

# Review of: "Health Outcome and Economic Growth: The Case of Malaria in Nigeria"

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Potential competing interests: No potential competing interests to declare.

## REVIEWER'S COMMENTS ON "Health Outcome and Economic Growth: The Case of Malaria in Nigeria."

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## REVIEWER'S IMPRESSIONS OF THE PAPER.

Choosing a topic and doing the project on malaria is very relevant and would contribute to knowledge. Though there is a lot of literature on malaria, there is little literature linking malaria to economic activities in the various nations.

The authors have done a wonderful job! But since they are doing their project on a topic that would be of interest to most readers, especially those from malaria-endemic countries, the comments given are not meant to discourage them but to help improve the paper. So, I decided to focus more on the comments now than the impressions. Adding all the impressions would make the report too long!

## REVIEWER'S COMMENTS

**Abstract:** The authors did well with their explanations of "health outcomes and economic growth"; however, they could not explain clearly how malaria, which is the case study for the project, contributes to this. It is only the first sentence that talks of malaria.

Though the abstract is not organized structurally, an experienced reader would be able to detect that it is structurally written. From "This inquiry delved into ..." up to "economic growth," it was talking about the background. But the authors just started with "This inquiry ..." when nothing has been previously said that can be linked to it. From "The multifaceted exploration ..." to "autoregressive distributed lagged model (ARDL)," it is also talking about the methodology. Then, from "The findings show that ..." to "economic growth in Nigeria," it is also on the results, whilst from "Thus, the policy proffered ..." up to "secondary level," it talks about the authors' recommendations.

## Background:

The first sentence of the background raised an essential issue: "A prevailing consensus suggests that the trajectory of economic growth inherently holds the capacity to fundamentally elevate health standards," but was not cited. The whole introduction has no paragraph, but the authors talked about strong issues that could have represented paragraphs. For example, from the beginning to "profound level" could have been a paragraph. Also, from "The prospect of heightened economic growth ..." to "steering economic growth" should have formed a paragraph too. Authors also wrote all that

without a single reference, which should not be the case.

The authors also used some expressions which were not necessary! Those expressions could be removed without affecting the message that they intend to convey. For example, “Should this reciprocal relationship exist, the subsequent analysis necessitates a meticulous examination of the nuanced significance of health’s contribution within the broader context of other empirically acknowledged determinants steering economic growth.” The expressions “a meticulous,” “nuanced,” and “empirically acknowledged” could be removed without negatively affecting the meaning of the sentence.

In the whole background, there was nowhere that the authors wrote anything about malaria and how properly managing it contributes to improved economic activities. The authors rather wrote briefly on “HIV/AIDS,” quoting its prevalence in the country. Since malaria is the main disease used as a case study to explain how health contributes to increased economic growth, the authors should have first written on it. Readers would love to know the current situation of malaria in Nigeria.

Still under the background “Nigeria Health Care Sector,” the authors did excellently, talking about relevant issues that are not well cited and properly arranged in paragraphs. From “Health services ...” to “... and tertiary,” should have been a separate paragraph. Then, from “Services at the community ...” up to “... and pharmacists,” should have been another paragraph with intext citations. Right from “Services at the community ...” to the end of that sub-heading, there is no single reference; meanwhile, the authors quoted many figures. A new paragraph should have begun at “An exemplary illustration ...” and ended at “... knowledge creation” with intext references.

Starting from “Regrettably, Nigeria’s health ...” to “... the age of 65,” should have been another separate paragraph with intext citation(s), especially since they quoted some figures and years. Then, starting from, “The country is ...” to “... HIV/AIDS in Nigeria is 3.7,” ought to have stood as a separate paragraph with its intext references too, though short. The information provided from “Despite having a ...” to “... naira, correspondingly” fits a separate paragraph with its reference(s) too. Here the authors quoted some nations for comparison, then many figures and years without providing their source(s) of literature. The last paragraph under the sub-heading should have started from “This financial trend ...” to “healthcare services in Nigeria.” Yet, the authors did not provide any reference, though they quoted some figures that needed to be confirmed.

A wrong expression is noted where the word “facilities”, in the second paragraph first sentence of “Nigeria Health Care Sector”, that was supposed to be singular, was rather typed as plural. It says: “An exemplary illustration of such healthcare “facilities” is a general hospital.”

Generally, readers should be able to figure out the objectives from the background, and how many of them authors used. But throughout the whole manuscript, it is very difficult for readers to identify which objectives the authors want to achieve.

## Literature Review

Authors should have done the review on malaria as a separate heading. The review should have targeted how effective management of malaria could contribute to increased economic activities, or how malaria infection hinders economic

activities. They should have reviewed literature on disease in general, especially infectious diseases. In their review, they should have tried to look for literature that talks about how diseases hinder economic activities or how, through quality health care delivery, sick people are recovered to contribute toward economic growth.

Unfortunately, the authors only concentrated their reviews on the theoretical and empirical reviews that talk about the outcome of health and economic activities. Though it is not wrong, the authors not reviewing anything on malaria makes understanding of their project difficult.

### **Methodology:**

For the project methodology, there was nowhere that authors specifically linked malaria treatment to “health outcome” and economic activities. They needed to have come out specifically and clearly on how effective treatment for malaria leads to positive “health outcomes and economic growth”. Malaria is only used as a case study to assess how “health outcomes” contribute towards “economic growth.”

So, in the methodology, if authors use another disease, aside from malaria, to determine how “health out” positively impacts “economic growth,” they are not wrong. That rather could have made it easier for readers to understand their project and what problem they intend to tackle. The authors listed some statistical calculations like “RGDP, CHE, IOM, GCF, SES” and “ $\alpha_0, \alpha_1, \alpha_2, \alpha_3, \alpha_4, e1t, ECM,$ ” but they did not clarify how these calculations were used.

### **Results:**

Reading through the results, it is difficult for readers to picture the relationship between “health outcome and economic growth.” That linkage needs to come out clearly from the results. Table 2 contains results that talk about “incidence of malaria, IOM” and “real gross domestic product, RGDP”; but the authors’ explanation did not reveal that linkage. Table 7 also contains results on RGDP and IOM, but these results are not well explained.

### **Discussions:**

This discussion is okay, but it singles out only Tables 7 and 8. Though the results of Table 7 were not explained, in the discussion section, readers can still appreciate the results. What about the other tables?

### **REVIEWER’S SUGGESTIONS**

The topic that the researchers chose is okay, and the title is also very relevant. However, if the title is still modified, that would be helpful. The authors can start the title with verbs like assessing or determining. Also, if the authors want a structural abstract, then they should be clear about that. Reading through, it can be observed that the abstract is written structurally, but it is not organized as such.

### **Abbreviations and Acronyms:**

The authors used many abbreviations in their project. Though they are defined in the text, authors should have a list of definitions and terms section to help readers easily identify meanings of some abbreviations.

### **Background:**

Authors should have a subheading that talks about malaria infections in Nigeria. They should talk about its prevalence in

the country and the age group that is mostly affected. Authors should provide references for areas commented above that need citations.

### **Literature Review**

Authors should add a separate heading for malaria and other diseases. They should indicate whether the prevalence of malaria or other diseases is increasing or going down. If the prevalence is still increasing, they should link that to whether the sick persons are able to work or not. If the prevalence is low, they should indicate what measures have been taken and how the low prevalence is contributing to positive “health outcomes and economic growth.”

### **Methodology:**

If authors can add a diagrammatic explanation of their methodology, it would help ease the understanding of their methods. It would also add to the originality of their project!

### **Ethical Approval:**

Though human beings were not used for ethical reasons, authors should indicate whether ethical clearance is applicable for this project or not. They should indicate how they were permitted by the “Central Bank of Nigeria” and “World Bank” to use their data.

### **Results:**

Authors should make use of the “incidence of malaria, IOM” and “real gross domestic product, RGDP” from Table 2 and Table 7 to explain the linkage between “health outcomes and economic growth.”

### **Discussions:**

To help readers appreciate their project, authors should try to discuss all their results instead of limiting the discussion to only Table 7 and Table 8. If they think the other findings are not necessary, then they should remove them.

### **Conclusion**

Authors have combined their conclusions and recommendations. To draw more attention from policymakers, it is advisable that they have separate subheadings “Conclusion” and “Recommendations” under “Conclusion and Recommendations”. Under conclusion, they can summarize key findings of their projects; and under recommendations, they should list their recommendations targeting the appropriate audience.

Thank you!

Yours sincerely,

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