# "Factors of macroeconomic growth in Nigeria: wages demand, taxes, and entrepreneurship development"

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# FACTORS OF MACROECONOMIC GROWTH IN NIGERIA: WAGES DEMAND, TAXES, AND ENTREPRENEURSHIP DEVELOPMENT

## Abstract

This paper contributes to clarifying the scientific debate on the impact of entrepreneurship development and wages increases on Nigeria's macroeconomic development. The main purpose of this research is to estimate the impacts, problems, and consequences between wages growth and the growth of a long-term relationship between wages and investment. The article deals with the current state of Nigeria's macroeconomic indicators. The methodological tools for the research are the ARDL and DOLS methods, which were used to study the relationships between the macroeconomic indicators. The research period is 1987–2019. The research empirically confirms and theoretically proves that the country operates under unstable and uncertain conditions, so it is difficult to achieve macroeconomic stability. Also, the article presents the results of the analysis, which has shown a positive and statistically significant effect of raising the minimum wages on economic growth both in the long and short term. The study results can be useful for state authorities, private sector, as well as for the researchers.

**Keywords**      wages, wages-price spiral, labor union, inflation, budget deficit, entrepreneurship

**JEL Classification**      E24, L26, G31

## INTRODUCTION

In macroeconomic development, the importance of forecasting and wages cannot be overemphasized. An important part of price inflation has been observed to be nominal wages inflation, while labor demand and other production factors are influenced by real wages. In a more general term, the nominal wages are structured to be a relevant determinant of whether or not there is any long-run or short-run tradeoff between employment, inflation, and economic growth. To lower inflationary pressure, policymakers generally take a closer look at labor cost growth. This is particularly because of the widely held view that inflation of labor cost is one of the major causes of price inflation. This assumption in a theoretical perspective represents post-Keynesian cost-push/price markup view of the inflationary process in which in excess of productivity, wages increase is seen as putting upward pressure on prices, while wages are regarded as variables, which exogenously determine the future direction of inflation.

Nigeria is yet to completely exploit the benefits of taxation because of the rate in which the country depends on the revenue generated from the sales of crude oil. The country, which was regarded as one of the nations, which produce the highest quantity of crude oil per day, has now fallen below expectations. Its production rate was about 2.1 million barrels per day at an average price of US$50 to about $100 per barrel, but now it produces far less. As observed by Oputa (2004), it

was argued that several billions of naira are lost by Nigeria through tax revenue every year due to tax regimes that are unreformed and equally ineffective tax legislations. This, therefore, has aided the tax evasion by multinational and national companies. This was further argued by Ajayi (2004) who opined that the government of Nigeria since independence had paid no significant attention to the structuring and restructuring of both corporate tax and personal tax. He observed that Nigeria's tax legislation still follows the colonial structure with little or no significant effort of the successive regimes to visit the problem and restructure it, hence, increasing the revenue-generating capacity of the country.

Despite the robust growth of the GDP in the country, one of the main challenges in the economy is the recurring syndrome of growth, which is not accompanied by growth in job opportunities and the absence of tangible improvement in the citizens' standard of living. This has been caused partially by the large formal sector exclusion from the reformed financial system, which has constricted the growth of small and medium enterprises.

This situation has limited the capacity of those to be in the tax net and yield from the tax revenue potential to be reduced despite the huge population of the economy. Generally, the wages bill is the most important component of government consumption expenditures; the challenges faced by countries, particularly Nigeria, in terms of deterioration in the government deficit and debt accumulation, have made the control of the public wages policy an issue of great interest. Against the above background, there is a need to isolate the problem of increasing public wages bill and policies associated with targeting a critical threshold of payroll compared to tax revenues in Nigeria.

The major factor that motivates this study is the fact that despite the wages bill increase in Nigeria, the living standard of workers is not improved. Consequently, a government budget debate over managing public payroll is rooted in the neoclassical theory. So, there seems to be a concerning need for a fiscal adjustment in case of a deterioration of the public deficit and debt accumulation in Nigeria.

The study consists of 5 sections. Section 1 introduces the study, while section 2 reviews the related literature. Section 3 discusses the magnitude of the wages bill to total tax revenue in Nigeria, and section 4 treats the tax system and wages bill policy challenges. The last section concludes the study and makes policy recommendations.

# 1. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

The main contribution to research on tax administration issues, revenue, and wages bill in Nigeria was made by such scholars as Ogunwale and Ekundayo (2016), Sabia (2014), Ajayi (2004). These scientists have analyzed the methodology of the research process of wages bill to tax revenue ratio in different states. The local, state, and federal governments are the three levels of government in Nigeria. Between these identified levels of government, there is a sharing of functions in the fiscal system. With regard to government levels, taxes differ, either in legislates or tax collection and administration. Taxes, which apply to financial assets, are being legislated by the federal government. Income taxes in Nigeria include VAT, royalties, excise duties, import duties, petroleum profit tax. These taxes are divided into three different groups: consumption and expenditure taxes, wealth and income taxes, and production taxes. Wealth and income taxes include petroleum tax, personal income tax, capital transfers, company tax, property, and capital gain tax. Consumption and expenditure taxes include custom duties tax, sales tax, goods that are locally manufactured are taxed under the sales tax, while the foreign manufactured goods, which are locally consumed, are taxed under the custom duty tax. This category equally encompasses the modified value-added tax, which is introduced later. Under the production taxes, there are taxes, which are on local manufactures and land duties; on the other hand, are on intermediate imported inputs.

According to Folawewo (2007), there are macroeconomic effects of the minimum wages in Nigeria in the efficiency of its economic reforms between 1934 and 2005. It was found that an increase in the minimum wages would lead to a significant rise in the general price level, thereby indicating that such a policy could induce inflation in the economy. Some papers (Clemens & Wither, 2014; Magruder, 2013; Mankiw, 2011) summarize the positive effects on household income and consumption, government balances, and employment and income trajectories. O. Uwuigbe, Omoyiola, U. Uwuigbe, Lanre, and Ajetunmobi (2019) investigate the factors that influence foreign direct investment in Nigeria and seek to establish the role of taxation (corporate tax) for foreign direct investment. Okoye, Omankhanlen, Okorie, Okoh, and Ahmed (2019) examine the issues of fiscal deficits in Nigeria. They substantiated a significant positive effect of inflation, oil revenue, and lagged exchange rate on fiscal deficits. Also, they proved the evidence that external debt and current exchange rate decrease the level of fiscal deficits.

Two points link economic growth, wages, and entrepreneurship. The first direction, according to Burkhauser and Sabia (2004), Card and Krueger (1995), Alesina (2002), states that the development of a credit system allows using modern technologies in production and improving the level of taxes. The second path moves from the point that minimum wages cause a big push in developing countries (Fanti & Gori, 2011; Feldmann, 2009; Magruder, 2013; Watanabe, 2013).

Kim (2018) studies the causal relationship between economic growth and tariff levels (i.e., levels of trade protection) in the United States using the US tariff levels and GDP growth data. Shkolnyk, S. Kozmenko, O. Kozmenko, and Mershchii (2019) investigate the impact of the economic financialization on the level of economic development of the associate EU member states. The relationship between economic growth and indicators of economic financialization was determined. Zhuravka, Makarenko, Osetskyi, Podmarov, and Chentsov (2019) explore the impact of politically generated shocks on macroeconomic and monetary performance based on the experience of some countries (Argentina, Turkey, Ukraine), which at one time introduced the regime of inflation targeting in monetary policy, but were forced to modify it influenced by political and economic instability.

Some scientists pay attention to the environmental factors of macroeconomic growth. Sotnyk (2014) describes the usage of the theoretical bases of decoupling to establish the relationship between economic growth and destructive impact on the environment. Melnyk and Kubatko (2019) go further, exploring the role and place of human resources in the implementation of modern industrial revolutions.

As observed by Egwaikhide, Chete, and Falokun (1994), the pass-through argument is most times the basis whereon the inflationary tendencies are structured, developed on the assumption that induced rises in prices of commodities that are imported, which is followed by the devaluation of the domestic currency, will affect the domestic prices. When devaluation of a currency occurs, there will be a rise in the prices of domestic commodities that are imported, and the production costs are affected. Indirect taxes and profit are most times mark-ups on the prices of producers to collect ex-factory prices. This, therefore, means that prices are structured based on mark-up over the production cost. This can be represented in a highly simplified model, which is stated as follows:

$$P = M\left(W + eP\right), \tag{1}$$

where output prices are represented by $P$, $M$ represents 1 plus the fixed mark-up rate, wages rate is represented by $W$, $e$ means the rate of exchange, and it is the imported commodity foreign prices.

From the equation above, mark-up is assumed constant. The argument, however, has been brought upon the size of the mark-up, which depends on excess demand in the economy. The general price level rise, which is caused by the devaluation, most times causes several developments, which are often fueling the process of inflation. Therefore, domestic prices rise without a corresponding rise in the nominal wages rate causes a reduction in the real wages. This, therefore, means that a specific household will need to spend more of their income to maintain

the same standard of living. With these, there will be agitation from labor for increases in the benefits and wages paid. As this demand for labor is granted, cost of production and mark-up prices are subsequently affected. In a developing country like Nigeria, the government is known to be the highest employer and, therefore, wages increase can increase public outlays, the government expenditure rises cause budget deficit when the collected revenue is not sufficient to meet up with the increase in expenditure.

In the macroeconomic theory, the wages-price spiral is to explain the cause-effect relationship between rises in prices and wages. It is suggested by the wages-price spiral that the demand for services and goods is increased by the wages increase, and this causes prices to rise. The demand for higher wages is inspired by the rising prices of commodities, which lead to a higher cost of production.

## 2. METHODS

Data on the annual minimum wages are collected from the National Bureau of Statistics (2016), the data for other variables used in the study are collected from the World Bank Development Indicators (WDI, 2016). The scope of the study is from 1987 to 2019.

This study is conducted to examine the relationship between the minimum wages and investment since it has been observed to have the ability to affect the productivity of the firm positively, which can affect the labor productivity or in a negative way because it has been equally observed to bring about the unemployment. The study, therefore, examines the long-run wages investment relationship through the adoption of dynamic ordinary least squares (DOLS) approach. With this, the wages and investment relationship is structured in equation 2:

$$GFCF_t = f\left(M_t, INTRS_t, INF_t, CRED_t\right), \quad (2)$$

where $GFCF_t$ is Gross Human Capital Formation, $M_t$ represents minimum wages, $INTRS_t$, $INF_t$, $CRED_t$ stand for lending interest rate, inflation, and credit to private and public sector.

There is no relationship between unemployment and wages if the coefficient of the wages variable is zero (0); in a situation like this, the need for the consideration for investment pass through wages growth relationship is not necessary. On the other hand, if the coefficient is significantly different from zero, then it means it will be appropriate for the analysis of wages-investment relationships. In this case, the coefficient is positive on the minimum wages; this, therefore, means that the minimum wages induce labor productivity and, therefore, encourages investment. A negative coefficient, on the other hand, means that the wages reduces investment with potential employment.

To examine wages-investment relationships, the study uses the following equations:

$$\ln Y_t = \alpha_0 + \alpha_1 + \ln M_t + \mu_t, \quad (3)$$

$$\ln Y_t = \beta_0 + \beta_1 \ln M_t + \beta_2 \ln I_t + \varepsilon_t, \quad (4)$$

$$\ln Y_t = \gamma_0 + \gamma_1 \ln M_t + \gamma_2 \ln K_t + \eta_t, \quad (5)$$

$$\ln Y_t = \delta_0 + \delta_1 \ln M_t + \\ +\delta_2 \ln K_t + \delta_3 \ln CRED_t + \xi_t, \quad (6)$$

where $Y_t$, $M_t$, $I_t$, $K_t$, and $CRED_t$ represent GDP, minimum wages, total spending (private and public spending, proxied by GFCF), an interaction term (interaction of between spending and minimum wages), and credit to the private sector. The coefficients of $M_t$, $I_t$, $K_t$, and $CRED_t$ in the respective equations are given as $\alpha_1$, $\beta_1$, $\gamma_1$, and $\delta_1$ for minimum wages, $\beta_2$ for public spending, $\gamma_2$ and $\delta_2$ for the interaction term and $\delta_3$ for credit to the private sector by banks, respectively.

The error term in the study includes $\mu_t$, $\varepsilon_t$, $\eta_t$, and $\xi_t$ in equations (2), (3), (4), and (5). The minimum wages effect on unemployment is examined in equation 2. The objective is to determine the effect of public spending and increases in the minimum wages on job creation. The simultaneous changes in the minimum wages are measured by the interaction term and the public spending on job creation.

## 2.1. Cointegration: ARDL bounds test

A cointegration test is carried out in the study to investigate the long-run relationship among the variables adopted in the study. The study adopted the Wald and the $F$-statistics to test the presence of a long-run relationship between the variables. ARDL cointegration analysis is conducted in a structured framework of the error correction. The advantage of adopting the error correction model is the avoidance of spurious regression, and since the first difference of the variable is adopted where there are levels of relationships. The unrestricted ECM is adopted in the ARDL framework to determine if there are the relationships between two variables, and it is specified as follows:

$$\Delta Y_t = \omega_0 + \sum_{i-1}^{Z} \omega_1 \Delta Y_{i-1} + \sum_{i-0}^{Z} \omega_m + \\ +\pi Y_{i-1} + \pi_m X_{t-1} + \mu_t, \tag{7}$$

where $Y_t$ represents the dependent variable, $X_t$ is the vector of observations of regressors, which are adopted in the equation (7).

## 3. RESULTS

Table 1 presents the result of the preliminary test to examine the long-run relationship between investment and wages. The null hypothesis of no cointegration is rejected in the study for both Philips-Ouliaris and Engle-Granger.

**Table 1.** DOLS test for cointegration relationship in the equation

| Equation | Engle-Granger | | Phillips-Ouliaris | |
|---|---|---|---|---|
| | tau-stat | $z$-stat | tau-stat | $z$-stat |
| Equation (i) | −4.12545* | −21.52228* | −4.134415* | −21.50000* |

*Note: H0: no cointegration, H1: cointegration.*

From the result, it was observed that there was a positive and statistically significant relationship between investment and minimum wages. At 1% significance level, the coefficient is significant. Therefore, the cointegration results equally support the pass-through effect of minimum wages on growth via investment.

**Table 2.** Estimated coefficients of the equation using DOLS approach-dependent variable

| Regressor | Coefficient |
|---|---|
| Log $M$ | 1.381221 |
| | (0.108814) |
| Log $CRED$ | −0.077616 |
| | (0.377860) |
| Log $INTRS$ | −0.461618 |
| | (0.261185) |
| C | 10.73806 |
| | (0.921145) |
| $R$-squared | 0.988272 |
| Adjusted $R$-squared | 0.981234 |
| Durbin-Watson statistic | 1.263730 |

Since it has been observed in the study that there is a correlation between investment and minimum wages, the study will go ahead to examine the relationship between wages and growth. Cointegration is first discussed further.

## 3.1. Cointegration test results using the ARDL approach

The test statistics in Table 3 indicate a long-run relationship between the estimated equations. The $F$ statistics for 1 and 2 are higher than their upper bound values, which is at 5% significance level. This indicates the presence of a cointegrating relationship between the variables that are in the model. For equations (3) and (4), on the other hand, the F statistics is observed to be between the lower and the upper bound value. This, therefore, makes the obtained results from the equation inconclusive. The unit root properties, as stated earlier in the methodology, are examined in equation (3) and (4); this ensures none is integrated into order 2 (I(2)). Further support for cointegration is provided in the study by the error correction, which is in the short-run estimates. It can be observed from the study that all the error correction terms are seen to be statistically significant and negative. This implies that any shock in the system can be reversed in a short time. It equally shows that there is moderate adjustment speed back to equilibrium long run. This, therefore, means that there is a significant cointegration between the estimates in the equation.

**Table 3.** ARDL bound test for cointegration relationship

| Equation | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Test statistic | 6.9111 | 9.555010 | 4.000535 | 2.633356 |

This study uses the Engle-Granger and Phillips-Ouliaris test for cointegration to test the DOLS framework (Saikkonen, 1992) as a check for robust on the cointegration properties in the variables adopted in the equation. To be more specific, the Phillips-Ouliaris method adopted the non-parametric Phillips-Perron approach, while the Engle-Granger adopted the parametric ADF approach. The null hypothesis of no cointegration in the study, which is examined against the alternative, is similar to examining the unit root null hypothesis, hence, non-stationarity against the alternative hypothesis of no unit root, implying stationarity. This test is conducted using one lead and two lags. The SIC is used for the determination and selection of the lag length, and the result is presented in Table 4.

**Table 4.** DOLS test for cointegration relationship

| Equation | Engle-Granger | | Phillips-Ouliaris | |
|---|---|---|---|---|
| | tau-stat | z-stat | tau-stat | z-stat |
| Equation 3 | −4.022711 | −21.96665 | −4.021114 | −20.47776 |
| Equation 4 | −4.375411 | −24.18669 | −4.288882 | −20.61212 |

From Table 4, it can be observed that for equation (3), with the adoption of Engle-Granger method, $z$-stat, and tau-statistic had to reject the null hypothesis of no cointegration. This, therefore, implies that in the residual, there is no unit root. Similar result is confirmed in the Phillips-Ouliaris at 10% significance level for equation (3). In equation (4), the Engle-Granger $z$-statistics and tau revealed a cointegration at both 5% and 10% significance levels.

## 3.2. Results and analysis of long-run relationships

The results of the long-run estimates, which are obtained using the ARDL method, are presented in Table 5. The obtained result for all the equations is presented in the columns accordingly. As can be observed for equation (2), the minimum wages was observed to be statistically significant on economic growth, which is a proxy for employment. This may be because of the output inducement principle of wages increase, and the effect of demand enhanced multiplier of wages increase, which is observed to be related to investment increase. This will eventually lead to increases in the national output and bring economic growth in the long run.

In equation (3), with the addition of investment, the minimum wages was observed to be positive and equally statistically significant. Nevertheless, there was observed a drop in economic growth. The investment variable coefficient was equally observed to be positive and significant. This means that when investment spending is increased, there will be an increase in the growth potential in the long run than the increase in the minimum wages. This is observed to be so because labor efficiency is directly affected by investment spending and affects productivity, which, of course, leads to economic growth. Furthermore, there is an indirect relationship between the increase in minimum wages and growth through the increase in labor productivity and output, which are adopted in the study as the determinants of investment. Since it has been observed in the study that the increase in economic growth can be brought about through the increase in minimum wages, there must be a corresponding increase in investment spending. If the government, therefore, wants to enhance economic growth in the economy, they must avenue for investment spending, which will increase at par with the minimum wages. This can be achieved by ensuring that the rate of interest is low. From the observations on the results obtained in equation (5), the coefficient of credit is observed to be positive and statistically significant at 1% significance level. The result further shows that the growth rate becomes even more enhanced when the credit availability to the private sector is considered by the relevant institutions. This, therefore, implies that a simultaneous increase in the minimum wages and investment spending can lead to an enhanced level of economic growth when the banks increase lending.

**Table 5.** Estimated long-run coefficients using the ARDL Approach-Dependent variable

Source: Authors' computation using EViews.

| Regressor | Equation (2) | Equation (3) | Equation (4) | Equation (5) |
|---|---|---|---|---|
| Log *M* | 1.1413 | 0.44562 | 0.13274 | −1.1799 |
| | (0.035296) | (0.20128) | (0.33273) | (0.60107) |
| Log *GFCF* | | 0.52104 | | |
| | | (0.14937) | | |
| Log *K* | | | 0.42838 | 0.96225 |
| | | | (0.14233) | (0.25476) |
| Log *CRED* | | | | 0.44081 |
| | | | | (0.17394) |
| C | 13.0083 | 8.0837 | 9.0641 | 3.4106 |
| | (0.51246) | (1.3934) | (1.3588) | (2.5816) |

It is interesting to observe that the coefficient of the minimum wages is statistically significant and negative at 10% significance level in equation (4). This is expected and normal. To expand or even establish their businesses, private investors most times borrow, unlike the government who can borrow to settle workers' salaries. If minimum wages increase, it forces them to borrow to offset wages. This type of spending may not lead to economic growth. This is observed so because the minimum wages has an indirect but positive relationship with the output of the company but a negative relationship with the investors accounting book. This situation will lead to an increase in the debt profile of the organization, and this can only be offset if there is an increase in the organizational profit.

## 3.3. Results and analysis of short-run relationships

Table 6 depicts the estimated coefficients in the short run. It can be observed from the table that the equation (2) short-run results are significantly different from those obtained in the long run; therefore, it is not discussed. The equation (3) short-run results, on the other hand, are different from the long-run results. The result obtained from the short-run investment does not lead to growth. This is as a result of the insignificant nature of the investment variable. This may be connected to the fact that the investment variable is a long-term investment. It will, therefore, take a longer time for their growth to be felt.

**Table 6.** Error correction representation for the ARDL model

Source: Authors' computation using EViews.

| Regressor | Equation (2) | Equation (3) | Equation (4) | Equation (5) |
|---|---|---|---|---|
| ΔLog *Y1* | 0.54329 | 0.52679 | 0.49510 | 0.24356 |
| | (0.14163) | (0.13085) | (0.13340) | (0.15506) |
| ΔLog *M* | 0.22357 | 0.14523 | 0.042234 | −0.057923 |
| | (0.056317) | (0.062162) | (0.10340) | (0.10459) |
| ΔLog 1 | | | | 0.23200 |
| | | | | (0.079957) |
| ΔLog *M2* | | | | 0.18218 |
| | | | | (0.077581) |
| ΔLog *M3* | | | | 0.20305 |
| | | | | (0.075544) |
| ΔLog *I* | | 0.064950 | | |
| | | (0.056292) | | |
| ΔLog *4231K* | | | 0.066301 | 0.11630 |
| | | | (0.056025) | (0.056797) |
| ΔLog *CRED* | | | | 0.13220 |
| | | | | (0.050490) |
| Δ*C* | 2.5482 | 2.6345 | 2.8840 | 1.0228 |
| | (0.56337) | (0.53123) | (0.56715) | (0.92445) |
| ecm (−1) | −0.19589 | −0.32590 | −0.31818 | −0.29990 |
| *R*-squared | 0.54071 | 0.61655 | 0.61828 | 0.71394 |
| *F* statistic | 10.8107 | 11.2995 | 11.3732 | 9.0492 |
| DW statistic | 2.2153 | 2.0331 | 1.9450 | 2.2976 |

Concerning the equation (4), it can be observed that the coefficient of the minimum wages and that of the interaction term are observed to be significant in the short-run equation. This interaction term is likely to be insignificant as a result of the longer period, which is needed than that of the short-run period. It is, however, observed that the lagged dependent variable is equally statistically significant and positive. This is a result of the elements, which stimulate growth in a particular period and may still be relevant to enhance growth in the short run, at least. In equation (5), from the first to the third lags of the minimum wages are all significant and positive. This may be as a result of the fact that the former levels of positive attitude to work can yet be strong enough to enhance the increase in the current output in the short run, which will lead to growth.

## 3.4. Model diagnostics and stability test results

The diagnostic test result shows an absence of heteroscedasticity and serial correlation in the equations. The residuals are also observed to be normally distributed, and evidence of functional form

misspecification was not seen in all the equations. The structural shift was not observed from the study according to the results obtained from the CUSUM and CUSUMSQ diagrams. Coefficients are, therefore, consistent, and the equation is reliable and stable. Furthermore, statistically speaking, with the addition of the interaction term, an increase is observed in the *R*-squared in equations (4) and (5). The results of the model diagnostics and stability tests are presented in Table 7.

**Table 7.** Model diagnostics and stability tests

| Test statistic | Equation (2) | Equation (3) | Equation (4) | Equation (5) |
|---|---|---|---|---|
| Serial correlation | 0.61471 | 0.026190 | 0.023269 | 0.96933 |
| | (0.433) | (0.871) | (0.879) | (0.325) |
| Functional form | 0.69130 | 0.24058 | 1.1801 | 0.41986 |
| | (0.406) | (0.624) | (0.277) | (0.517) |
| Normality | 2.3176 | 1.4160 | 1.3263 | 0.22139 |
| | (0.314) | (0.493) | (0.515) | (0.895) |
| Heteroscedasticity | 0.065928 | 0.46250 | 0.43285 | 1.6843 |
| | (0.797) | (0.496) | (0.511) | (0.194) |
| CUSUM | Stable | Stable | Stable | Stable |
| CUSUMSQ | Stable | Stable | Stable | Stable |

## 4. DISCUSSION

The effect of minimum wages increases on macroeconomic factors in Nigeria is the major focus of economic growth in this paper. The study adopted the ARDL in an error correction framework. The study established the theoretical basis for the examination of the relationships between wages and growth, and this was followed by the successful determination of the wages-investment long-run relationship using the DOSL approach. The study result revealed a statistically significant relationship between economic growth and wages increase both in the short run and the long run. In as much as wages increase can lead to growth, it will be, however, naive to conclude that minimum wages increases stimulate growth. This is observed to be so as a result of the extent to which increases in minimum wages affects economic growth depends on other relevant variables such as the investment spending in the economy and the credit availability to the private sector. Furthermore, it was observed that the minimum wages increase had no effect on growth both in the short run and the long run, and in the long run, it tends to reduce growth in equation (5). This, therefore, means that for minimum wages increase to lead to growth, it must be matched with a corresponding increase in investment spending. This, however, can be realized if the credit availability is increased by the financial institutions, which will enable them to expand their investment, and adopt new technology for increased labor efficiency and output productivity. In turn, this is expected to stimulate employment in the economy. Furthermore, the private sector profit level is expected to increase, which will provide them with the capacity to pay the existing wages rates.

## CONCLUSION

Economic growth is the result of economic and non-economic factors. These include military, political, geographical, climatic, national, demographic, environmental, etc. The influence of certain factors on economic growth can be more or less noticeable, but they interact especially effectively. The main factors determining the dynamics of macroeconomics are an increase in the number of labor resources and their quality; increase in volume and improvement of the quality composition of fixed capital; improvement of the organization and production technology; increase in the quantity and improvement of the quality of resources involved in the economic turnover; the growth of entrepreneurial activity and entrepreneurial initiatives in the society.

For the economy to, therefore, benefit positively from the wages increases (that means the quality of workforce), sustained and deliberate policies must be put in place to ensure the availability of credit, ensure its affordability and accessibility to the private sector. The policymakers are expected to make policies that support the adoption of new technologies in the production process. The policymakers can achieve this through the imposition of low tariffs on the import of equipment and machinery. Lastly, the policymakers are to make sure that the ratio of revenue increase to tax revenue is such a complementary change, which is expected to be growth-enhancing.

## AUTHOR CONTRIBUTIONS

## ACKNOWLEDGEMENT

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