

IMPACT OF GOVERNMENT POLICY ON AGRICULTURAL PRODUCT DISTRIBUTION IN OWERRI-WEST LGA, IMO STATE

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ABSTRACT

Agriculture plays a crucial role in Nigeria's economy, contributing to food security, employment, and economic growth. However, the distribution of agricultural products faces significant challenges, many of which are influenced by government policies. This study examined the impact of government policies on agricultural product distribution in Owerri-West Local Government Area of Imo State, focusing on transportation regulations, taxation policies, and infrastructure development. A descriptive survey research design was adopted, and data were collected from 520 respondents, including farmers, traders, transporters, and government officials. The study utilized both descriptive and inferential statistical methods, including Chi-square tests, to analyze the data. Findings revealed that high transportation costs, multiple taxation, and poor road networks significantly hinder the efficient distribution of agricultural products. Over 80% of respondents agreed that excessive transport costs and multiple levies negatively impact their businesses. Additionally, inadequate storage facilities and poor market infrastructure contribute to post-harvest losses and inefficiencies in the supply chain. Hypothesis testing confirmed that government transportation and taxation policies ($\chi^2 = 18.42, p = .0002$) and infrastructure development ($\chi^2 = 21.15, p = .0001$) significantly affect agricultural distribution. The study concludes that policy reforms are necessary to reduce multiple taxation, improve road infrastructure, and invest in storage facilities. Recommendations include policy adjustments, investment in rural infrastructure, support for cooperative societies, and adoption of modern storage techniques. The study suggests further research on the role of technology, climate change, and public-private partnerships in agricultural distribution. Implementing these solutions will enhance efficiency, reduce costs, and improve food security in Owerri-West LGA.

Keywords: Agricultural Distribution, Government Policies, Infrastructure, Taxation, Transportation Cost

Introduction

Agriculture remains a cornerstone of Nigeria's economy, contributing significantly to the nation's Gross Domestic Product (GDP) and providing livelihoods for millions, particularly in rural areas (International Trade Administration, 2023; Nwogwugwu et al., 2023). Beyond its economic role, agriculture supports food security, employment, and industrial raw materials. However, the sector faces persistent challenges, particularly in the

distribution of agricultural products from producers to consumers, which affects both profitability and food availability. Government policies are crucial in shaping agricultural production and distribution through subsidies, infrastructural development programs, tax incentives, and regulatory frameworks (Lencucha et al., 2020; Oyeleke, 2021). Despite these interventions, unintended consequences such as multiple taxation, poor infrastructure, high transportation costs, and regulatory

bottlenecks often hinder effective product distribution (Sulaiman, 2021).

Owerri-West Local Government Area (LGA) of Imo State exemplifies these challenges. The area has a rich agricultural base, producing crops such as cassava, yam, maize, vegetables, and palm oil (Uhuegbulem et al., 2016). Yet, farmers and traders face significant hurdles in distributing these products, primarily due to inadequate road infrastructure, high transportation costs, and multiple levies imposed by various government agencies (Agbo et al., 2015). Poor road conditions, particularly in rural areas, worsen during the rainy season, leading to delays, increased costs, and product spoilage (Wudad et al., 2021). Multiple taxation further compounds the problem, with farmers, traders, and transporters enduring various levies, including road taxes, market fees, and vehicle permits, collected by multiple local government bodies and regulatory agencies (Sulaiman, 2021). These financial burdens raise the overall cost of distribution, making agricultural products more expensive for consumers and reducing farmers' profitability.

Transportation regulations also influence the movement of agricultural products within the LGA. Vehicle restrictions, loading limits, and road use regulations often cause delays, while security checkpoints and mandatory inspections create additional obstacles, increasing logistics costs and reducing supply chain efficiency (Sugri et al., 2021). Although, government policies aim to boost agricultural productivity and ensure food security, the unintended side effects — poor infrastructure, multiple levies, and restrictive transport policies — undermine distribution efficiency. For instance, subsidy programs intended to support farmers may lose effectiveness when poor road networks and high taxation overshadow their benefits (Sulaiman, 2021).

This study sought to examine the impact of government policies on agricultural product distribution in Owerri-West LGA. It aims to assess how transportation policies, taxation systems, and infrastructure development influence the efficiency of moving agricultural products from farms to markets. By identifying key challenges and proposing policy recommendations, the study aspires to

contribute to enhancing agricultural distribution in the region, promoting better market access for farmers, and improving food availability for consumers. The findings will benefit policymakers, farmers, traders, transporters, and researchers by providing practical recommendations for improving agricultural supply chains in Nigeria.

Statement of the Problem

Agricultural product distribution in Owerri-West Local Government Area (LGA), Imo State, faces significant challenges that hinder the efficient movement of goods from farmers to consumers. Poor road infrastructure is a major issue, with many rural roads in deplorable condition, especially during the rainy season. This leads to transportation delays, increased fuel costs, and post-harvest losses, limiting farmers' access to urban markets, reducing profitability, and discouraging agricultural investments.

Multiple taxation and government-imposed levies seem to further complicate distribution. Farmers, traders, and transporters appear burdened with various fees, including market levies, road taxes, and licenses, which increase overall costs. These expenses are often passed on to consumers, resulting in higher food prices. Additionally, transportation regulations such as vehicle loading limits, checkpoints, and movement restrictions create logistical delays, contributing to spoilage, higher operational costs, and reduced supply chain efficiency.

The lack of adequate storage and processing facilities worsens the situation, forcing farmers to sell produce immediately after harvest at lower prices. This seems to lead to seasonal price fluctuations, food wastage, and reduced income for farmers. While government policies aim to regulate and improve agricultural distribution, they often create unintended consequences that limit market access and increase costs. This study seeks to analyze how transportation policies, taxation systems, and infrastructure development influence agricultural distribution in Owerri-West LGA and provide recommendations to improve efficiency, reduce costs, and enhance food availability.

Objective of the Study

The general objective of this study is to assess the impact of government policies on the distribution of agricultural products in Owerri-West LGA, Imo State. While the specific objectives are:

1. To examine the effect of government transportation and taxation policies on agricultural product distribution in Owerri-West LGA.
2. To assess the role of government infrastructure development in enhancing or hindering agricultural product distribution in the study area.

Conceptual Literature Review

Transportation Infrastructure

Transportation infrastructure plays a vital role in agricultural product distribution, directly impacting supply chain efficiency, market access, and costs (Olawuyi & Adetunji, 2019; Amanor & Pabi, 2020). Government investments in roads, railways, ports, and storage facilities are essential for reducing transaction costs and minimizing post-harvest losses (Eneji et al., 2017; Perdana et al., 2023). In rural areas, improved road networks encourage agricultural commercialization by connecting farmers to urban markets, enhancing profitability (Abdo et al., 2021; Ogunlela & Mukhtar, 2020). Conversely, poor infrastructure limits farmers' ability to access markets, increases transportation expenses, and contributes to product spoilage, reducing overall agricultural productivity.

Developed economies often integrate transportation infrastructure with cold-chain systems, ensuring the quality of perishable goods during transit, which helps sustain food supplies (Perdana et al., 2023; Sugri et al., 2021). However, in many developing countries, the lack of such facilities leads to significant food losses and higher costs for farmers and consumers (Ayanwale et al., 2021). Strengthening transportation infrastructure is crucial to overcoming supply chain inefficiencies, promoting rural economic

integration, and enhancing food security (Ajibefun & Daramola, 2016). By investing in better roads and transport systems, governments can improve agricultural distribution, reduce costs, and support the growth of rural economies.

Taxation and Subsidies

Taxation and subsidy policies shape the agricultural distribution landscape by influencing the cost structures and incentives for producers and distributors (Eze & Ibekwe, 2022; Nwogwugwu et al., 2023). High taxes on agricultural products at local checkpoints discourage farmers from moving products to distant markets, raising distribution costs and reducing profit margins (Oyeleke, 2021; Obi & Chikaire, 2018). Conversely, targeted subsidies can enhance agricultural distribution efficiency. For example, fuel subsidies can lower transportation costs for moving products from rural to urban centers (Sulaiman, 2021). Input subsidies, such as those for fuel and fertilizers, can indirectly improve distribution by enabling farmers to scale production and expand market access (Agbo, et al., 2015). However, subsidies can also lead to inefficiencies and distort market signals, sometimes resulting in misallocation of resources (Lencucha et al., 2020).

Regulatory Frameworks

Regulatory frameworks, encompassing laws, quality standards, licensing, and operational guidelines, are crucial for ensuring food safety and enhancing access to both domestic and export markets (Nwogwugwu et al., 2023; Oyeleke, 2021; Obi & Chikaire, 2018). While effective regulations promote market confidence and improve product quality, overly complex or costly compliance requirements can hinder smallholder farmers and informal traders, creating an uneven playing field that benefits larger agribusinesses (Perdana et al., 2023; Lencucha et al., 2020; Uhuegbulem et al., 2016). Balancing food safety with inclusive market participation is essential to ensure that regulatory systems support, rather than restrict, agricultural product distribution (Sugri et al., 2021).

Trade Policies

Trade policies, including tariffs, export bans, trade liberalization agreements, and regional integration initiatives, significantly influence agricultural distribution (International Trade Administration, 2023; Ogunlela & Mukhtar, 2020). Liberal trade policies tend to reduce distribution costs by facilitating economies of scale and specialization (Ajibefun & Daramola, 2016). Regional trade agreements help to reduce intra-regional trade barriers, leading to more efficient agricultural product flows (Perdana et al., 2023; Nwogwugwu et al., 2023). However, protectionist trade policies, including export bans and high tariffs, can lead to inefficiencies and market distortions (Obi & Chikaire, 2018). Poorly coordinated trade policies exacerbate food price volatility, negatively affecting supply chain predictability (Ayanwale et al., 2021). At the same time, regional trade agreements can facilitate cross-border distribution networks, enhancing agricultural product distribution (International Trade Administration, 2023; Oyeleke, 2021).

Synthesis of Conceptual Perspectives

Government interventions in transportation infrastructure, fiscal policies, regulatory frameworks, and trade liberalization collectively shape agricultural distribution systems, each contributing uniquely to supply chain outcomes (Perdana et al., 2023; Olawuyi & Adetunji, 2019). Infrastructure enhances connectivity (Amanor & Pabi, 2020; Eneji et al., 2017), fiscal policies drive economic incentives (Eze & Ibekwe, 2022; Sulaiman, 2021), regulations set market standards (Nwogwugwu et al., 2023; Oyeleke, 2021), and trade policies enable global market access (International Trade Administration, 2023; Ogunlela & Mukhtar, 2020). However, policy incoherence — such as trade liberalization undermined by poor infrastructure or restrictive regulations — erodes efficiency (Perdana et al., 2023; Obi & Chikaire, 2018). An integrated, balanced policy approach is crucial for improving agricultural distribution, especially in developing economies (Ajibefun & Daramola, 2016).

Theoretical Framework

This study is grounded in Institutional Theory, originally proposed by John R. Commons (1931) and later expanded by scholars such as Douglass C. North (1990) and W. Richard Scott (1995). The theory explains how institutions — including formal rules like laws and regulations, and informal norms like cultural practices — shape the behavior of individuals and organizations. Commons viewed institutions as collective actions that control individual behaviors, while North emphasized that institutions reduce uncertainty by providing structure, lowering transaction costs, and improving market efficiency. Scott further defined institutions through three pillars: regulatory (laws), normative (social values), and cultural-cognitive (shared beliefs), all of which influence how organizations function within a system.

Institutional Theory is crucial for understanding how government policies affect agricultural product distribution in Owerri-West LGA. Policies on transportation, taxation, and infrastructure act as institutional mechanisms that impact market efficiency. High transportation costs, multiple taxation, and poor infrastructure raise transaction costs, causing inefficiencies in the supply chain (North, 1990; Scott, 1995). Additionally, inadequate road networks and limited storage facilities exacerbate food spoilage and price increases (Perdana et al., 2023; Sugri et al., 2021). Farmers and traders often conform to excessive levies to avoid disruptions, illustrating how institutional pressures influence economic behaviors (Scott, 1995; Obi & Chikaire, 2018). The study aligns with Institutional Theory's assertion that institutional structures significantly influence market outcomes. It underscores the need for policy reforms, such as streamlining taxation, improving road infrastructure, and reducing informal levies, to create a more efficient agricultural distribution system (Oyeleke, 2021; Lencucha et al., 2020). By addressing these regulatory barriers and lowering transaction costs, government interventions can enhance food security and economic sustainability in Owerri-West LGA (Nwogwugwu, et al., 2023; North, 1990). This

highlights the vital role of governance in shaping the efficiency and sustainability of agricultural distribution, reflecting Institutional Theory's emphasis on the power of institutional structures (Scott, 1995; Commons, 1931).

Empirical Review

Several empirical studies have examined the relationship between government policies and agricultural product distribution, particularly focusing on the roles of transportation policies, taxation, infrastructure development, and market efficiency. A study by Ajibefun and Daramola (2016) on agricultural supply chain inefficiencies in Nigeria revealed that government policies, especially those relating to taxation and transportation, significantly hinder the smooth distribution of agricultural products. The study found that multiple layers of formal and informal taxation increase distribution costs by up to 30%, reducing farmers' profitability and discouraging investment in rural agriculture. The authors stressed that these inefficiencies disproportionately affect smallholder farmers, who constitute the majority of producers in Nigeria.

Similarly, Obi and Chikaire (2018) in their study of agricultural product distribution in Imo State found that inconsistent policies and weak enforcement mechanisms at the local government level have created loopholes for rent-seeking behaviors by non-state actors, such as informal toll collectors and vigilante groups. The study concluded that uncoordinated taxation practices and poor governance contribute to product wastage, price hikes, and market dislocation, especially during peak harvest periods.

Olawuyi and Adetunji (2019) investigated the impact of transportation infrastructure on food distribution in rural Nigeria. Their findings indicate that poor road conditions account for up to 40% of distribution inefficiencies in rural agricultural markets. The study demonstrated that farmers in areas with poor road networks face higher transportation costs, leading to reduced market access, product spoilage, and post-harvest losses. They recommended that governments prioritize rural infrastructure as part of broader agricultural policy reforms to enhance food supply chain efficiency.

Further, Ogunlela and Mukhtar (2020) conducted a study on rural transport challenges in Northern Nigeria. Their research established that transportation bottlenecks caused by inadequate road infrastructure, coupled with rising fuel prices, contribute significantly to the high costs of agricultural distribution. The authors noted that the lack of investment in rural transportation networks perpetuates poverty by limiting farmers' ability to connect with profitable markets.

A comprehensive study by Ayanwale et al. (2021) on infrastructure and agricultural market performance in Southwest Nigeria revealed that the absence of key infrastructure—such as storage facilities, agro-processing centers, and rural roads—hinders the efficient flow of agricultural goods. The research found that areas with better infrastructure experienced 25-30% lower transaction costs and higher levels of product availability. The study emphasized that infrastructure directly impacts food security, farmer income, and rural livelihoods.

Eneji et al. (2017) also examined the role of government-driven infrastructural development on agricultural value chains in Nigeria. Their findings revealed that the lack of storage facilities leads to significant post-harvest losses, estimated at 35% annually for perishable goods. The study further established that infrastructural deficiencies have long-term effects on food inflation, consumer affordability, and regional trade competitiveness.

Eze and Ibekwe (2022) conducted a recent study on the impact of multiple taxation on agricultural product distribution in Southeastern Nigeria. The study found that excessive levies by local councils and state agencies account for approximately 20% of the total cost of agricultural products. The authors observed that traders often transfer these costs to consumers, making agricultural products less affordable and creating inefficiencies in the distribution network. They recommended harmonization of taxation policies to promote smoother and more affordable distribution processes.

Amanor and Pabi (2020) studied agricultural product distribution challenges in Ghana, with a focus on transportation and infrastructure. Their research found similarities with Nigeria's situation, including high distribution costs due

to poor roads and weak regulatory enforcement. Their study reinforced the argument that weak infrastructure and fragmented policy environments lead to substantial post-harvest losses and limit rural farmers' access to urban markets.

Gaps in the Reviewed Literature

The reviewed literature reveals several gaps in research on agricultural product distribution in Owerri-West LGA. First, most studies focus on broader regions rather than localized challenges specific to Owerri-West. Additionally, while government policies are widely examined, there is limited research on their direct impact on distribution networks, including transportation and storage. The role of private sector participation remains underexplored, as studies mainly emphasize government interventions. Furthermore, policy implementation challenges are not comprehensively analyzed, and empirical studies relying on primary data, such as field surveys and farmer interviews, are scarce.

Method of the Study

The study adopted a descriptive survey research design to examine the impact of government

policy on agricultural product distribution in Owerri-West LGA, Imo State. The population comprised farmers, traders, transporters, and government officials, with a sample size of 520 respondents selected using purposive and stratified random sampling techniques. Data were collected through a structured questionnaire that was validated by experts and pilot-tested for reliability, yielding a Cronbach Alpha coefficient of 0.82. The questionnaire captured key demographic variables including category (farmer, trader, transporter, government official), gender (male, female), occupation, and years of experience in agricultural distribution (1–5 years, 6–10 years, and above 10 years). The instrument was administered with the help of trained research assistants over a two-week period. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to analyze the data, while Chi-square tests were applied to test hypotheses at a 0.05 level of significance. The decision rule was to reject the null hypothesis if the calculated Chi-square value was greater than the critical value or if the p-value was less than 0.05, indicating statistical significance.

Data analysis and presentation

Table 1
Demographic Profile of Respondents

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	320	61.5
	Female	200	38.5
Occupation	Farmers	230	44.2
	Traders	160	30.8
	Transporters	110	21.2
	Government officials	20	3.8
Years of Experience	1-5years	150	28.8
	6-10years	200	38.5
	Above10years	170	32.7

Note. Source: Field survey, 2025.

As shown in Table 1 above, out of 520 respondents. 320 were male, making up 61.5% of the total participants. Female respondents were 200 in number, accounting for 38.5%. This shows that the majority of the respondents were male. The respondents were engaged in different occupations. Farmers made up the

largest group with 230 respondents (44.2%), followed by traders with 160 respondents (30.8%). Transporters were 110 in number, making up 21.2% of the respondents. Only a small portion, 20 respondents (3.8%), were government officials. This suggests that most of the participants were self-employed or involved

in informal sector jobs. Regarding years of experience, 150 respondents (28.8%) had between 1 to 5 years of experience in their field. A larger group, 200 respondents (38.5%), had worked between 6 to 10 years, while 170

respondents (32.7%) had over 10 years of experience. This distribution indicates that the majority of participants had a significant amount of work experience, especially those with over 6 years.

Descriptive and Inferential

Table 2
Impact of Government Transportation and Taxation Policies

Statement	SA n (%)	A n (%)	N n (%)	D n (%)	SD n (%)
High transportation cost affects agricultural distribution	250 (48.1%)	180 (34.6%)	40 (7.7%)	30 (5.8%)	20 (3.8%)
Government taxation policies increase the cost of selling farm produce	270 (51.9%)	160 (30.8%)	30 (7.7%)	40 (7.5%)	20 (3.8%)
Multiple taxation by local authorities negatively impacts market accessibility	260 (50.0%)	170 (32.7%)	40 (7.7%)	30 (5.8%)	20 (3.8%)

The data in Table 2 shows that the majority of respondents believe government transportation and taxation policies negatively affect agricultural distribution and market access. Most respondents (48.1% strongly agreed and 34.6% agreed) indicated that high transportation costs hinder the effective distribution of farm produce. Similarly, 51.9% strongly agreed and

30.8% agreed that government taxation policies increase the cost of selling agricultural products. Additionally, 50% strongly agreed and 32.7% agreed that multiple taxation by local authorities negatively impacts market accessibility. These results suggest that transportation expenses and taxation practices are major challenges faced by farmers and traders in the agricultural sector.

Table 3
Impact of Infrastructure Development

Statement	SA n (%)	A n (%)	N n (%)	D n (%)	SD n (%)
Poor road network can delay in transporting farm produce	280 (53.8%)	180 (34.6%)	30 (5.8%)	20 (3.8%)	10 (1.9%)
Lack of storage facilities leads to post-harvest losses	250 (48.1%)	170 (32.7%)	40 (7.7%)	40 (7.7%)	20 (3.8%)
Market infrastructure development improves agricultural distribution	240 (46.2%)	180 (34.6%)	50 (9.6%)	30 (5.8%)	20 (3.8%)

The data in Table 3 highlights the impact of infrastructure development on agricultural activities. A large number of respondents (53.8% strongly agreed and 34.6% agreed) believe that poor road networks cause delays in transporting farm produce. Additionally, 48.1%

strongly agreed and 32.7% agreed that lack of storage facilities leads to post-harvest losses, showing concern about the preservation of agricultural products. Furthermore, 46.2% strongly agreed and 34.6% agreed that developing market infrastructure can improve

the distribution of farm produce. Overall, the responses indicate that inadequate infrastructure, such as roads, storage, and market facilities, significantly hinders agricultural efficiency and distribution.

Inferential Analysis (Hypothesis Testing)

Table 4

Chi-Square Test for the Impact of Transportation and Taxation Policies on Agricultural Product Distribution

Variable	χ^2 (Chi-square) Value	p-Value	Decision
Transportation & taxation policies	18.42	0.0002	Reject H_{01}

Since $p < .05$, the null hypothesis is rejected, indicating that government transportation and taxation policies significantly impact agricultural product distribution.

A Chi-square test was used to test the research hypotheses.

Hypothesis 1: Government transportation and taxation policies do not significantly affect agricultural product distribution in Owerri-West LGA.

Hypothesis Two

H_{02} : Government infrastructure development does not have a significant impact on agricultural product distribution in the study area.

Table 5

Chi-Square Test for the Impact of Government Infrastructure Development on Agricultural Product Distribution

Variable	χ^2 (Chi-square) Value	p-Value	Decision
Infrastructure development	21.15	0.0001	Reject H_{02}

Since $p < 0.05$, the null hypothesis is rejected, suggesting that infrastructure development significantly influences agricultural product distribution.

Discussion of Results

The findings of Hypothesis 1, which states that government transportation and taxation policies significantly affect agricultural product distribution, align with several empirical studies. For instance, Ajibefun and Daramola (2016) highlight that multiple layers of taxation and poor transportation infrastructure increase distribution costs, making agricultural goods less profitable and discouraging investment in rural areas. Similarly, Obi and Chikaire (2018) emphasize how weak enforcement mechanisms at the local government level, coupled with inconsistent policies, create inefficiencies,

including rent-seeking behaviors, which disrupt the agricultural distribution system. Contrastingly, Amanor and Pabi (2020) in their study of Ghana, argue that although taxation and transportation issues are challenging, they are not the only factors affecting distribution, suggesting that governance and other systemic inefficiencies are also at play. Despite this, the study reinforces the critical role of policy in distribution efficiency.

Hypothesis 2, which suggests that government infrastructure development significantly influences agricultural product distribution, is strongly supported by existing literature. **Olawuyi and Adetunji (2019)** found that poor road conditions significantly hinder transportation efficiency, contributing to higher transportation costs and post-harvest losses in rural Nigeria. Similarly, **Ayanwale et al. (2021)** revealed that regions with better infrastructure

experienced lower transaction costs and higher product availability, supporting the idea that infrastructure plays a vital role in agricultural distribution. In contrast, **Eneji et al. (2017)** highlight that while infrastructure is essential, its absence alone may not be the sole reason for distribution inefficiencies, as other factors like market dynamics and governance also influence distribution. Nonetheless, the majority of studies align with the importance of infrastructure development in reducing distribution barriers.

Conclusion and Recommendations

The study concludes that government policies on transportation, taxation, and infrastructure development significantly influence agricultural product distribution in Owerri-West LGA. While some policies aim to enhance distribution efficiency, challenges persist due to inconsistent taxation, poor road networks, and inadequate storage facilities. These issues increase costs, cause delays, and contribute to post-harvest losses. Addressing these gaps through improved road infrastructure, streamlined tax policies, and better storage systems is essential for enhancing agricultural distribution, reducing waste, and ensuring food security in the region.

Based on the study's findings, the following recommendations are proposed to improve agricultural product distribution in Owerri-West LGA:

1. The government should reduce multiple taxes on farmers and traders, repair rural and urban roads, and regulate transport costs while providing subsidies or incentives to agricultural transporters to lower distribution expenses.
2. Farmers and traders should form cooperative societies to negotiate better costs and access support programs, adopt modern storage methods to reduce losses, and leverage e-commerce platforms and social media to expand their market reach.
3. Transporters should invest in durable vehicles suited for carrying perishable goods, collaborate with local governments to push for better road maintenance, and advocate for reduced transport levies.

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