National Minimum Wage legislation (Amendment) Act 2	2003
Ernest Shonekan Committee	2006
National Minimum Wage (Amendment) Act 2011	2011

The Problem and the objective of the study

The consequences of wage increase on macroeconomic variables have been enormous and worrisome and yet the phenomenon has not been well documented for Nigeria as little information currently exists especially on the linkage between wages and inflation and how policy can effectively influence real wage in Nigeria. Although it is often argued that the income policy that minimizes wage increases is a selective government policy to pursue the primary objective of price stability, yet the macroeconomic instability has been on the high side and deeply seated. Thus, the consequences of increase in wages on price stability and the potential interrelations between inflationary rate and wage rate are therefore the focus of this study.

The paper however illustrates how wage increase might be linked to the price level dynamics in a small structural model of analysis of an emerging economy. The general conception is that wage increase has the potential to increase liquidity and that excess liquidity fuels inflation. On the other hand it is argued that inflation reduces the real earnings and often time the decline in the real earnings is traceable to inflationary pressures. The paper however develops an optimizing general equilibrium monetary model with capital accumulation, fully flexible prices and wage effects in which the Keynesian equivalence condition is satisfied. In the light of this analysis, the paper is therefore organized as follows. Following the introductory section, Section 2 reviews the literature. The methodology of the study is discussed in Section 3. An econometric analysis of the consequences of wage increase on the macroeconomic variables under consideration in Nigeria is considered in Sections 4. Finally, Section 5 presents the summary and conclusions of the paper.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

The macroeconomic implications of wage and income policy have been investigated in the literature. Researchers such as Grossman (1983), Adams (1987), Brown et al (1982), Card and Krueger (1994), Neumark and Wascher (2002), Abowd et al (1999) and Currie and Fallick (1996), Yuen (2003), Neumark et al (2004), Neumark et al (2005), Golan et al (2001), DiNardo et al (1996) and Lee (1999), L'Horty and Rault (2004), Falk et al (2006) and Folawewo (2007) have at one time or the other carried out theoretical and empirical studies with different methodologies on the subject. The earlier works of Grossman (1983), Adams (1987), Brown et al (1982) Card and Krueger (1994) explored how changes in minimum wages affect various macroeconomic variables such as real wage, employment, unemployment, price level, and real gross national product (GNP). These authors found that the impact of increase in minimum wage on the macroeconomic variables differ from country to country. The effect depends on the economic situations prevailing in each country. An increase in minimum wages that have adverse effects on one country might produce positive impact on the other country. While it

could lead to enormous distortion in price level and unemployment in a country, it could lead to marginal declining effect on real wage, employment and real GNP in another. Adams's findings are similar to that of Brown et al (1982), who used time series regression to analyse the effects of minimum wages on employment and unemployment. They found a positive relationship between minimum wages and unemployment, and a negative relationship between minimum wages and employment. This implies that an increase in minimum wage leads to an increase in unemployment. But Card and Krueger (1994) found no effect of minimum wages on unemployment in USA. However, Neumark and Wascher (2002) applied a reduced-form equation to state-level data in the United States of America (USA), using a disequilibrium approach, to analyze the impact of minimum wages on employment. The study showed that the employment effect of binding minimum wages in an economy could be underestimated subject to data and methodological approach. This reduction effect has been corroborated by other studies such as Abowd et al (1999)

Folawewo (2007) used time series multiple regression to analyse the effects of minimum wages on employment, unemployment, real wage and general price level and found that the impact of minimum wages increase on employment is mixed; while it leads to marginal rise of employment in agricultural sector, there is a marginal fall in services sector employment, and no significant effect in manufacturing and mining and oil sectors. The implication of this is that while increase in minimum wages could raise employment in agricultural sector, such increase could also lead to loss of jobs in services sector. Further, the results of his study reveal that an increase in minimum wages lead to a significant rise in general price level, thereby, indicating that such policy induces inflation in the economy. Finally, a rise in minimum wages has positive effects on household income and consumption, as well as on government balances, suggesting the positive welfare effect of minimum wages policy.

In separate studies and for different countries Yuen (2003), Neumark et al (2004) and Neumark et al (2005) investigated the effects of minimum wages on low-wage worker and other groups of worker in Canadian and American economy respectively. They found that low-wage workers are the most beneficiaries of minimum wages, while higher-wage workers derived little or no benefits from policies that raise minimum wages. Their studies revealed that though low-wage workers income increased with the raising of minimum wages, their hours and employment declined, leading to overall negative effects of minimum wages policy. Their studies further indicated that although minimum wages policy raises the incomes of poor families and the effect is more on the household whose incomes are below the stipulated minimum wages. Golan et al (2001) and DiNardo et al (1996) investigated other aspects of welfare effect of minimum wages policy. They analysed the effect of minimum wages on income inequality and poverty using French data. Their findings showed that real minimum wages have significant effect on poverty and income inequality and inflation. They concluded that minimum wages formation greatly reduced wage disparity, led to inflationary pressure on other wages, as well as price especially in the French economy.

In a more recent study Falk et al (2006) tested the effects of minimum wage laws on perceptions and reservation wages and found that a temporary introduction of minimum wages would lead to a rise in reservation wages, and that the rise would persist even after the removal of the minimum wages.

In most of the literatures reviewed so far, the analytical framework and methodology adopted failed to test the interrelationship among the macroeconomic variables investigated especially wage increase and price level dynamics although they established that minimum wages policy has effects on several macroeconomic variables. A good analysis of the impact of minimum wage requires the use of a methodology that captures the forward and backward effects of minimum wage. Consequently, in this study, we developed a vector autoregressive model (VAR) to track the effect of minimum wages policy on employment, output, and general price levels. And to place our study in the perspective of the literature which discovered that the effect of changes in wages depends on the economic situations prevailing in each country, we focus on Nigeria. Nevertheless our study will contribute to the literature by exploring the Nigeria’s case.

3. METHODOLOGY AND MATERIALS

This paper investigates wage-legislation trends and Price level dynamics in Nigeria. However, since wage increase may not be random, the estimates for wages may span over some years. Hence the time series data may suffer from unit root problems. The practice is to correct for the unit root problems by using the Augmented Dick fuller stationarity test. This procedure involves estimating a participation function in the first stage to derive an inverse mills ratio. The ratio so derived is then used in the second stage OLS estimation of the earnings function as regressors to correct for specification bias. A close examination of wage effect in Nigeria indicates that there are three main channels, the employment, the output and the price levels. We therefore analyze the choice of variable using the vector autoregressive model and derive the mills ratio for use in the earnings function using the Lee two-stage method. We then estimate the standard human capital earnings function, which assumes that the proportional change in wage earnings is a function of the characteristics of the economy (Xi), which are output, employment and price levels and other characteristics, i.e.:

$$\ln W_i = \alpha_0 + \beta_1 X_i + \varepsilon_i \dots\dots\dots(1)$$

where $\ln(W_i)$ is the natural logarithm of the observed wage rate for the economy i and ε_i is a stochastic error term distributed . Equation 1 is estimated using vector autoregressive model, with correcting for unit root problems. Next we proceed to decompose the wage effects on employment, the output and the price levels. The joint process is written as: $WR_t = (EMPL_t, GDP_t, INFL_t,)\dots\dots\dots 1$

Where:

WR_t = Observed Wage Rate for the Economy

$EMPL_t$ = Employment Rate

$INFL_t$ = Inflation Rate,

GDP_t =Economic Growth And

t' = time subscript.

Using Vector Autoregressive model and rearranging equation (1) gives the expanded form of the VAR model, which can be written as:

$$WR = \Omega_0 + \Omega_1 WR + \Omega_2 EMPL + \Omega_3 RGDP + \Omega_4 INFL + U \dots\dots\dots 2$$

$$\Omega_2 EMPL = \Omega_0 + \Omega_1 WR + \Omega_2 EMPL + \Omega_3 RGDP + \Omega_4 INFL + U \dots\dots\dots 3$$

$$RGDP = \Omega_0 + \Omega_1 WR + \Omega_2 EMPL + \Omega_3 RGDP + \Omega_4 INFL + U \dots\dots\dots 4$$

$$INFL = \Omega_0 + \Omega_1 WR + \Omega_2 EMPL + \Omega_3 RGDP + \Omega_4 INFL + U \dots\dots\dots 5$$

The parameters to be estimated are: Ω_1 , Ω_2 , Ω_3 , and Ω_4

The innovations of current and past one-step ahead forecast errors are orthogonalised using Cholesky decomposition so that the resulting covariance matrix is diagonal. This assumes that the first variable in a pre-specified ordering has an immediate impact on all variables in the system, excluding the first variable and so on. Therefore, in this study, the policy variable are placed first then followed by the target variables, because the target variables are less endogenous than the policy variables. The ordering are Wage Rate, employment Rate, and economic growth inflation.

From the VAR model, two important analytical tools are used to analyses the impact of wage rate on the employment Rate, economic growth and inflation namely; variance decomposition, impulse response and granger-causality test. The impulse response function of any VAR model traces the effect of one standard deviation shock to one of the innovations on current and future values of the endogenous variables. While the variance decomposition on the other hand shows the fraction of the forecast,

4. RESULTS AND DISCUSSIONS

The output of the regression is given in table 3. The standard error and the t-statistics are written in the parentheses. With several lags of the same variables each estimated co-efficient will not be statistically significance possibly because of multi-co linearity but collectively they may be significant on the bases of the F-test.

VECTOR AUTO REGRESSIVE ESTIMATE

Date: 02/09/12 Time: 04:28

Sample(adjusted): 1982 2008

Included observations: 27 after adjusting endpoints

Standard errors & t-statistics in parentheses

	WR	INFLR	EMPL	GDP
WR(-1)	0.560040 (0.24695) (2.26786)	0.922797 (0.63625) (1.45037)	-0.021587 (0.03563) (-0.60590)	-0.238163 (0.13452) (-1.77051)
WR(-2)	-0.133345 (0.22566) (-0.59091)	-1.269099 (0.58140) (-2.18282)	0.030053 (0.03256) (0.92309)	0.238560 (0.12292) (1.94076)
INFR(-1)	-0.115307 (0.09205) (-1.25261)	0.738427 (0.23717) (3.11345)	-0.013108 (0.01328) (-0.98701)	-0.002250 (0.05014) (-0.04488)
INFR(-2)	-0.072068 (0.09275) (-0.77699)	-0.203484 (0.23898) (-0.85148)	0.000103 (0.01338) (0.00768)	-0.002705 (0.05052) (-0.05354)

EMP(-1)	-2.166808 (1.94428) (-1.11445)	4.413272 (5.00940) (0.88100)	0.503980 (0.28051) (1.79666)	0.635305 (1.05909) (0.59986)
EMP(-2)	-1.512643 (1.57564) (-0.96002)	-6.124995 (4.05959) (-1.50877)	0.165354 (0.22732) (0.72740)	-0.318850 (0.85828) (-0.37150)
GDP(-1)	-0.192398 (0.22164) (-0.86806)	-0.178582 (0.57105) (-0.31272)	-0.039273 (0.03198) (-1.22817)	0.212410 (0.12073) (1.75935)
GDP(-2)	-0.323119 (0.23260) (-1.38917)	-0.255003 (0.59928) (-0.42551)	0.000765 (0.03356) (0.02279)	0.284612 (0.12670) (2.24632)
C	29.69959 (11.4237) (2.59982)	23.94626 (29.4329) (0.81359)	1.501533 (1.64814) (0.91105)	1.450999 (6.22273) (0.23318)
R-squared	0.691575	0.498159	0.689361	0.481042
Adj. R-squared	0.554497	0.275118	0.551300	0.250393
Sum sq. resids	683.1255	4534.737	14.21919	202.6975
S.E. equation	6.160472	15.87230	0.888794	3.355737
F-statistic	5.045125	2.233488	4.993144	2.085607
Log likelihood	-81.92770	-107.4811	-29.65454	-65.52569
Akaike AIC	6.735385	8.628229	2.863300	5.520421
Schwarz SC	7.167331	9.060175	3.295245	5.952367
Mean	17.27444	20.81481	3.914815	3.940741
dependent				
S.D. dependent	9.229723	18.64258	1.326854	3.875888
Determinant	Residual 6716.600			
Covariance				
Log Likelihood	-272.2119			
Akaike Information Criteria	22.83051			
Schwarz Criteria	24.55829			

The study investigates the wage fluctuations on certain macroeconomic variables such as employment Rate, economic growth and inflation in Nigeria. The vector auto-regression result reveals the statistical and theoretical significance of the parameter estimate. Looking at the results individually, only the wage rate lagged once was found to be statistically significant. The statistical significance of this variable is evaluated on the basis of the value of the standard error. When compared to the value of coefficient of the variable, the value of the standard error was less than half of the value of coefficient of the variable in absolute term. All other variables were

statistically not significant. They did not pass the standard error test. Nevertheless the F-statistics of 5 is high enough and this implies the overall significance of the model. In other words the F-value is high so that we cannot reject the hypothesis that collectively all lag terms are statistically significant. The akaike and Schwarz statistics strengthened the statistical significance of the estimate since the lower value of the akaike and Schwarz suggest that, the parameter estimate is significant statistically. The adjusted R-Square is 0.55. This shows that variations in inflation rate; unemployment rate and gross domestic output in Nigeria are being accounted for by variations in the wages.

The theoretical significance is evaluated on the basis of the signs of the coefficient. The result shows that the coefficient of wage rate is positively related to inflation which implies that higher wages raise inflation with the magnitude depending on the extent of labour productivity (wage-cost push inflation) and the ability of producers to increase output. The wage fluctuations exert a negative impact on real economic growth, and a negative impact on employment. This finding is similar to that of Brown et al (1982), who used time series regression to analyze the effects of minimum wages on employment and unemployment and found a negative relationship between minimum wage increase and employment. This implies that an increase in minimum wage leads to an increase in unemployment and it is unproductive. It is unproductive in the sense that the gross domestic output does not increase with the rise in minimum wage. It does not enhance the labor productivity. In overall, the theoretical implications of changes in minimum wage can further be evaluated from the variance decomposition result and analysis of impulse responses shown below.

VARIANCE DECOMPOSITION

PERIOD	SE	WR	INFL	EMP	GDP
WR					
1	5.030004	100.0000	0.000000	0.000000	0.000000
4	8.038564	73.69457	3.457095	21.54847	1.299867
8	8.476054	68.25092	5.361324	25.14572	1.242040
10	8.522368	67.56564	5.873802	25.30654	1.254021
INFL					
1	12.95968	11.97825	88.02175	0.000000	0.000000
4	16.59199	10.38747	80.58039	7.376755	1.655383
8	17.96396	15.60551	74.57321	8.222865	1.598414
10	18.09235	16.44557	73.66445	8.310551	1.579431
UNEMP					
1	0.725697	14.66875	11.12714	74.20411	0.000000
4	1.006513	14.03497	23.60160	61.31313	1.050308
8	1.080178	13.99690	28.39005	56.15428	1.458760
10	1.089423	14.60026	28.66928	55.21781	1.512647
GDP					
1	2.739948	29.92732	0.936497	7.927834	61.20835
4	3.180977	35.51591	1.414399	8.578124	54.49157
8	3.308243	36.58645	4.339590	8.423614	50.65034

10	3.327296	37.01635	4.481826	8.428910	50.07291
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WAGE RATE

The variance decomposition suggest that shocks to the wage increase as evidenced in the above table shows that own shocks constitute the predominant source of variation for all the variables in the model. The shocks in wage increase ranged between 100 percent in the first quarter declining in effects to about 73 percent in the fourth quarter, declined further to 68 percent in the eight quarter and finally to 67 percent in the tenth quarter. Apart from its past values, inflation rate, employment rate, and GDP also accounted for variation in wages. Specifically, shock in inflation did not contribute initially to the shocks in wages in the first quarter but the contribution rose to 3.4 percent in the fourth quarter and to 5.30 in the eight quarters and finally to 5.8 in the tenth quarter. Also, shocks in GDP contribute about 1.2 percent to the wages shocks throughout the ten quarters, and shocks in employment contribute about 2.5 percent to the wages shocks throughout the ten quarters.

Inflation Rate

When the forecast error variance decomposition of Inflation Rate was considered, the own shock for Inflation rate seems to have a sustained impact on itself with an initial impact of 88.92 percent coming down to 80.73 percent in the fourth quarter and falling further to 74.72 percent in the eight quarter and finally fell marginally to 73.81 percent at the 10th quarter. Shock in wages cause inflation to rise from 10 percent in the fourth quarter to 16 percent in tenth quarter. This finding confirms that shocks in wages are necessarily inflationary in Nigeria.

Employment

The result shows that own shock constitute highest cause of the variation as the employment rate ranged from 74.13 percent in the first year declining to 61.57 percent in the fourth quarter and to 56.17 percent in the eight quarter before settling down to 55.39 percent in the tenth year. The contribution of wage increase to shocks in employment was about 14.5 percent in the first quarter. This figure fell marginally to 13.04 percent in the fourth quarter, and rose finally to 14.0 percent in the tenth year. This finding is consistent with previous studies and a prior expectation that wage increase do significantly affect employment

Gross Domestic Product.

For the real gross domestic product, own shock contribute the highest source of variation with an initial impact of 61.67 percent in the first quarter declining in effect to about 54.56 percent in the fourth quarter and decline finally to 50.50 percent in the last quarter. Wage shocks contribute about 29.2 percent to real GDP in the first year before rising to 35.0 percent in the fourth quarter and rose marginally to about 37.35 percent in the tenth quarter. The result demonstrated a direct but significant relationship between wage shock and gross domestic product in the long run in Nigeria. The result suggests that high wages stimulate output growth in the country.

Impulse Response Function

An impulse response function traces the effect of a one-time shock to one of the innovations on current and future values of the endogenous variables. In this study, the impulse response analysis will be used to uncover the dynamics relationship between wage increase,

inflation rate, employment rate and gross domestic product. within the Vector-Autoregressive (VAR) model. It measures the time profile of the effect of a shock or impulse on the (expected) future values of a variable.

ANALYSIS OF IMPULSE RESPONSES

VARIABLE	PERIOD	WR	INFL	EMPL	GDP
RESPONSE OF WAGE RATE	1	5.030004	0.000000	0.000000	0.000000
	5	0.815172	-0.421170	-2.494935	-0.232714
	8	0.060640	0.553459	-0.584323	0.074384
	10	0.179118	0.439402	-0.301164	0.106134
RESPONSE OF INFLATION RATE	1	4.485293	12.15876	0.000000	0.000000
	5	2.269401	1.208482	-3.264116	-1.282925
	8	-1.849025	1.350322	0.966022	0.214268
	10	-1.150436	0.303702	0.518241	0.077853
RESPONSE OF EMPLOYMENT RATE	1	-0.277941	-0.242074	0.625129	0.000000
	5	-0.006612	-0.207914	0.213758	-0.039375
	8	0.082723	-0.107957	0.013078	-0.031872
	10	0.065367	-0.054084	-0.011920	-0.018485
RESPONSE OF REAL GROSS DOMESTIC PRODUCT	1	1.498912	-0.265152	-0.771471	2.143619
	5	0.153727	-0.104012	0.448658	0.381093
	8	0.280639	-0.195114	-0.088125	0.019064
	10	0.195024	-0.081400	-0.077098	-0.000874

The responses of inflation rate, employment rate and gross domestic product to changes in wages were established in all the ten quarters. The response of employment to changes in the wages was negative throughout the ten quarters. It was -2.4 percent in the fourth quarters, -0.6 percent in the eight quarters and -0.3 percent in the tenth quarters respectively. The result indicates that, an increase in wage reduces employment in Nigeria. Contrary wise, the responses of GDP and inflation to changes in wages were partially negative but mostly positive in most of the quarters. This is consistent with the empirical research which indicates that increases in wages generate positive impact on the output growth and inflation in Nigeria. Theoretically, the results posit that wage increases generate excess liquidity and lead to hyperinflation in Nigeria.

The expansionary impact of inflation rate, employment rate and gross domestic product on wage increase was established in all the ten quarters. The expansionary impact of gross domestic output was positive throughout the ten quarters. On the other hand inflation and employment exhibit contractionary impact almost in all the quarters. In summary the results demonstrate that changes in wages have different implications both expansionary and contractionary impact on the macroeconomic variables. In other words, it indicates that all the macroeconomic variables investigated responded to shocks in wages either negatively or positively.

5. SUMMARY, CONCLUSION AND POLICY RECOMMENDATION

This study used Nigeria database and minimum wage variability to examine the impact of the wage increase shock on certain sensitive macroeconomic variables such as inflation, employment rate and gross domestic product using Vector Autoregressive (VAR) model. At the preliminary level, the study examined statistical and theoretical significance of the variables under investigation using standard error test. The study found that, individually, only the wage rate lagged once was statistically significant. Nevertheless the F-statistics was high enough to validate the overall significance of the model. The statistical significance of the estimate was strengthened by the lower value of the akaike and Schwarz.

Based on the findings, it was established and can be concluded that the minimum shocks in Nigeria have a significant impact on dynamic variables such as inflation rate, employment rate and gross domestic product. . It shows that shocks in wages cause unemployment and are necessarily inflationary in Nigeria. This finding is in tandem to that of Brown et al (1982), who used time series regression to analyze the effects of minimum wages on employment and unemployment and found a negative relationship between minimum wage increase and employment and positive relationship between minimum wage increase and inflation.

The findings and the conclusion of the study suggested the need for the policy makers to curtail excess liquidity in Nigeria and enforce the respect of monetary requirements and fiscal discipline. In the light of this suggestion, the policy makers should evaluate the productivity of labor and ensure that the aggregate supply is increased to offset the increase in minimum wage. If aggregate supply does not increase, then wage increase will be inflationary. And rather than increasing the minimum wage; the policy makers should formulate policies that can increase the purchasing power of the income earners. Such polices will address and curtail the volatile exchange rate and hyperinflation in Nigeria.

REFERENCES

- Adams, Gerard (1987), *Increasing the Minimum Wage: The Macroeconomic Impacts*, Briefing Paper, Economic Policy Institute, Washington, DC.
- Abowd, John M., Francis Kramarz, and David N. Margolis (1999), 'Minimum Wage and Employment in France and the United States', NBER Working Paper no. 6996.
- Brown, Charles, Curtis Gilroy, and Andrew Kohen (1982), 'The Effect of the Minimum Wage on Employment and Unemployment', *Journal of Economic Literature*, 20 (2): 487-528.
- Card, David and Alan B. Krueger (1994), *Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania*, *American Economic Review*, 84 (4):772-793.
- DiNardo, John, Nicole Fortin, and Thomas Lemieux (1996), 'Labour Market Institutions and the Distribution of Wages', 1973-1992: A Semi-Parametric Approach', *Econometrica*, 64 (5):1001-1044.
- Falk, Armin, Ernest Fehr, and Christian Zehnder (2006), *Fairness Perceptions and Reservation Wages – The Behavioral Effects of Minimum Wage Laws*, *Quarterly Journal of Economics*, forthcoming. *Macroeconomics of Minimum Wage Draft: Do not quote 21*.
- Folawewo Abiodun O. "Macroeconomic Effects Of Minimum Wage In Nigeria: A General

Equilibrium Analysis” *Paper Presented at the Csea Conference 2007: Economic Development In Africa, Oxford, 19 - 20 March 2007.*

- Golan, Amos, Jeffrey M. Perloff, and Ximing Wu (2001), Welfare Effect of Minimum Wage and other Government Policies, Working Paper 957, Department of Agricultural and Resources Economics, University of California, Berkeley.
- Grossman, Jean Baldwin (1983), ‘The Impact of the Minimum Wage on other Wages’, *The Journal of Human Resources*, 18 (3):359-378.
- L’Horty, Yannick and Christopher Rault (2004), ‘Inflation, Minimum Wage and other Wages: An Econometric Study of French Macroeconomic Data’, *Applied Economics*, 36: 277-90.
- Neumark, David, Mark Schweitzer, and William Wascher. 2005. “The Effects of Minimum Wages on the Distribution of Family Incomes: A Nonparametric Analysis.” *Journal of Human Resources* 40(4): 867-894.
- Neumark, David, Mark Schweitzer, and William Wascher. 2004. "Minimum Wage Effects throughout the Wage Distribution." *Journal of Human Resources* 39(2): 425-450.
- Neumark, David, and William Wascher. 2002. "State-Level Estimates of Minimum Wage Effects: New Evidence and Interpretations from Disequilibrium Methods." *Journal of Human Resources* 37(1):35-62.
- Owoye, Oluwole (1994), “Wage Determination and Strike Activity in Nigeria”, *Journal of African Economics*, 3 (3): 447-80.
- Yuen, Terence. 2003. "The Effect of Minimum Wages on Youth Employment in Canada: A Panel Study." *Journal of Human Resources* 38(3):647-672.