Review of: "Sectoral GDP and Tax Revenue: a Panel Data Analysis"

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Potential competing interests: No potential competing interests to declare.

The article examines the relationship between tax revenue and sectoral Gross Domestic Product (GDP) in Indonesia. The study utilizes panel data from 34 provinces in Indonesia, analyzing the period from 2016 to 2020. The author discovers that industrial, mining, accommodation, and financial sectors show a positive correlation with tax revenue, while agricultural, transportation, and communication sectors correlate negatively.

The paper employs a panel data model, incorporating fixed effects and various diagnostic tests to ensure the model's appropriateness. The results indicate that not all economic sectors contribute equally to the growth of tax revenues, which has significant implications for government policy and tax strategies. Detailed remarks:

Strengths:

*- **Relevance and Timeliness:** The paper addresses a significant economic issue, exploring the relationship between sectoral GDP and tax revenue, which is particularly pertinent for developing countries like Indonesia. The focus on sectoral analysis rather than a more generalized approach to GDP and tax revenue is commendable and adds depth to the study.*

*- **Comprehensive Data Set:** The use of a panel data set from 34 provinces in Indonesia over five years provides a robust basis for the analysis. The inclusion of various sectors, such as industrial, mining, accommodation, and financial sectors, and their correlation with tax revenue, offers a detailed insight into the economic dynamics of the country.*

*- **Methodological Rigor:** The paper employs a panel data analysis and conducts several tests to ensure the appropriateness of the model, including checks for autocorrelation, cross-sectional dependence, and heteroskedasticity. The use of the Fixed Effect model after the Hausman test adds to the reliability of the results.*

*- **Policy Implications:** The findings have clear implications for the Indonesian government and the Directorate General of Taxes (DGT), suggesting that sectoral GDP growth does not automatically translate into increased tax revenue. This could guide policy-making and strategy development for tax revenue optimization.*

Areas for Improvement:

*- **Exclusion of Economic Variables:** The paper excludes other economic variables such as inflation, tax rate, and central bank rate, which are homogeneous for all provinces. While the rationale is provided, the exclusion of these variables might overlook their potential impact on the relationship between sectoral GDP and tax revenue.*

***- Negative Correlations**: The negative correlation found between agriculture, transportation, and communication*

> *sectors with tax revenue is intriguing but not thoroughly explained. Further analysis could be beneficial to understand the underlying factors contributing to this negative relationship.*
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> *- **Use of Tax Payment Data:** The study uses tax payment data instead of tax due, which could introduce bias due to the withholding tax system in Indonesia. Future research could attempt to compare these results with tax due data to validate the findings.*
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> *- **Regional Analysis:** While the paper does a robustness check for regional analysis, it could further explore the regional disparities and their implications on tax revenue, considering Indonesia's diverse economic landscape.*
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> *Future Implications:*
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> *The paper opens several avenues for future research. One could be the exploration of the impact of economic variables excluded from this study on the relationship between sectoral GDP and tax revenue. Another could be an in-depth analysis of sectors that negatively correlate with tax revenue to develop targeted fiscal policies. Additionally, comparative studies with other developing countries could provide a broader understanding of the dynamics between sectoral GDP and tax revenue.*
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> *In conclusion, this paper is a valuable contribution to the literature on fiscal economics, particularly in the context of Indonesia. It provides a solid foundation for policymakers to understand the complexities of sectoral contributions to tax revenue. However, further research is needed to address the limitations and expand on the findings presented.*