Reviewer's report

Title: Embedding health research into decision-making processes in low- and middle-income countries

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Reviewer: Maarten Kok

Reviewer's report:

The authors provide an exploration of the embeddedness of research and research institutions in decision making in health. This subject is important and relevant, and part of this work has been presented at the Global Health System symposium in Beijing.

In the manuscript some interesting points are made, but a lot more focus, conceptualization and analysis is required to further develop it to a publishable scientific article on this topic.

A key problem is that the article briefly touches upon many themes and issues, while remaining rather general and often superficial in conceptualizing and exploring these issues. (e.g. what is meant by research? How does embeddedness relate to the many other concepts in the literature on this, such as alignment, entanglement, linking and exchange, (and all the work on health research systems linking through research priority setting)? why would embeddedness be different for health related issues (compared to e.g. agriculture in LMIC?) why would embeddedness and knowledge use be different for the separate building blocks of the health system? and why would this be different for LMIC compared to HIC, for which a lot more literature is available)

The paper contains a very brief exploration of the concept of organizational embeddedness, which is then linked to research. A hypothesis is then derived at the start of the method section, but it is unclear how this relates the background. In the (most interesting) result section, first empirical studies are presented in which the use of research in decision making is described, according to each of the health systems building blocks. In a second part of the result section, a theoretical framework is briefly sketched. It remains unclear where this framework comes from and what is meant by concepts as ‘reputation’ (between which actors?) ‘quality’ and ‘quantity’ of connections to decision makers, etc. A proper discussion of 1) the meaning of these findings, 2) the way they relate to the original hypothesis and 3) to the existing literature (such as the existing work on ‘health research systems’ is lacking.

I struggle with finding the right approach for providing constructive feedback to the authors, as this depends on what I consider the knowledge base (what we know about embedding research and its relation to decision making) and target audience for this review article.

The authors seem to start from a broad knowledge base, drawing upon literature
from “multiple disciplines” such as public administration, etc. When following this line, I must point out that a large number of key publications on the embeddedness of research and the way this relates to (government) decision making is missing. Scholars such as Jasanoff, Fujimura, Epstein, Mol, Garud, Hoppe, Latour, John Law, Michel Callon, Bal, etc, have published extensively on this theme for over decades in journals such as Sociology of Science, Science Technology and Human Values and Research Policy. While not all of their publications are on health issues, many are and some focus specifically on health issues in low income countries. Some exploration of their work could be very useful to first construct a more detailed theoretical framework and conceptualization, before considering the empirical cases.

A key question, essential for considering its embeddedness, is what is meant with ‘research’. The authors seem to alternate between research as a ‘process of producing knowledge’ and research as a knowledge output (e.g. in the conclusion). When viewing research as a process of knowledge production, it may be useful to consider the multi-level nature of the functioning of research processes. Scholars such as Fujimura have explored embeddedness at several levels, such as the level of research project, the organization in which it is conducted, and in our social world. At each level, research can be ‘embedded’ (or linked, aligned, etc) to decision making (such as the social contract between science and society, the relation between government institutions and research organizations and the relation between those involved in a specific research project, and a specific decision making arena).

In a similar way it may be useful to further explore what is meant by ‘decision makers’ and ‘using research in decision making’. The authors do not make this explicit, but seem to indicate that they focus on decisions made at the MOH in LMIC. I find this rather narrow, as many analyses indicate that key decisions, in which research is used, are constantly made at all levels in the health system.

I would suggest the authors to first provide a more specific aim for the article, a more detailed conceptualization and theoretical framework in the background section, based upon a broader exploration of the existing literature. This could then be used to look at the empirical cases they have nicely collected. Once the result section has been re-written, it needs a proper discussion.

A more specific focus for this paper could be useful, as it now touches upon many different issues that could all be very interesting, but need more analyses and exploration.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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