



SDI Review Form 1.6

Journal Name:	Journal of Economics, Management and Trade
Manuscript Number:	Ms_JEMT_37345
Title of the Manuscript:	PUBLIC HEALTH EXPENDITURE AND ECONOMIC GROWTH IN NIGERIA:AN ERROR CORRECTION MODEL
Type of the Article	Original Research Article

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This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	There are a number of serious issues with the paper. 1) The data in Table 4.1 for GEH do not appear to be in real terms, since they rise sharply at the same time that Nigeria experienced high levels of inflation, and then they fall when Nigeria experienced disinflation. The estimation should have all variables in real terms, since real GDP should be function of real factors. 2) How was PCY calculated? Is it simply real GDP divided by the population? It doesn't make sense to regress income per capita on real gdp. Real income per capita is what is typically used in the growth literature as measuring economic growth. It should be the explanatory variable instead of real gdp. If the authors use real gdp to measure growth then one of the explanatory variables needs to be population, since higher population leads to higher growth. There is no discussion in the introduction why IPC is considered. Nevertheless, it is not the correct approach. The authors should look again at the paper by Bloom et.al. to see how the production function is obtained. 3) The model estimated in equation 7 is not an error correction model. To start, real gdp needs to be in first difference, not in levels. Is that a typo? The summation terms are not correct. Beta is same for all explanatory variables, and it is multiplied by t (time?) which doesn't make sense. Furthermore, the summation is over i, but there is no i anywhere. Finally, are not the variables of GEH, LEN, PCY at time t included in the first difference (i.e. in the summation)? Why are they in equation 3.7 twice? Overall, equation 3.7 is incorrect, it is not an ECM. The author needs to look at the literature on error correction models. A useful paper that uses ECM to analyze a similar question as the author is by K.M.Wang, 2011, titled Health care expenditure and economic growth: Quantile panel-type analysis, in <i>Economic Modeling</i>. 4)Table 4.6 doesn't give the results of the estimates. The second column needs the coefficient estimates. Given all the errors in the paper it is difficult to believe that the results are correct. Plus, the authors should have noticed that the R^2 in their model is 0.98 (as is the adjusted R-squared). That is not believable.	



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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Minor REVISION comments	All the equations need fixing. They should be written with variables that have a time subscript, since this is a time series analysis. Equation 3.5 is missing the coefficient on the error correction term (ECM). The ECM needs to be written out specifically. All variables are estimated in logs, than the variables in the equations should also be presented in logs. The author states that LEN is falling over time in Nigeria, but the table in Appendix I doesn't show this. LEN is rising from 45.5 in 1980 to 52.7 in 2015. It shows (for the most part) a continuing improvement in LEN. There needs to be better discussion of the findings and the motivation for the work conducted in this paper. There are lots of grammatical errors that should be edited. A number of references are included that are not included in the paper.	
Optional/General comments	There are serious issues with the paper that need to be addressed. To start the author needs to discuss the goal of the paper and its contribution. Why is real income per capita added to the production function? Is it to illustrate the impact of initial conditions of an economy as discussed by Barro (1995)? The authors should consider different potential sources of economic growth in their research (look again at Bloom et.al.). There is a concern of using LEN and GHE as , since one would assume that higher expenditure on health would have an impact on life expectancy. However, my biggest concern is that since the ECM is not provided correctly, that it was not estimated correctly. I based this partly on the reported R^2 (and adjusted R^2). An R^2 of 0.98 should be questioned; it is very difficult to believe that the authors can explain 98% of growth in real GDP without considering a number of important sources of growth (even Barro (1995) only obtained an R-square of 0.6 at the highest).	

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