

Market Structure, Tax Reforms, and Revenue Mobilisation in Northern Nigeria's Cattle Markets: Evidence from Yobe State under Nigeria's New Tax Reform

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Abstract

This study investigates how market structure and Nigeria's new tax reforms interrelate to influence government revenue in Northern Nigeria's cattle markets. Data was collected from three key livestock markets in Yobe State. Potiskum, Geidam, and Garin Alkali, the study employed the Structure Conduct Performance (SCP) framework and market concentration analysis (Herfindahl Hirschman Index, CR4) to evaluate the effects of market structure on tax performance. Results indicate that trader size and compliance score significantly predict tax paid, whereas market concentration (HHI) does not have a direct impact after controlling for trader level variables. The study further provides theoretical and empirical insights relevant to Nigeria's fiscal reforms and informal sector taxation. Policy recommendations highlight the importance of digital tax collection systems and formalization of larger traders to improve internally generated revenue (IGR) for the State, Local Government and the Nation at large. Further study should investigate other factors necessary for enhancing markets revenue in other informal.

Keywords

Market structure, tax reform, cattle markets, informal economy, Structure Conduct Performance (SCP)

1. INTRODUCTION

Livestock markets are a cornerstone of Nigeria's rural economy, especially in the northern region where they contribute to employment, food security, and cross border trade. Cattle markets such as those in Potiskum, Geidam, and Garin Alkali in Yobe State serve as vital economic corridors connecting Nigeria with neighbouring countries. Despite their importance, these markets remain largely informal, limiting the potential for government revenue generation. According to the National Bureau of Statistics (2023), over 60% of rural market activities in Nigeria were conducted outside the formal tax system, creating significant leakages in internally generated revenue (IGR).

The introduction of Nigeria's new tax reforms in 2023 was intended to address such fiscal inadequacies by intensifying the tax base, introducing digital payment systems, and harmonizing levies (Federal Inland Revenue Service [FIRS], 2023). However, these reforms have been met with confrontation, particularly in northern states, where stakeholders argue that the reforms could burden informal traders and worsen existing regional inequalities (The Guardian, 2024). This pressure highlights the need to understand how market structure and trader behavior will affect revenue performance under the new fiscal regime.

Previous studies, such as Adebisi (2019) and Bamidele (2021), examined tax reforms in Nigeria but focused primarily on small and medium enterprises, leaving livestock markets underexplored. Similarly, Okoye and Akinmoladun (2020) assessed informal sector taxation but did not integrate structural market analysis. By contrast, this study employs both theoretical and analytical perspectives to investigate how market structure, trader size, and compliance influence revenue performance. The research contributes to the literature by integrating market concentration indicators with Nigeria's current tax reform framework.

The study therefore, aims to (1) identify the market structures dominant in Yobe State's cattle markets, (2) assess the relationship between trader level characteristics and tax performance, and (3) evaluate how Nigeria's new tax reforms could enhance fiscal efficiency within informal livestock markets. The study is grounded in the Structure Conduct Performance (SCP) paradigm, which offers a robust theoretical foundation for analysing the relationship between market dynamics and policy outcomes.

1.2 Statement of Research Problem

Despite the economic importance of cattle markets in Northern Nigeria, more especially in Yobe State, the revenue generating from these markets remains largely underutilized as by various government authorities. The market structure is dominated by informal actors, weak regulatory systems, and inconsistency in pricing behavior, making it difficult for government authorities to mobilize tax revenue efficiently (Okoye and Akinmoladun 2020).

Nigeria's new tax reform aims to broaden the tax base and enhance transparency, but still its impact on traditional live stock markets is poorly understood that brought a dispute, particularly in northern states, where stakeholders argue that the reforms could burden informal traders and aggravate existing regional inequalities (The Guardian, 2024). There is a limited empirical study on how the existing structure of the cattle market characterized by middlemen dominance, poor record keeping and fragmented market conducts affect the implementation of tax reforms and the capacity of the state to collect revenue.

This knowledge gap in the literature poses challenges for designing tax policies that are equitable, enforceable and compatible with the realities of cattle trade in Yobe State. Similarly, a systematic investigation is required to understand the integration between market structure, trader behaviour and the performance of new tax policies in order to improve revenue mobilisation

and to support a more sustainable and formalized livestock economy.

1.3 Objective of the Study

These are the specific objectives of the study

1. To identify the market structures dominant in Yobe State's cattle markets
2. To assess the relationship between trader level characteristics and tax performance
3. To evaluate how Nigeria's new tax reforms could enhance fiscal efficiency within informal livestock markets

2.0 LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

Market structure and taxation have been widely studied across economic perspectives. The classical theory of market structure emphasizes the number of firms, product differentiation, and barriers to entry as determinants of competition (Hunt & Lautzenheiser, 2011). In perfectly competitive markets, no individual trader influences price; however, in real world markets such as cattle trading, imperfect competition is dominant due to information asymmetry, price bargaining, and localized monopolies (Just et al., 2004).

The Structure Conduct Performance (SCP) framework, first formalized by Bain (1951), posits that market structure regulates firm conduct, which in turn affects performance outcomes such as prices, efficiency, and welfare. In livestock markets, SCP has been applied to explain how concentration ratios influence trader behaviour and market efficiency (Williams et al., 2006; Akinyemi & Akinlo, 2020). High market concentration can lead to collusive pricing, reducing market efficiency, whereas low concentration promotes competition but complicates tax collection.

Empirical studies in Africa show mixed results. For instance, in a study conducted by Erhijakpor

(2007) and Dimian & Barbu (2012) found positive correlations between government effectiveness and socio economic development, suggesting that effective tax systems enhance welfare outcomes. In another studies conducted in Nigeria, by Bamidele (2021) and World Bank (2022) emphasized the importance of digital taxation for informal sector integration. Despite all these only, few studies link these insights to livestock markets, which account for a substantial portion of informal trade in northern Nigeria. Therefore, this current study intends to fill in the existing gap.

In a study carried out by Abbass (2012) and Hayatu (2017) focused on conflicts and economic dynamics in pastoralist communities but did not quantify how market concentration affects revenue mobilization. Similarly, Ajakaiye et al. (2014) and Adebisi (2019) considered poverty and reform impacts but lacked micro level evidence from market structures (livestock). This gap highlights the need for empirical investigation into how competition, trader size, and compliance jointly affect government revenue.

Therefore, this study bridges existing gaps by combining the SCP theoretical model with quantitative market concentration metrics such as the Herfindahl Hirschman Index (HHI) and the four firm concentration ratio (CR4). By applying these tools to Yobe State's cattle markets, the research provides a new empirical lens for assessing Nigeria's fiscal reforms in informal market settings.

2.2 Concepts of Tax Reform

According to World Bank, Tax reform refers to logical changes to a country's tax system projected to expand proficiency, fairness, and revenue performance. Reforms often aim to reduce biases, broaden the tax base, and simplify tax rules, and make administration more effective, usually as part of broader economic policy adjustments.

Similarly, International Monetary Fund (IMF), viewed Tax Reform as involves changes in tax policy and direction planned to align taxation with economic objectives, reinforce passivity, and assemble public resources often emphasizing objective profit measurement, transparency, and removing incentives for tax avoidance.

Moreover, In 2025 Nigeria government passed a comprehensive refurbishment of its tax laws often referred as the Nigeria Tax Act and related reforms. The reform intentions is to simplify and remodel the tax context by combining and restructuring multiple tax laws, reducing the number of minor/nuisance taxes, widening the tax base, improving compliance and administration, and aligning domestic rules with international tax standards (including measures on controlled external companies and minimum effective taxation). The objective is to increase revenue collection in a reasonable and more efficient way while making compliance easier for taxpayers and strengthening coordinating institutions for revenue administration.

However, Tax reform is often shadowed to improve revenue utilization. Understanding market structure is vital when designing tax reforms because the degree of competition, market concentration, and product differentiation affect firms' ability to pass taxes forward (International Monetary Fund, 2016). Therefore, good tax policy blends sound economic analysis of market structure with strong administrative reforms to achieve equitable and stable revenue mobilization.

2.3 Effect of Market Structure on Tax Reform

Market structure plays an essential role in influencing how tax reforms are planned and implemented. The extent of competition, number of firms, and level of market concentration determine the degree to which taxation policies can be efficiently enforced and how they influence market performance (Tanzi & Zee, 2001). In a competitive market with many small

firms, tax implementation is usually challenging because informal transactions are more common and records are poorly kept. Equally, in more concentrated markets, governments find it easier to collect taxes due to the limited number of large, visible firms (Bird & Zolt, 2015).

Tax reforms particularly those targeting informal sectors must therefore take into consideration the existing market structure. For example, modifications that aim to widen the tax base or reduce tax evasion depend on understanding whether markets are perfectly competitive, monopolistic, or oligopolistic (Ayee, 2019). In cattle markets, such as those in Yobe State, the dominance of intermediaries or middlemen often reflects an oligopolistic structure. This can sway how tax authorities set levies and how reforms are implemented to ensure fairness and compliance.

Therefore, the market structure acts as a moderating variable between tax reform policies and actual tax outcomes. Where markets are well designed and structured, tax reforms tend to enhance performance and compliance. However, in disjointed markets dominated by informal actors, reforms may face resistance, poor documentation, and limited implementation capacity (Keen, 2013).

3.0 METHODOLOGY

This is where you describe your research methods, dataset description, method of data collection, hardware and software requirements, etc.

2.4 Effect of Market Structure on Revenue Mobilization

Revenue mobilization denotes to the government's ability to generate income through taxes and other charges. The market structure directly affects this method through its impact on pricing comporment, output decisions, and competition (Stiglitz, 2010). In highly competitive markets, firms tend to operate on tinny profit margins, which can reduce taxable income and

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thus lower government revenue. In contrast, in monopolistic or oligopolistic markets, firms often earn abnormal profits, creating opportunities for the government to collect higher taxes if the system is effectively structured (Obeng-Odoom, 2015).

In developing economies like Nigeria, the structure of agricultural markets especially livestock markets significantly influences local revenue mobilization. Where there is a dominant set of traders controlling market entry, as observed in northern Nigerian cattle markets, the tax drain can become haphazardly distributed (Yusuf & Dandago, 2018). Local governments may rely heavily on a few key traders for revenue, reducing equity and performance in tax collection. A suitably reformed tax structure, informed by market analysis, can therefore ensure broader participation, reduce evasion, and enhance sustainable revenue generation.

Moreover, the integration of contemporary tax systems, such as digital market levies or transaction based collection, depends on the level of market organization. Well-structured markets simplify traceability and improve compliance, while poorly structured markets weaken revenue mobilization due to the absence of records and high levels of informality (OECD, 2021).

2.5 Blending Market Structure, Tax Reform, and Revenue Mobilization through the Structure Conduct Performance (SCP) Model

The Structure Conduct Performance (SCP) model provides a convenient analytical framework for examining how market structure affects firm behavior (conduct) and overall market outcomes (performance). The SCP was originally profound and developed by Bain (1956), the model suggests that market structure influences the conduct of firms, which in turn affects performance, including profitability and efficiency.

In the perspective of taxation and revenue mobilization, the SCP model can be adapted to show how market structure (S) affects the conduct (C) of market players regarding tax compliance,

and how this determines performance (P) in terms of revenue generation.

However, when markets are subjugated by a few traders (oligopolistic structure), these traders may influence pricing and evade taxes through collusion, reducing tax efficiency. Equally, in a well-controlled structure with competitive transparency, tax reforms are more likely to flourish, leading to improved performance in revenue collection (Bain, 1956; Mason, 2012).

Thus, applying the SCP model helps policymakers and researchers understand the causal linkage between market organization and fiscal outcomes. It highlights that effective tax reform requires not just policy changes, but structural repositioning of markets to ensure greater compliance and fair taxation.

3.1 Materials and Methods Used

A descriptive analytical design was adopted. Data were collected from 300 respondents distributed across Potiskum (130), Geidam (100), and Garin Alkali (70). A simple random sampling was used in selecting the right respondents. Variables include trader size, experience, compliance score, price markup, and market level concentration indices (HHI and CR4). Ordinary Least Squares (OLS), and regression with robust standard errors was applied to model the determinants of tax paid per trader. Statistical Package for Social Sciences (SPSS V25) was employed to analyze the characteristics of respondents across the three cattle markets (Geidam, Potiskum, and Garin Alkali). Descriptive statistics such as frequencies, percentages, means, and standard deviations were computed to summarize socio economic variables including gender, age, education, and years of trading experience. This summarizing helps understand the demographic context in which market revenue mechanisms operate.

4.0 RESULT AND DISCUSSION

4.1 Introduction

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Demographic Characteristic of Respondents

The socio economic characteristics of 300 respondents as analyzed, using SPSS Version 25. Results indicated that in all the three markets selected for the study, male traders dominate the markets (around 80%), with most respondents between 31–45 years old, and secondary education being the most common qualification. This means that traders the average trading experience ranges from 6–10 years, suggesting a moderately experienced trading population. In terms of the marital status, the analysis further revealed that about 85 of the respondents with (68.7%) were married, and the rest were single and divorced with (30.5%) and (10.2%) respectively.

Generally, the descriptive statistics prove that the respondents represent a diverse but economically active group across all three markets, providing a solid foundation for analyzing institutional and behavioral influences on revenue collection.

4.2 Markets Concentration, Tax Paid and Trader Size

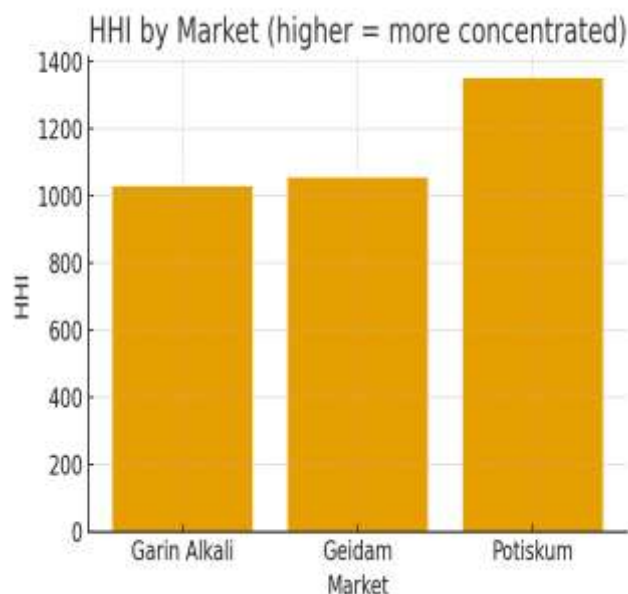


Figure 1: HHI by Market

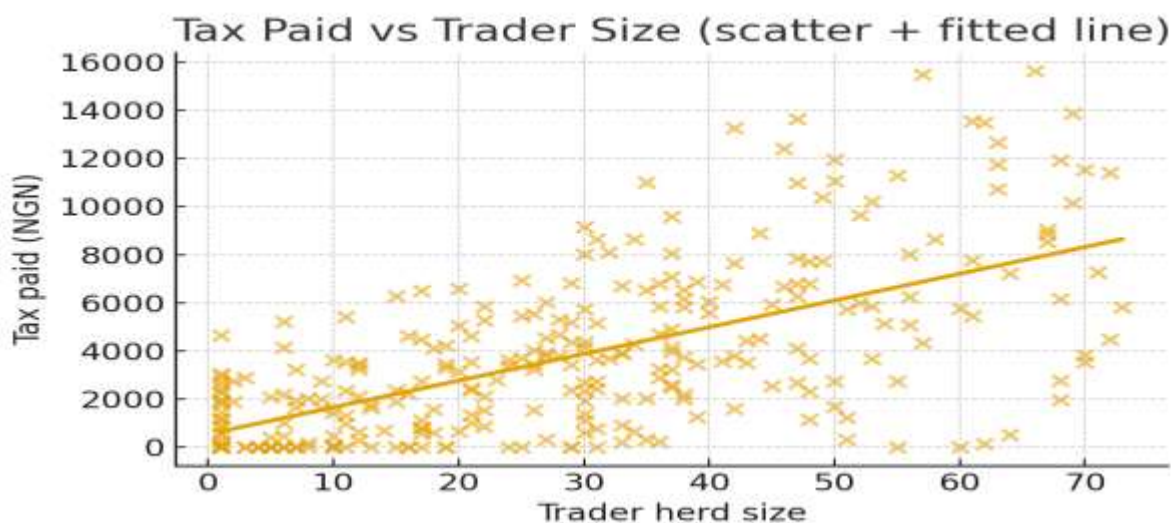


Figure 2: Relationship between Trader Size and Tax Paid

Regression results revealed that trader size and compliance score are statistically significant predictors of tax revenue with ($p < 0.001$). Market concentration (HHI) showed no significant effect when controlling for trader level factors. The model achieved an R^2 of 0.598, indicating that approximately 60% of the variance in tax paid is explained by the independent variables. The

findings align with SCP predictions, showing that conduct (compliance) and structure (trader size) jointly shape performance (revenue outcomes).

Overall, the analysis confirms that formalization, digital access, and market size are key drivers of IGR performance. Equally, a higher number of collectors reduce efficiency due to overlying roles and potential leakages. These findings are in line

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with Adebisi (2019) and Okoye and Akinmoladun (2020), who reported similar outcomes in informal revenue contexts.

5.0 CONCLUSIONS

In conclusion, the study stresses the vital role of market structure and trader behavior in influencing revenue mobilization under Nigeria's new tax reforms. While market concentration itself does not directly guarantee revenue as viewed across the studies, while larger and more compliant traders contribute significantly to tax generation.

6. RECOMMENDATIONS

Therefore, Policymakers should focus on digital payment systems, taxpayer education, and formalization of high volume traders. Applying SCP based monitoring tools such as HHI and CR4 can help revenue authorities track changes in competition and compliance across markets. Future studies should focus on other areas or sectors and use other variables to provide in depth knowledge on how new tax policies will enhance revenue mobilization.

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