

## 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.

## 1. Introduction and literature review

The general discussion presented in the introductory part of the paper touches on the broad problems of health planning and human capital. It attempts the interesting task of proposing a broader view of health care, including general care, human capital, and macroeconomic theoretical interpretations of the role of the State. While the overall discussion is interesting, it is too sparse and generic. It would benefit from higher specificity, particularly when the authors attempt to link their general considerations to the Nigerian case. This also applies to the review of the literature, which is discontinuous and seems to jump from one issue to another without a common thread to sustain the central argument of the relationship between malaria and economic growth. The ensuing narrative would benefit from more specific references to the increasing attention of the scientific community to infectious diseases and to the "one health" paradigm, which appears especially relevant for Nigeria.

## 1. The topic

The topic chosen presents itself, apart from any econometric problem, as a problem of circular causation, since growth and infectious diseases appear a priori to be interdependent. A more thorough discussion of the causality process that the authors hypothesize and propose to test would greatly enhance the quality of the discussion and of the econometric tests performed. Evidence from simple correlations in the literature and from the preliminary scrutiny of the data should be handled with care and critically analyzed because of the multifaceted nature of both economic development and health.

## 1. The model

The single equation constituting the basic model needs much more justification and should be presented with explicit reference to the introductory discussion and the literature surveyed. The econometric details, rationale, and hypotheses should be more carefully described, and functional forms, lags, and other specifications should be discussed before empirical tests are attempted. It appears that the authors consider the lag structure a sufficient strategy to eliminate problems of reverse causation and endogeneity, but this does not appear acceptable in principle unless convincing a priori arguments can be explicitly invoked. If the equation to be estimated is conceived as a reduced form of a structural model, this would need to be spelled out, and the reduction process should be clear. From a policy point of view, a distinction between endogenous and exogenous variables is also important. The theory of endogenous growth, for example, is based on the idea that growth can be endogenously sustained through some form of externality arising from



private behavior. Would health care provide such an externality, or can it be considered a simple input to build human capital? Addressing these and other policy questions would add interest to the paper and its implications for further research. A section on the limitations of the approach adopted and the results obtained would also be useful.