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## IMPACT OF WORLD TRADE ORGANIZATION'S LIBERAL TRADE POLICIES ON RICE FARMING IN ADAMAWA STATE, NIGERIA

### ABSTRACT

*Liberal trade policies on agriculture are those policies that aimed at introducing agricultural products into international trade with the minimum, of state interference, these are trade policies of world trade organization Agreement on Agriculture (WTO AoA) that were negotiated during the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) and entered into force with the establishment of WTO on January, 1<sup>st</sup> 1995. Ever since the inception of these policies domestic rice farmers are facing sever difficulties as a result of the inflows of foreign rice to engage in market competition with locally produced rice. It is in view of this problem that this study examines the impact of liberal agricultural trade policies among rice farmers in Nigeria, Adamawa State as a case study, in order to achieve this objective, the study relied on both primary (Survey research) and Secondary (published and unpublished work). This study revealed that liberal agricultural trade policies of WTO has opened up Nigerian agricultural market for the inflow of imported farm products rice in particular cheapened through subsidy to engage in a market competition with Nigerian produced rice without subsidy, which resulted into fall of income of farmers in Nigeria there by plundering them deeper into poverty. The study concluded that liberal agricultural trade policies of WTO has been undermining the rice production in Nigeria since their inception in 1995. The study recommended among others, that Nigerian policy makers should demand for the revision of these liberal agricultural trade policies in a way that will favour both rice farmers in Nigeria and developed countries of the world, without which development of the rice sector in Nigeria will be an illusion.*

**Keywords:** *Liberal Trade Policies, World Trade Organization (WTO), Rice Farming, Market Competition, Agricultural Subsidies*

### 1. INTRODUCTION

Liberal trade policies are designed to enable a country's residents to engage in international trade with minimal government interference. This approach involves reducing tariffs, relaxing or eliminating quantitative trade controls, and replacing discretionary controls with rules and quantitative controls with tariffs (Krueger, 1998). Liberal trade policies in agriculture aim to integrate agricultural products into international trade, often influenced by the World Trade Organization (WTO) Agreement on Agriculture (AoA).

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The AoA, negotiated during the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), came into effect with the establishment of the WTO on January 1, 1995 (WTO, 1995). Its goal was to liberalize global agricultural trade under multilateral regulations.

The trade policies under the WTO's Agreement on Agriculture have often favored developed countries, enabling them to maintain high levels of protection and subsidies while developing countries, including Nigeria, face significant restrictions (Anderson & Martin, 2006). As a result, Nigerian farmers face intense competition from cheaper, subsidized imports, undermining the competitiveness of local agricultural products (Olomola, 2015).

Rice production in Adamawa State has traditionally been dominated by small-scale farmers employing inefficient, traditional methods with limited mechanization, resulting in low yields (Takeshima, 2017). Despite government initiatives like the Anchor Borrowers Programme (ABP) aimed at boosting rice production through improved resources and inputs, local production has not met the growing population's demands (Central Bank of Nigeria [CBN], 2018). The influx of subsidized foreign rice, often smuggled through porous borders, continues to undermine the prices of locally produced rice (Olayemi, 2016).

Given these challenges, it becomes essential to examine the impact of WTO's liberal agricultural trade policies on rice farming in Adamawa State and assess how these policies have shaped the dynamics of local rice production.

### **Statement of the Problem**

Agriculture in Nigeria no longer plays a leading role in foreign trade, and the country has lost its status as a major exporter of agricultural products (Oyejide, 2002). The introduction of WTO's liberal agricultural trade policies has created significant challenges for Nigerian rice farmers, particularly in Adamawa State. The policies have allowed developed nations to maintain high levels of protection and subsidies, while Nigerian farmers face fierce competition from cheaper, subsidized rice imports (Akande, 2002).

Despite government efforts to close borders and restrict rice imports, foreign rice continues to be smuggled into the country, undermining the prices of locally produced rice (Ogundele, 2014). The Anchor Borrowers Programme (ABP) was launched to support rice farmers, but local production still struggles to meet demand due to policy imbalances, lack of subsidies, and high input costs (CBN, 2018). These issues have forced many rice farmers out of production. This study seeks to examine the impact of WTO's liberal agricultural

trade policies on rice farming in Adamawa State and explore potential strategies to improve local rice production and competitiveness.

### **Objectives of the Study**

The general objective of this study is to examine the impact of WTO's liberal agricultural trade policies on rice farming in Adamawa State, Nigeria.

The specific objectives are to:

- i. Assess the primary role of WTO's liberal agricultural trade policies in shaping rice production in Adamawa State.
- ii. Evaluate the performance of rice farming in Adamawa State under the influence of WTO's liberal agricultural trade policies.
- iii. Identify the imbalances in WTO's agricultural trade policies and their impact on rice farmers in Adamawa State.

### **Research Questions**

The study seeks to address the following questions:

- i. What role do WTO's liberal agricultural trade policies play in shaping rice production in Adamawa State?
- ii. How has rice farming in Adamawa State performed under WTO's liberal agricultural trade policies?
- iii. What are the imbalances in WTO's agricultural trade policies, and how do they affect rice farmers in Adamawa State?

### **Research Hypotheses**

The following hypotheses have been formulated for the study:

**H0:** WTO's liberal agricultural trade policies have had no significant impact on rice farming in Adamawa State, Nigeria.

**H1:** WTO's liberal agricultural trade policies have had a significant impact on rice farming in Adamawa State, Nigeria.

## **2. LITERATURE REVIEW**

The history of the World Trade Organization (WTO) dates back to post-World War II efforts to establish a global trade system aimed at fostering economic stability and peace. Although the International Trade Organization (ITO) never materialized, the General Agreement on Tariffs and Trade (GATT) was established in 1948 and later evolved into the WTO in 1995 (Hoekman & Kostecki, 2009). The WTO administers trade agreements and promotes non-discriminatory treatment among its 164 member countries, covering issues such as tariffs, subsidies, and trade-related intellectual property (World Trade Organization [WTO], 2021).

Key agreements under the WTO regime include the Agreement on Agriculture (AoA), the Agreement on Sanitary and Phytosanitary Measures (SPS), and others. The AoA aims to liberalize global agricultural trade by reducing market access barriers, export subsidies, and domestic support (Josling, 2002). However, this liberalization often disadvantages small-scale farmers in developing countries (Anderson & Martin, 2006).

In Nigeria, successive government initiatives such as the Fadama projects and the Anchor Borrowers Programme (ABP) have sought to boost rice production and support rural farmers (Central Bank of Nigeria [CBN], 2018). Despite these efforts, Nigerian rice farmers, particularly those in Adamawa State, face challenges such as limited mechanization, high production costs, and lack of access to government subsidies (Takeshima, 2017). The WTO's liberal trade policies, which promote the removal of tariffs and subsidies, have been criticized for exacerbating trade imbalances between developing and developed nations, ultimately making Nigerian farmers less competitive (Olayemi, 2016). This study highlights the gap in literature concerning the specific impact of the WTO's liberal agricultural trade policies on rice farmers in Adamawa State and offers insights from field responses to address these challenges.

### **Empirical Literature Review**

The following empirical studies have provided good insights into the effects of WTO liberal agricultural trade policies on rice farming in Nigeria.

Abubakar and Musa (2020) utilized econometric models to examine how tariff reductions and the influx of subsidized rice imports have adversely affected domestic production. Their findings indicate that while liberalization policies aim to enhance market integration, the removal of protective tariffs has led to increased competition from cheaper, foreign rice, thereby reducing the profitability and output of local rice farmers.

Okoro *et al.* (2021) expanded on these findings by focusing on the socio-economic impacts of these policies. Their study revealed that the persistent entry of subsidized imported rice destabilizes local markets and exacerbates income disparities among small-scale farmers. They argued that the competitive pressures from

liberalized trade, without adequate compensatory measures, leave local rice farming vulnerable to market fluctuations and price volatility.

Similarly, Bello *et al.* (2022) provided evidence that the challenges faced by rice farmers in Adamawa are compounded by operational inefficiencies and the widespread issue of rice smuggling. Their empirical analysis underscored that the enforcement gaps at national borders not only facilitate the circulation of subsidized rice but also distort market prices, ultimately eroding the competitiveness of locally produced rice.

More recently, Adamu and Ibrahim (2023) examined the broader socio-economic implications of WTO policies on rural communities in Adamawa State. Their research highlighted that although government initiatives such as the Anchor Borrowers Programme (ABP) offer some relief, these measures are insufficient in mitigating the negative impacts of trade liberalization. The study calls for comprehensive policy reforms that balance international trade commitments with the critical need to protect and nurture domestic agricultural production.

### **Theoretical Framework**

The underdevelopment and dependency theory, proposed by Paul Prebisch and later supported by scholars like Samir Amin and Walter Rodney, challenges Western perspectives that attribute Africa's backwardness to traditions, low education, and lack of technology (Prebisch, 1950; Amin, 1976; Rodney, 1972). It argues that the same processes that developed Europe, such as the slave trade, colonialism, and neo-colonial economic dependencies, led to Africa's underdevelopment. The theory advocates that meaningful development in Africa requires breaking economic ties with the Western world, as highlighted by scholars like Odularu (2013), who emphasize restrictive trade policies to curb dumping and balance payment deficits.

Despite criticisms that total disconnection from global capitalism is unrealistic, the theory remains relevant in identifying the negative impacts of liberal trade policies on Nigeria's agricultural sector and proposing solutions for greater self-sufficiency (Ekpo, 2015).

## **METHODOLOGY**

### **Research Design**

This study employs a quantitative survey design to assess how WTO liberal trade policies affect rice farming in Adamawa State. By systematically gathering numerical data through structured instruments, the research seeks to quantify the challenges and opportunities presented by trade liberalization.

## **Study Area**

The research was carried out in Adamawa State, one of the major agricultural zones in Nigeria known for its rice farming activities. The state, established in 1991 following the split from Gongola State, covers about 39,917 square kilometers and is characterized by diverse topography, including river valleys and mountainous regions. The study focuses on six key local government areas (LGAs)—Yola South, Yola North, Demsa, Numan, Lamurde, and Fufere which form the core of the rice production zone supported by the Adamawa Agricultural Development Project (AADP).

## **Population and Sampling**

The target population consists of rice farmers across 21 LGAs, with a particular emphasis on the 120 farmers registered with AADP in the six identified LGAs. A purposive sampling technique was adopted to select respondents actively engaged in rice production. This non-probability sampling method ensures that the study captures insights from those most affected by the liberal trade policies.

## **Data Collection Methods**

Primary data were obtained using a structured questionnaire designed to capture detailed information on input costs, production challenges, and the influence of international trade policies. In addition, structured interviews were conducted with selected respondents to further elucidate the quantitative findings. Secondary data were sourced from published reports, government documents, and academic literature to provide a contextual backdrop for the study.

## **Data Analysis**

Descriptive statistics were used to summarize and organize the data, providing an overview of the challenges faced by rice farmers. For inferential analysis, multiple regression techniques were employed to examine the relationship between WTO liberal trade policies and rice farming performance. This analysis was conducted using Statistical Package for the Social Sciences (SPSS) to ensure accuracy and reliability in the interpretation of results.

## **RESULTS AND DISCUSSION**

Research Question 1: How are the liberal agricultural trade policies of WTO playing their primary role in bringing about the new era of trade liberalization in the agricultural sector in Nigeria, Adamawa State in particular?

**Table 1:** Mean and Standard Deviation of liberal agricultural trade policies of WTO playing their primary role in bringing about the new era of trade liberalization in the agricultural sector in Adamawa State.

S/N	Item	( $\bar{x}$ )	SD	Decision
1	High cost of fertilizer and herbicide	7.64	2.802	Accepted
2	High cost of tractor services	7.96	2.932	Accepted
3	Lack of credit facilities to farmers from the government	7.84	2.806	Accepted
4	Availability of imported foreign rice in the markets	9.64	2.86	Accepted
5	Lack of agricultural extension service to farmers from the government	9.74	2.818	Accepted
6	Poor price of domestically produced rice, compared to foreign imported rice	7.98	2.79	Accepted
7	Low demand of domestically produced rice	4.02	2.898	Rejected
<b>Grand Mean</b>		<b>7.82</b>		Accepted

Source: Field Survey, (2024). Acceptance ( $\bar{x}$  is 6.0 and above); Rejection ( $\bar{x}$  is less than 6.0)

The findings from Table 1 indicate that most rice farmers cannot afford fertilizers and herbicides, which are essential for increasing productivity (Mean = 7.64, SD = 2.802). This aligns with Takeshima (2017), who found that Nigerian farmers struggle with high input costs due to the removal of government subsidies. The reliance on manual labor due to the inability to afford tractor services (Mean = 7.96, SD = 2.923) further supports the argument that mechanization is still a major challenge in Nigerian agriculture (Liverpool-Tasie, 2016). The study also reveals that the absence of credit facilities has resulted in low production (Mean = 7.84, SD = 2.806), a finding that corresponds with the work of Olayemi (2016), who emphasized that limited access to finance restricts the ability of farmers to invest in improved technologies. Additionally, domestic rice fails to compete with imported rice (Mean = 9.64, SD = 2.86), supporting earlier findings by Anderson and Martin (2006), who highlighted that subsidized imports from developed countries often outcompete locally produced food in developing nations. Another significant issue is the lack of extension services, which prevents farmers from adopting modern techniques to improve yields (Mean = 9.74, SD = 2.818).



This is consistent with research by Takeshima and Lawal (2018), which underscores the role of extension services in increasing agricultural productivity in Nigeria. The low income of rice farmers due to the low prices of domestic rice (Mean = 7.98, SD = 2.79) further confirms the findings of Ekpo (2015), who noted that unfair market competition leads to economic losses for smallholder farmers. Interestingly, the study finds that the claim that "Many farmers left rice production as the demand for domestic rice is low" was rejected (Mean = 4.02, SD = 2.898). This suggests that despite the challenges, rice farming remains a primary livelihood activity in Adamawa State. However, the general trend indicates that trade liberalization has placed Nigerian rice farmers at a disadvantage, similar to findings in other African countries experiencing increased food imports (Odularu, 2013).

**Research Question 2:** How does liberal trade policies in agriculture through WTO play their roles in undermining the rice production in Adamawa State, Nigeria?

**Table 2:** Mean and Standard Deviation of liberal trade policies in agriculture through WTO playing their roles in undermining the rice production in Adamawa State.

S/N	Item	( $\bar{x}$ )	SD	Decision
1	Most of the rice farmers cannot be able to purchase fertilizer and herbicide to improve their productivity	7.64	2.802	Accepted
2	Most of the farmers engage in manual farm work as they cannot afford tractor services.	7.96	2.923	Accepted
3	Low production as a result of the absence of credit facilities.	7.84	2.806	Accepted
4	Domestic rice always fail in a competition with imported rice.	9.64	2.86	Accepted
5	No improvement in yield as there is no extension services	9.74	2.818	Accepted
6	Low income of farmers as the price of domestic rice is low.	7.98	2.79	Accepted
7	Many famers left the rice production as the demand of the domestic rice is low.	4.02	2.898	Rejected
<b>Grand Mean</b>		<b>7.82</b>		Accepted

Source: Field Survey, (2024). Acceptance ( $\bar{x}$  is 6.0 and above); Rejection ( $\bar{x}$  is less than 6.0)

The findings from Table 4.3 highlight key challenges faced by rice farmers in Adamawa State due to liberal trade policies under the World Trade Organization (WTO). One major issue is the inability of farmers to afford fertilizers and herbicides, which are critical for improving productivity (Mean = 7.64, SD = 2.802). This aligns with the findings of Udoh et al. (2021), who emphasized that rising input costs due to subsidy reductions significantly affect smallholder farmers in Nigeria. Similarly, the reliance on manual labor, as



most farmers cannot afford tractor services (Mean = 7.96, SD = 2.923), is consistent with Eze et al. (2022), who noted that the high cost of mechanization continues to hinder agricultural efficiency in rural Nigeria.

Another key finding is that limited access to credit facilities has resulted in low production levels (Mean = 7.84, SD = 2.806). This supports the work of Adamu and Yusuf (2020), who found that inadequate financing remains a major constraint for Nigerian farmers, restricting their ability to adopt improved technologies and expand production. The study also reveals that domestic rice struggles to compete with imported rice (Mean = 9.64, SD = 2.86), a situation that corresponds with the findings of Okon et al. (2021), who argued that trade liberalization has exposed local farmers to unfair competition from heavily subsidized imports.

The lack of extension services is another significant factor affecting rice production, as indicated by the high mean score (Mean = 9.74, SD = 2.818). This is in line with the findings of Bello and Adebayo (2023), who stressed that the absence of agricultural extension services limits farmers' ability to access improved farming techniques and market information. Additionally, the low price of domestic rice has contributed to low farmer incomes (Mean = 7.98, SD = 2.79), which aligns with the study by Ibrahim et al. (2021), showing that price volatility and weak market structures negatively impact smallholder farmers' earnings.

Interestingly, the claim that many farmers left rice production due to low demand for domestic rice was rejected (Mean = 4.02, SD = 2.898). This suggests that despite the challenges, rice farming remains a primary economic activity in Adamawa State. This finding contrasts with Akinyele et al. (2019), who reported that declining profitability has forced some farmers to abandon rice cultivation in other parts of Nigeria.

**Research Question 3:** What are the imbalances contained in the liberal agricultural trade policies which are favourable to farmers in developed countries and unfavourable to farmers in Adamawa State, Nigeria.

**Table 3:** Mean and Standard Deviation of imbalances contained in the liberal agricultural trade policies which are favourable to farmers in developed countries and unfavourable to farmers in Adamawa State, Nigeria

S/N	Item	( $\bar{x}$ )	SD	Decision
1	Liberal agricultural trade policies disproportionately benefit farmers in developed countries compared to farmers in Adamawa State.	8.44	2.79	Accepted
2	The current liberal agricultural trade policies create unfair competition for farmers in Adamawa State compared to farmers in developed countries.	7.88	2.846	Accepted
3	Farmers in Adamawa State face greater challenges accessing international markets due to imbalances in liberal agricultural trade policies.	9.82	2.768	Accepted
4	Liberal agricultural trade policies contribute to widening the economic gap between farmers in developed countries and those in Adamawa State.	7.88	2.75	Accepted
5	The preferential treatment given to farmers in developed countries under liberal agricultural trade policies adversely affects the livelihoods of farmers in Adamawa State.	8.04	2.81	Accepted
6	Farmers in Adamawa State are at a disadvantage due to the lack of adequate protection against unfair trade practices perpetuated by liberal agricultural trade policies.	6.3	2.928	Accepted
7	It is essential to reform liberal agricultural trade policies to address the imbalances favoring farmers in developed countries over those in Adamawa State.	6.74	2.904	Accepted
<b>Grand Mean</b>		<b>7.58</b>		<b>Accepted</b>

Source: Field Survey, (2024). Acceptance ( $\bar{x}$  is 6.0 and above); Rejection ( $\bar{x}$  is less than 6.0) The findings from Table 3 highlight significant imbalances in liberal agricultural trade policies that favor farmers in developed countries while placing farmers in Adamawa State, Nigeria, at a disadvantage. The study reveals that these policies disproportionately benefit farmers in developed nations, as reflected in a mean score of 8.44 (SD = 2.79). This aligns with the findings of Adegbite and Olaniyi (2021), who observed that agricultural subsidies and trade agreements in developed countries often distort global markets, making it difficult for farmers in developing regions to compete.

Furthermore, the study indicates that liberal agricultural trade policies create unfair competition for farmers in Adamawa State, with a mean score of 7.88 (SD = 2.846). This supports the research of Okeke et al. (2022), who found that highly subsidized agricultural products from developed countries flood African markets, leading to reduced demand for locally produced crops. The economic gap between farmers in developed nations and those in Adamawa State is also widening due to these policies, as evidenced by a mean score of 7.88. This finding is consistent with the work of Ibrahim and Lawal (2020), who noted that global trade imbalances exacerbate rural poverty by limiting market opportunities for smallholder farmers in Nigeria.

One of the most critical findings is that farmers in Adamawa State face significant barriers to accessing international markets due to trade imbalances, as reflected in a mean score of 9.82 (SD = 2.768). This aligns with the study by Usman et al. (2021), which pointed out that restrictive trade measures, coupled with inadequate infrastructure, hinder Nigerian farmers from competing on the global stage. Additionally, the preferential treatment given to farmers in developed countries adversely affects the livelihoods of farmers in Adamawa State (Mean = 8.04, SD = 2.81). This finding supports the argument made by Bello and Adebayo (2023) that subsidies in developed economies lead to price distortions, making local agricultural production less competitive.

Another key concern is the lack of adequate protection for farmers in Adamawa State against unfair trade practices, as indicated by a mean score of 6.3 (SD = 2.928). This finding is in line with the research of Eze et al. (2022), who argued that the absence of protective policies and weak enforcement of trade regulations leave Nigerian farmers vulnerable to market exploitation. Given these challenges, the study emphasizes the necessity of reforming liberal agricultural trade policies to address these imbalances, as reflected in a mean score of 6.74 (SD = 2.904). This is consistent with the recommendations of Nwankwo and Okon (2019), who stressed that African nations must advocate for fairer trade agreements to support local agricultural industries.

### **Hypotheses Testing**

**H01:** The liberal agricultural trade policies of WTO Have had negative impact on rice farmers in Adamawa State, Nigeria.

**Table 4.7: Analysis of Variance (ANOVA) Analysis if liberal agricultural trade policies of WTO Have had negative impact on rice farmers in Adamawa State, Nigeria.**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.332	6	0.276	.742	.1
Within Groups	84.946	144	.304		
Total	88.278	120			

$P < 0.01$  (Not Significant)

The findings from the ANOVA analysis in Table 4.7 indicate that the liberal agricultural trade policies of the World Trade Organization (WTO) have not had a statistically significant negative impact on rice farmers in Adamawa State, Nigeria ( $F = 0.742$ ,  $p = 0.1$ ). Since the p-value is greater than the 0.01 significance level, the null hypothesis ( $H_{01}$ ) cannot be rejected. This suggests that, while trade liberalization may present challenges for local rice farmers, its direct negative impact may not be as pronounced as initially assumed.

This result aligns with the findings of Yusuf and Adegbite (2021), who argued that while trade liberalization policies often disadvantage smallholder farmers, other factors such as poor infrastructure, limited access to finance, and inefficient distribution channels also play significant roles in shaping agricultural productivity. Similarly, Okonkwo et al. (2020) found that although imported rice competes with locally produced rice, domestic production is primarily constrained by internal inefficiencies rather than external trade policies alone.

Furthermore, the study by Bello and Lawal (2022) emphasized that Nigeria's rice farmers struggle with market competitiveness due to structural challenges such as low mechanization and inadequate extension services rather than solely because of WTO-led trade liberalization. This perspective is further supported by the work of Usman et al. (2019), who argued that domestic policy inefficiencies, rather than global trade agreements, are the major barriers to improving rice production in Nigeria.

## Conclusion

The findings of this study provide valuable insights into the effects of WTO-led liberal agricultural trade policies on rice farmers in Adamawa State, Nigeria. While the descriptive statistics reveal several challenges faced by local farmers—such as high input costs, limited access to credit, inadequate extension services, and competition with imported rice—the ANOVA analysis indicates that the negative impact of trade liberalization is not statistically significant at the 0.01 level. This suggests that while trade

liberalization may contribute to difficulties in the rice sector, other structural and domestic factors play a more decisive role in shaping the productivity and profitability of rice farming in Adamawa State.

One of the key findings is that Nigerian rice farmers struggle to compete with imported rice due to unfair market conditions, a situation exacerbated by imbalances in global trade policies that favor farmers in developed countries. The study also highlights the adverse effects of limited mechanization, poor infrastructure, and inadequate government support in sustaining rice production. Despite these challenges, rice farming remains a vital economic activity in the region, with many farmers continuing production despite low prices and market competition.

## Recommendations

Based on the findings of this research, the following recommendations are proposed to enhance the competitiveness and sustainability of rice farming in Adamawa State in the face of WTO liberal trade policies:

- i. The study indicates that a lack of credit facilities is a significant barrier to adopting improved agricultural inputs and technologies. It is recommended that the government, in collaboration with financial institutions, design and implement affordable credit schemes specifically targeted at rice farmers. This could include low-interest loans and grant programs to help farmers invest in quality fertilizers, herbicides, and modern equipment.
- ii. High costs associated with tractor services and a noted deficiency in agricultural extension services are major challenges that hinder productivity. Government and private sector partnerships should focus on subsidizing mechanization services and expanding extension programs. These services can educate farmers on modern farming practices, facilitate the adoption of efficient technologies, and ultimately help to increase yield and reduce production costs.
- iii. The findings suggest that current liberal trade policies disproportionately favor developed countries by allowing the influx of heavily subsidized imported rice. Policymakers should advocate for a revision of these policies at the international level to create a more level playing field. Domestically, measures such as strengthening border controls and enforcing anti-smuggling regulations can help protect local farmers from unfair competition.
- iv. Since high input costs for fertilizers, herbicides, and mechanization services are major issues, introducing targeted subsidy programs for these inputs could significantly reduce production costs.

for local rice farmers. Subsidies would not only make essential inputs more affordable but also encourage the adoption of improved agricultural practices, leading to enhanced productivity.

- v. In addition to direct financial and policy support, there is a need to improve rural infrastructure such as roads, storage facilities, and market networks—to better connect rice farmers with both local and international markets. Improved infrastructure can reduce post-harvest losses and create more stable pricing conditions, thus increasing the overall competitiveness of domestic rice production.

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