

Review of: "Unravelling The Contributions Of The Nigerian Livestock And Other More Prominent Sectors In Mitigation Of Global Green House Gas (GHG)"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

ORIGINALITY

This paper fails to make an original contribution to the literature. The research problem has not been clearly defined and the actual/anecdotal evidence provided (i.e., of an insignificant contribution of Nigeria's livestock population to global warming) essentially defeats the purpose and obviates any logic or justification for the enquiry. The paper seems a poor attempt to convert a dissertation/thesis to a journal article. The other "more prominent sectors" probably represent greater concerns for greenhouse gas emissions and so begs the question as to why the contribution of livestock is the focus in this paper. The study should probably be exploring the implications of transitioning from nomadic, free-range livestock rearing to intensive livestock farming under ranching arrangements, with a prognosis of the implications for greenhouse gas emissions and how the transition can be managed to minimise environmental impact. The article appears to be a weak attempt to contextualise the Food and Agricultural Organization of the United Nations (FAO)'s Global Livestock Environmental Assessment Model (GLEAM) to the Nigerian livestock sector.

RELATIONSHIP TO LITERATURE

The engagement with the extant literature is weak and only a limited number of formal sources are cited, with the citation and referencing formats inadequate or incomplete. The problem or literature gap has not been established and the purpose served by chapters 1, 2 and 3 is not clear. These chapters make several unsubstantiated claims/assertions. A structured, critical literature review is required, especially one which delineates empirical and theoretical discourses on the greenhouse gas emissions and global warming issues of livestock farming, contextualised to the specific challenges in Nigeria. The review should also highlight the main design assumptions/limitations of previous studies to provide the basis for clearly identifying the research gap and for positioning the current study.

METHODOLOGY/RESULTS

The study has not indicated or provided justifications for any method, and it is unclear where the data for Tables 1 & 2 have been sourced from or the basis of the cash flow projections. Chapter 4 starts with these tables and no attempt has been made to narrate the numbers or the basis for the estimates or cost/revenue projections. It is unlikely that the cash flows can be estimated via a deterministic model. If these are simulated figures, then the assumptions underpinning the simulation experiment and the future cash flow forecasts need to be carefully explained. Besides, given that the

projections relate to several years, the pertinent metric should not be cash flows (whether real or nominal) but discounted cash flows and the net present value of the project(s).

IMPLICATIONS

Other than the assumed net profit figure, the broader implications of intensive livestock farming and the benefits of managing greenhouse gas emissions have not been explored or evaluated. Ideally, the results should be reconciled to the extant literature and thoroughly discussed to substantiate the contribution(s) of the study.

QUALITY OF COMMUNICATION

The narrative is not properly structured and the use of chapters (instead of e.g., sections and subsections) appears haphazard, with not clear delineation of ideas, concepts and arguments. Several undefined acronyms have been used in the abstract and the text, which makes the narrative difficult to follow in some parts. The language/structure could be better or clearer.

Guidance to the Author

Although not exhaustive, the list below is an indication of the main points (taken from or in addition to the above) that would need to be addressed to make the work publishable:

1. Provide clearer context and justification for the study by outlining the main motivation(s) and expected contribution(s), possibly making the case that while Nigeria's livestock greenhouse gas emissions are currently not significant, the need to transition to livestock ranching calls for a better anticipation of and preparation for the emissions challenges that such a transition would entail for Nigeria.
2. A structured critical literature review would help to highlight the main arguments to properly identify and state the research gap.
3. Do away with the chapter structure and use sections and subsections, suitably numbered, that allow for a structured and clearer narrative, with a better flow from the definition and delineation of the research gap, and better articulation of the nature of the enquiry and analysis undertaken.
4. State and explain the research design and model specifications. The basis for the cash flows is not apparent. In addition, while the projected net profit figure from greenhouse gas mitigation measures may be a good metric, more insight could be had from a sensitivity analysis of the underlying variables, particularly using the discounted cash flows and the net present value (NPV) of the intervention project.
5. All modelling and cash flow assumptions/adjustments should be fully explained, and the numbers should be supported by empirical antecedents or expert opinions for reasonably characterising the costs and revenues. It is highly unlikely that the cash flows can be modelled deterministically as presented in the paper. Ideally, the goal should be to undertake a scenario analysis or, better still, a stochastic model that offers a characterisation of the variables to simulate a probability distribution of the project outcomes or NPV, for different livestock farming and other sectoral arrangements.
6. Results should be fully discussed and reconciled to the extant literature to properly situate the contribution(s) made.

7. Credible sources should be properly cited, and the reference list suitably extracted using/following a standard referencing format.