

REVIEWER'S REPORT

Manuscript No.:IJAR-58164

Title: DISPARITES GEOGRAPHIQUES DE L'ENSEIGNEMENT PRIMAIRE ENTRE LE MILIEU URBAIN ET RURAL DANS LA REGION DE ZINDER, NIGER.

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

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

Reviewer's ID: JPR- 212

Detailed Reviewer's Report

This paper presents a rigorous and well-structured examination of geographical disparities in primary education between urban and rural areas in the Zinder region of Niger. The study makes a valuable contribution to the literature on educational inequalities in Sub-Saharan Africa by combining longitudinal quantitative data with qualitative insights from institutional and community stakeholders. The research is timely and relevant, particularly given Niger's ongoing educational challenges and the broader policy context of Education for All and the Sustainable Development Goals.

The paper demonstrates strong methodological sophistication, particularly in its use of panel regression with fixed effects, and provides compelling evidence for the structural nature of urban-rural educational disparities. The authors' argument for differentiated and territorialized educational planning as a policy solution is well-supported by the data. Overall, this is a high-quality manuscript that requires only minor revisions to reach publication standard.

Strengths of the Paper

1. Methodological Rigor

The study employs a robust mixed-methods approach that significantly strengthens its findings:

- **Longitudinal data** (2018-2023) allows for analysis of trends rather than just snapshots
- **Panel regression with fixed effects** appropriately controls for time-invariant characteristics of departments
- **Triangulation** of quantitative indicators (TBS, TBA, TAP, ratios) with qualitative interviews enhances validity
- The **comprehensive indicator framework** (Table 1) covers access, retention, infrastructure, equity, and pedagogical organization

2. Clear and Compelling Findings

The results are presented effectively and reveal striking disparities:

- The 52-point gap in gross enrollment rates (105% urban vs. 53% rural average) is dramatic and well-documented
- The analysis of classroom infrastructure (Table 2) powerfully illustrates rural precarity—44% of classrooms are paillotes (straw huts)

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- The evolution of multigrade classes (Graphique 1) demonstrates widening inequality over time
- The econometric model (Table 6) convincingly shows that school density and infrastructure quality are primary determinants of enrollment disparities

3. Strong Theoretical Grounding

The paper effectively integrates:

- Supply-demand frameworks (Lange & Yaro, 2003; Pilon, 2002)
- Educational planning economics (Mingat & Suchaut, 2000)
- Reproduction theory (Bourdieu & Passeron)
- The concept of "territorial educational debt" (Sawadogo, 2019)

4. Policy-Relevant Conclusions

The paper moves beyond description to offer actionable policy recommendations:

- Advocacy for differentiated resource allocation
- Recognition that planning based solely on existing demand perpetuates inequality
- Emphasis on anticipatory planning that addresses demographic growth in rural areas

Minor Issues Requiring Revision

1. Methodological Clarifications

- **Urban-Rural Classification:** The paper acknowledges that the INS classification considers former department capitals as "urban," which complicates the analysis (p. 8). This is an important limitation that deserves more explicit discussion in the methodology section. Consider adding a dedicated sub-section explaining the operational definition used and its implications.
- **Sample for Qualitative Component:** The paper states that 16 semi-structured interviews were conducted (4 inspectors, 6 pedagogical advisors, 6 CGDES members). Provide more details on:
 - How participants were selected (purposive sampling? snowball?)
 - The geographical distribution of interviewees across departments
 - Whether saturation was achieved
- **Model Specifications:** While the panel regression results are presented clearly, provide additional details:
 - The number of observations (N) in the panel
 - Whether robust standard errors were used
 - Whether the fixed effects model was preferred over random effects based on the Hausman test (mentioned but could be explained)

2. Data Presentation

- **Table 2 (Classroom Types):** The table is difficult to read due to formatting issues. Consider:
 - Adding percentages to show the distribution within each department
 - Highlighting the urban-rural contrast more explicitly
 - Possibly creating a separate table showing summary statistics for urban vs. rural aggregated categories
- **Graphique 1:** The graph is referenced but does not appear in the PDF. Ensure it is included in the final submission with clear axis labels and a legend.
- **Table 5 (TBS Evolution):** The "taux d'augmentation" column is confusing. Clarify whether this represents the percentage point change or the relative percentage change. The text mentions "-18.2% in relative value" for Tesker, indicating relative change, but this should be stated explicitly in the table heading.

3. Writing and Organization

- **Redundancy:** Some content is repeated across sections. For example:
 - The description of urban-rural disparities appears in both the introduction and results sections
 - The explanation of TBS exceeding 100% in Zinder appears twice

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- Streamline repetitive content for conciseness
- **Language Consistency:** The paper uses French throughout, but the abstract includes an English translation. Consider whether the entire paper should be in French or whether an English version would be more accessible for an international audience.
- **Minor Typographical Errors:**
 - "souient" instead of "soutiennent" (p. 14, line 348)
 - "Ces inégalités engendrent, la faible demande" (p. 14, line 346) — extra comma
 - "défavorisé" spelling (p. 8)
 - "repose" instead of "repose" in several instances

4. Theoretical Engagement

- **Missing Recent Literature:** While the bibliography is comprehensive, consider adding:
 - Recent work on the impact of COVID-19 on educational inequalities in the Sahel
 - Literature on school feeding programs and their effect on rural enrollment
 - Studies on the role of mobile technology in bridging educational gaps in remote areas
- **Conceptual Contribution:** The paper introduces the useful concepts of "avantage citadin" and "planification durable." These concepts could be developed further in the discussion section to articulate the paper's unique theoretical contribution more explicitly.

5. Limitations Discussion

The limitations section (p. 8 and p. 18) is somewhat brief. Consider expanding to include:

- The inability to isolate the effect of pedagogical quality due to lack of standardized assessment data
- The challenge of disentangling the effects of language of instruction from other factors
- The potential for selection bias in the qualitative component
- The limited time frame (2018-2023) which may not capture longer-term structural trends

6. Policy Recommendations

While the paper advocates for differentiated planning, it could be strengthened by:

- Providing more specific, actionable recommendations (e.g., what would a 10-year territorialized plan look like?)
- Discussing the financial implications of rebalancing (how much would it cost? where would funds come from?)
- Addressing potential political economy obstacles to redistribution (urban areas have more political voice)
- Considering the role of community-based organizations more explicitly in implementation

Specific Technical Comments

1. Regression Model (Table 6)

The model is well-specified and the results are robust. However:

- The table could be enhanced by including:
 - Number of observations
 - R-squared values (within, between, overall)
 - Model F-statistic
- The interpretation of the constant term (41.27) could be explained
- Consider adding interaction terms to test whether the effect of infrastructure differs between urban and rural areas

2. Missing Variables

The model explains 76% of within-department variation in TBS. Consider discussing what other factors might explain the remaining 24%:

- Cultural factors (attitudes toward formal education)
- Economic factors (household income, opportunity costs)

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- Conflict/insecurity (not mentioned but relevant in the Sahel context)
- Health factors (malnutrition, disease prevalence)

3. Figure Quality

Ensure all figures and tables are clearly readable in the final manuscript. The formatting issues in Table 2 and the missing Graphique 1 should be addressed.

Recommendations for Revision

Essential Revisions (Required)

1. **Clarify the urban-rural classification methodology** and its implications for the findings
2. **Provide the missing Graphique 1** and ensure all tables are properly formatted
3. **Add interview protocol or questionnaire** as an appendix
4. **Clarify the "taux d'augmentation" column** in Table 5
5. **Provide more detail on the qualitative sample** selection and saturation

Recommended Revisions (Strengthens the Paper)

6. **Expand the limitations section** with the points noted above
7. **Add more specific policy recommendations** with implementation considerations
8. **Incorporate recent literature** on COVID-19 and educational inequalities in the Sahel
9. **Consider including a conceptual framework diagram** illustrating the supply-demand mechanisms at play
10. **Review for minor typographical errors** and redundancy

Optional Suggestions

11. Consider whether an **English translation** of the full paper would broaden its audience
12. **Add a brief section on the Nigerien educational policy context** (NEP 2020 equivalent) to frame the analysis
13. **Explore potential spatial autocorrelation** in the regression model (nearby departments may be similar)

Assessment of Specific Criteria

Originality: Good

While the topic of urban-rural educational disparities is well-studied, this paper makes several original contributions:

- Focus on a specific region (Zinder) that has received less attention than other areas
- Use of recent longitudinal data (2018-2023)
- Combination of econometric modeling with qualitative insights
- Introduction of concepts like "avantage citadin" and "planification durable"

Technical Quality: Excellent

The methodological approach is sophisticated and appropriate for the research question. The panel regression with fixed effects is well-executed, and the triangulation with qualitative data strengthens the findings. The model diagnostics (VIF, Hausman test) demonstrate attention to statistical rigor.

Clarity: Good

The paper is generally well-written and organized. The findings are presented logically, and the tables support the narrative effectively. Some repetition and minor formatting issues detract slightly from clarity.

Significance: Excellent

The research addresses a critical policy issue in a country with significant educational challenges. The findings have implications for:

- Educational planning at the regional and national level
- Resource allocation and infrastructure investment
- Community engagement in education

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- Achieving SDG 4 (quality education) in Niger
- Broader debates on spatial inequality in Sub-Saharan Africa

Conclusion

This is a strong manuscript that makes a meaningful contribution to understanding geographical disparities in primary education in Niger. The research is methodologically rigorous, the findings are compelling, and the policy implications are important. The minor revisions suggested above would strengthen an already excellent paper.

I recommend acceptance subject to minor revisions addressing the methodological clarifications, formatting issues, and the few writing improvements noted. I congratulate the authors on producing a valuable piece of research that addresses an important and timely issue in African educational development.