Appendix S1 – Author Reflexivity Statement

Title: Alternative Approaches for Creating a Wealth Index: Case of Mozambique

1. How does this study address local research and policy priorities?

In the context of the BOHEMIA project, this research was initiated to suggest an alternative to the traditional DHS-methodology for formulating a wealth index, specifically for the Mopeia district of Mozambique and similar data-limited areas. The recommended strategy aims to ease the data collection process for researchers and streamline the construction of wealth index in low to middle-income countries (LMICs).

2. How were local researchers involved in study design?

Local research partners from Manhiça Health Research Center (CISM) in Mozambique (SI, EE, VM, MS, PN, JM, EJ, HM, FM, FS, and CS) participated in this study in various capacities. They had significant involvement in designing the Mopeia Census instrument, managing the data collection operation, getting local IRB approvals etc. The data was anonymized before being used for building the wealth index. All local investigators were offered an opportunity to contribute to data analysis and manuscript write up.

3. How has funding been used to support the local research team?

The Centro de Investigaçao em Saúde de Manhica, a research institution based in Mozambique, is a consortium member and received a sub-grant which covered all activities at country level including salaries, operations and travel to present their scientific work.

4. How are research staff who conducted data collection acknowledged?

All researchers who participated in data collection are recognized as co-authors of this manuscript.

5. Do all members of the research partnership have access to study data?

All members of the partnership have access to data.

6. How was data used to develop analytical skills within the partnership?

The present study was not directly used to develop analytical skills within the partnership. The goal of this research was to develop a wealth index that all partners could use in their own analysis. The results are being applied to all manuscripts emerging from this project when applicable.

7. How have research partners collaborated in interpreting study data?

All research partners had access to the study protocol, analysis plan, publication plan and raw data. All listed as co-authors received earlier versions of the manuscript and helped write and review the final version of the manuscript and provided feedback through all stages of the study, including the interpretation of study data.

8. How were research partners supported to develop writing skills?

Junior researchers and students who are coauthors in this study, received support and guidance from senior academicians and researchers to improve and polish their writing skills.

9. How will research products be shared to address local needs?

The study will be published in an open-access journal to ensure its availability to all local researchers in Mopeia and beyond. The study's results will also be directly disseminated to partners and stakeholders at community level as well as with local health authorities.

10. How is the leadership, contribution and ownership of this work by LMIC researchers recognised within the authorship?

Over half of co-authors of this article are LMIC researchers. While the first and last author positions are held by the US-based research team—who led the question's development, the analysis, and the writing of the study—the contribution of LMIC researchers is crucial.

11. **How have early career researchers across the partnership been included within the authorship team?**

SI, EE, VM, MS, EJ, HM and FM are each early career researchers involved in this study.

12. How has gender balance been addressed within the authorship?

The authorship displays a balanced gender representation, comprising of ten male authors (XW, SI, EE, VM, MS, EJ, HM, FS, CC and CS) and nine female authors (KX, AM, PRS, PN, JM, FM, RR, AC and CR).

13. How has the project contributed to training of LMIC researchers?

Accross the project, over 300 field workers received training in GCP and data collection. 12 senior researchers from Mozambique were trained in management of field operations. Two MScs from and two PhDs from LMIC are emerging from this project.

14. How has the project contributed to improvements in local infrastructure?

This project funded and developed the opening of a research site in Mopeia from the Centro de Ivestigaçao em Saude de Manhiça, this includes offices, an accredited pharmacy, a full entomology lab and a sample storage facility.

15. What safeguarding procedures were used to protect local study participants and researchers?

This is a methodology paper that only uses secondary data collected under the BOHEMIA project so this question is not relevant here. For the main BOHEMIA project study, various safeguards were implemented, and ethical approvals (at WHO and national level) were obtained. Researchers also received training to ensure participant confidentiality and privacy.