

REVIEWER'S REPORT

Manuscript No.: IJAR- 58774

Title: "Choix de variante dans la traversée de la ville de Kalfou (région de Tahoua, Niger) : conformité géométrique, impacts fonciers et structure sociale de l'acceptabilité "

English: *Selection of an Alternative for the Road Crossing through the City of Kalfou (Tahoua Region, Niger): Geometric Compliance, Land Impacts, and the Social Structure of Acceptability*

Recommendation:

Accept

Rating	Excel.	Good	Fair	Poor
Originality	Yes			
Techn. Quality		Yes		
Clarity	Yes			
Significance		Yes		

Reviewer Name: Dr. Ashish Yadav

Detailed Reviewer's Report

Reviewer's Comment for Publication.

Acceptance Comment are mentioned below suitable for the paper titled "Choix de variante dans la traversée de la ville de Kalfou (région de Tahoua, Niger) : conformité géométrique, impacts fonciers et structure sociale de l'acceptabilité "

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Reviewer Comments: Accept

Reviewer Comments –

1. Introduction:

The introduction clearly presents the challenges associated with selecting a road alignment through an urban area, particularly the interaction between geometric requirements, earthworks, land impacts, and social acceptability. The case of Kalfou is well contextualized, and the motivation for comparing the two alignment alternatives is clearly established. The objectives are relevant and appropriately connected to the technical and socio-economic dimensions of road planning. Overall, the introduction provides a strong foundation for the study.

2. Literature Review:

The literature review is relevant to the main themes of the manuscript, including road geometric design,

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multicriteria decision analysis, land acquisition, and social acceptance of infrastructure projects. The integration of technical, land-related, and social criteria within a single evaluation framework gives the study a valuable multidisciplinary perspective. The analysis of acceptance according to proximity to the road right-of-way is particularly interesting compared with conventional approaches that primarily emphasize local opposition. The literature framework therefore provides adequate support for the proposed investigation.

3. Solution Approach / Methodology:

The methodology is well designed and appropriate for the research objectives, combining GNSS surveys, geometric compliance assessment, land-impact inventory, and consultation with 101 stakeholders. The use of 28 indicators and a simple additive weighting method provides a transparent and structured comparison of the two alternatives. The robustness analysis using nine different weighting vectors substantially strengthens the reliability of the multicriteria ranking. In addition, the Fisher exact test and Cramér's V provide appropriate statistical evidence for assessing the relationship between proximity to the alignment and social acceptability.

4. Results and Discussion:

The results are convincing and clearly demonstrate the advantages and trade-offs associated with the two alignment alternatives. The correction of the geometric non-compliance and the 71.8% reduction in earthworks represent significant technical advantages for Variant B, despite its higher number of affected rights holders. The 17.9% relative difference in the multicriteria ranking and its stability across the different weighting schemes further support the robustness of the findings. The very strong statistical association between proximity and acceptability ($p = 8.7 \times 10^{-11}$; Cramér's $V = 0.776$) provides an original and valuable contribution to understanding social responses to road infrastructure projects.

5. Conclusion:

The conclusion is fully consistent with the results and appropriately highlights the complexity of selecting a road alignment through an inhabited area. The study convincingly demonstrates that the alternative considered optimal under a comprehensive multicriteria assessment may not necessarily be the one preferred by directly affected residents. The finding that proximity can simultaneously increase perceived nuisance and improve accessibility is particularly original and relevant for road planning and stakeholder management.