Reviewer’s report

Title: Operating efficiency of public hospitals in Zambia: implications for the success of global health initiatives

Version: 1 Date: 17 January 2007

Reviewer: Eyob Zere

Reviewer’s report:

General

-----------------------------------------------------------------------------------------------------------------

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

-----------------------------------------------------------------------------------------------------------------

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

- In the Background section, there is a need to briefly discuss on Zambia’s progress towards achieving the health MDGs so as to put the problem and significance of the study in context – the major focus is implications of technical efficiency on attaining the global health initiatives.
- Sources of data (4.1) – The level of the hospitals should be explicitly stated so that the reader will be able to know whether comparison is made between likes or not. Moreover how was the selection of the sampled hospitals done? It has to be described.
- Page 15: It is stated that “the efficient and inefficient hospitals are operating on different frontiers”. If so, this raises a concern as operating on different frontiers implies that the hospitals in the sample are not comparable for they are using different production technologies and their respective efficiency levels need to be measured relative to each group’s efficient frontier. This has to be clarified.
- The second paragraph (Page 3) lacks coherence and seems misplaced. This has to either be removed or revisited.
- Acronyms should first be written in full (e.g. MOH)
- Page 7 Eq. (1) should rather be Eq. (1)
- In this study hospitals are the Decision Making Units (DMUs). Therefore instead of using DMUs it might be better to use hospitals.
- The first paragraph under 5.1 is more of methodology and would be better placed in the methodology section

-----------------------------------------------------------------------------------------------------------------

Discretionary Revisions (which the author can choose to ignore)

- In the literature, hospital beds have been used as a proxy for capital inputs. It might be worthwhile to include beds as inputs in the model. One of the major functions of hospitals is inpatient care, which partly depends on the supply of beds. Its omission from the model might not give a near-complete picture. If data permits, I suggest that the model is run with “beds” included.
- Some of the techniques used in testing the robustness of the DEA methods have relied on studying the responses When DMUs are deleted or added to the set being considered or when outputs or inputs are added or withdrawn from consideration. The author may opt to undertake sensitivity analysis using a methodology known as Jackknife analysis to test for stability/robustness of the estimates.
- In the text and tables different types of averages have been reported; which one would the writer choose between the arithmetic and geometric means. It is better to put the preferred one with the justification.
- Page 16 second paragraph: bed size that maximizes scale efficiency is 120-160 beds – it might be useful to show this using a scatter plot with a fitted non-linear trend line (beds on horizontal axis and scale efficiency on the vertical access).
What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests