Global Scientific and Academic Research Journal of Economics, Business and Management
ISSN: 2583-5645 (Online)
Frequency: Monthly
Published By GSAR Publishers
Journal Homepage Link- https://gsarpublishers.com/journals-gsarjebm-home/

Workers Development and Economic Upswing

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Article History

Received: 05/11/2022
Accepted: 12/11/2022
Published: 14/11/2022

Vol – 1 Issue – 3

PP: -01-05

DOI:10.5281/zenodo.18617577

Abstract

The study examines the impact of Workers Development (WD) Nigeria on Economic Upswing in Its analysis is predicted on multivariate co integration where real GDP Upswing rate is the dependent variable while recurrent expenditure on education, real gross capital formation, primary enrolment; post primary education enrolment and tertiary education are independent variable. It finds that capital formation; post primary education enrolment; tertiary education enrolment and recurrent expenditure on education promote economic Upswing in Nigeria.The coefficient of tertiary institutions emanating from factors such as inadequate funding, weak infrastructure, incessant strike, and disruption in academic activities. Government should appreciate the fact that no country can develop above is educational base..

INTRODUCTION

In the global terms, knowledge on all ramification of human endeavor, be it engineering, marketing, medicine and so on, is the pivot upon which the fulcrum of wisdom gravitate. This accounts for the differences in development on the private life and national life of individuals and the nations all over the world.

No country has achieved sustained economic development without substantial investment in Workers. Several studies have evolved to analyze the channel through which humancapital can affect Upswing (Barro, et al, 1995; Temple, 1990).

However, Workers development has been described as an end or objective of development. It is a way to fulfill the potential of people by enlarging their capability and this necessarily implies empowerment of people, enabling them to participate actively in their own development.

Workers is also a means since it enhances their skills, knowledge, productivity and intensiveness of people through a process of Workers development formation broadlyconceived. Thus, Workers development is people centered strategy and not goods centered or production centered strategy of development. What truly matters is the empowerment of people to identify their own priorities and to implement programmes and projects of direct benefit to them.

The impact of social spending on economic Upswing is gaining prominence in the literature. It is becoming increasingly important to investigate the effect of good public health system andquantitative education on the economic Upswing of nations of the world.

Productivity has long been linked to both quality health care and good education. Basic education is critical to participation and productivity in economic life. A healthy labour forceincrease both the amount of Upswing realized from establishing a sound investment climate and strongly reinforce the poverty reduction benefits from that Upswing. This example ofeducation clearly shows that the two pillars of investment climate and development are closely connected to support each oilier.

Todaro (2000) states that education serves the dual purpose of increasing both empowerment and economic Upswing. In the first instance, education allows people to be more aware of theirresponsibility and their fundamental and qualified rights. It opens up an opportunity to know how to do things better.

RESEARCH DESIGN

In order to appropriately capture the effect of Workers development on economic Upswing in Nigeria, this study will

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employ the augmented Solow human-capital-Upswing model adapted from Oluwatobi and Ogunrinola (2011). The augmented Solow human-capital-Upswing model is an improvement on the Solow Upswing model. Solow's original model did not explicitly incorporate Workers. To achieve that, Mankiw, Romer, and Weil (1992) came up with the augmented Solow model. The justification for the inclusion of Workers in the model is the fact of non- homogeneity of labour in the production process either within a nation or across different economies due to their possession of different levels of education and skills. This modification facilitates the suitability and hence, the adaptation of this model for the Nigerian context. The basic assumption in this approach is that increase in workers' quality through improved education, improves output. The augmented Solow model is therefore specified as:

$$Y = AK^{\alpha}(hL)^{\beta} \quad (1)$$

Where, Y= Output level or economic Upswing; K=Stock of physical capital; h=Level of Workers; L=Labour, measured by number of workers; A=Level of Total Factor Productivity; α = Elasticity of capital input with respect to output; while β = Elasticity of labour input with respect to output.

Econometrically, the model is specified as follows:

$$Y = AK^{\alpha}(hL)^{\beta} U \quad (2)$$

When transformed into a log-linear form, we have,

$$\log Y = \beta_0 + \alpha \log K + \beta \log hL + W \quad (3)$$

Where β_0 = log$A$ and W = log$U$

To achieve a robust result in the context of the Nigerian environment, the augmented Solow human-capital-Upswing model would be modified to take an additional variable. This is, government total expenditure on education, compromising both the recurrent and capital expenditure. This additional variable is necessary because the development of the educational sector is one major way of achieving the Workers development. The Expanded model is stated as follows:

$$\log Y = \beta_0 + \beta_0 + \alpha \log K + \beta \log hL + \log GTEE + W \quad (4)$$

Output level or economic Upswing (Y) is proxied by real gross domestic product; stock of physical capital (K) is represented by gross total capital formation total stock of Workers (hL) is a product of secondary school enrollment (h) and total labour force (L) term . Workers development is measured by government total expenditure on education, a combination of both capital and recurrent expenditure, that is, GTEE.

DATA ANALYSIS AND INTERPRETATION

Stationarity Test: A stationary test was carried out in order not to run a spuriousregression. The Augmented Dickey-Fuller (ADF) test was used for this analysis since it adjusts for serial correlation. The test was done with the following hypothesis:

Null hypothesis (H_0): Variable contains unit root and hence is non-stationary.

Alternative hypothesis (H_1): Variable does not contain unit root and hence is stationary.

Decision rule: If the calculated ADF Test statistic is greater than the MacKinnon critical values (both in absolute term) at the chosen level of significance, reject the null hypothesis of non-statonarity and accept the alternative hypothesis of stationarity, otherwise do not the null hypothesis of non-stationarity. The result is summarized in table I below.

Table I: Adf Test Statistics

Variable	Adf Test Statistics	5% critical value	Order of integration
Y	-7.604362	-2.917650	Stationary at second difference
K	-9.122017	-2.917650	Stationary at second difference
hL	-4.168758	-2.916566	Stationary at first difference
GTEE	-8.649019	-2.917650	Stationary at second difference

The result from table I reveals that while *Y*, *K* and GTEE are all integrated at order 2, *hL* is integrated at order 1. This result implies that second differencing is sufficient in modeling in this study

Cointegration Analysis

Economically speaking, two variables will be cointegrated if they have a long-run or an equilibrium relationship between them (Gujarati, 2004:822). The Johansen (1991) likelihood ratio test statistics, the trace and maximal eigenvalue test statistics, were utilized to determine the number of cointegrating vectors. The decision rule is to reject the null hypothesis if the probability (P value) is less than 5% (0.05). Otherwise, we do not reject. The result is summarized in the tables II and III below.

Table II: Johansen Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistics	0.05 Critical Value	Prob.**
None *	0.801513	154.2887	47.85613	0.0000
At most 1*	0.658300	65.35200	29.79707	0.0000

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At most 2	0.100955	6.291777	15.49471	0.6611
At most 3	0.007942	0.438546	3.841466	0.5078

* denotes rejection of the hypothesis at the 0.05 level

Table III: Johansen Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistics	0.05 Critical Value	Prob.**
None *	0.801513	88.93671	27.58434	0.0000
At most 1*	0.658300	59.06022	21.13162	0.0000
At most 2	0.100955	5.853230	14.26460	0.6321
At most 3	0.007942	0.438546	3.841466	0.5078

* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values.

Both the trace statistics (table II) and Eigen value statistics (table III) reveal the rejection of the first and second null hypotheses at 5% level of significance based on our decision rule. This implies that there is two cointegrating equations or vectors among the variables of interest. Therefore, there is a long run relationship between the variables. That is, the linear combination of these variables cancels out the stochastic trend in the series. This will prevent the generation of spurious (i.e., non-meaningful) regression results. Therefore, the estimates of the augmented Solow human-capital-Upswing model are summarized in table IV below.

Table: IV: Regression Estimates

Dependent Variable	Independent Variables	Coefficients	t-statistics	Probability
logY	Constant	1.379980	1.102169	0.2755
	logK	0.199364	6.215968	0.0000*
	loghL	0.340559	5.153704	0.0000*
	logGTEE	0.110632	2.451304	0.0176*
R^2	0.958838			
F-statistics	403.7667			

Note: * indicates significance at 5% level

The result of the regression (table IV) shows that gross total capital formation, total stock of Workers and total government expenditure on education (a proxy for Workers development) jointly explained about 95% variations or changes in the output of the economy. Also, they are statistically significant in explaining the level of the economy's output. That is,they remain indispensable in the achievement on economic Upswing and development in Nigeria

Furthermore, in terms of sign, all the independent variables conforms with apriori expectation since they all exhibit a positive relationship with the economy's output or Upswing level. This means that a greater amount or level of gross total capital formation, total stock of Workers and total government expenditure on education would engender a higher level of output or economic Upswing in in Nigeria. In addition, the regression result also reveals that the elasticity of economic Upswing or out level with respect to each of the independent variable is relatively inelastic given as 0.199364, 0.340559 and 0.110632 for gross total capital formation, total stock of Workers and total government expenditure on education respectively.

CONCLUSION

Using the augmented Solow human-capital-Upswing model, this study empirically investigated the impact or effect of Workers development on the Nigeria economy. The Johansen 2 likelihood ratio test statistics, the trace and maximal eigenvalue cointegration test statistics reveals two cointegrating two cointegrating equations or vectors among the variables of interest. The regression estimates shows that all the independent variables - gross total capital formation, total stock of Workers and total government expenditure on education, are statistically significant in the determination of the level of the economy's output. This implies that they cannot be ignored if we must achieve economic Upswing and development in Nigeria. Furthermore, the result indicates that all the independent variables, in line with theory, exhibit positive relationship with output level. This means that a greater amount of each would engender increase in output level or rise in the Upswing of the economy. Also, the regression result reveals that all the independent variables are relatively inelastic with respect to their relationship with the dependent variable.

Policy Recommendations

The following policy recommendations are made on the basis of findings of the present study as to how government can boost the economic Upswing of Nigeria through the positive contribution of Workers development:

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1. The Nigeria government should increase its total expenditure on education so that adequate educational facilities for thorough and proper quality education delivery would be made available.
2. The Nigeria Government should ensure sufficient budgetary allocation on health expenditure in order to make proper health care facilities available to Nigeria citizens.
3. The Nigerian government should ensure a standard is set across all secondary and tertiary institutions in the country so that proper Workers required for anyindividual to become productive is enhanced.
4. The Nigeria government should make health care and education more accessible through improving its affordability to the common individual in society so as to boost the economic Upswing of Nigeria through Workers development.
5. Government and policy makers should as a matter of urgency give high priority to Workers development. Concerted and sincere efforts should be made in building and developing human capacity through adequate educational funding across all levels since it remains the major way of attaining sustainable economic Upswing and development.

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