



# Rice Science

## FOR DECISION- MAKERS

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# HOW CAN RICE TRADE LIBERALIZATION AFFECT PRODUCERS AND CONSUMERS?

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## INTRODUCTION

Tariffs and quantitative restrictions (QR) are used to control the entry of imported rice in the country. Tariffs are taxes imposed on traded products; QRs are measures such as quotas and bans that limit the volume of rice allowed into the country. They protect the local industry against competition from imported rice, but only tariff can generate revenue for the government.

Liberalizing trade means loosening these restrictive measures at a certain degree to ease flow of goods and services in and out of the country.

Trade liberalization (lib) is widely believed to hurt the farming sector but is beneficial to consumers. However, the magnitude of the effect is hardly understood, thus clouding the actions that need to be taken. This policy brief describes the form of rice trade lib that the Philippines (PH) will face in the immediate future and quantifies its effects on producers and consumers.

## PH'S CURRENT IMPORT PROTECTION POLICY ON RICE

Our policy on rice importation involves Tariff Rate Quota (TRQ), which is a combination of tariff and QR. This entails setting a **Minimum Access Volume (MAV)** or the least amount of rice that should be imported from specific trading partners. This is levied with a lower import duty called the in-quota tariff. Beyond the MAV, importers pay a higher duty called the out-quota tariff (Manzo, 2007).

## KEY POINTS

- The Philippines implements Tariff Rate Quota as its trade policy on rice importation. Relaxing this trade barrier can help reduce domestic price.
- Reduced price implies availability of more affordable rice in the market, hence a higher demand for the staple food. This situation benefits all consumers, as it even helps reduce smuggling.
- If farmers cannot cope, liberalized trade could lead them into planting less area, which will reduce their production and rice income. But farmers who eat more rice than they produce or buy more rice than they sell, would benefit from liberalized trade. Ways to boost farmers' competitiveness are therefore being proposed.

In 1994, both quota tariffs for rice were at 50%. These were maintained until 2005 despite PH's accession to the General Agreement on Tariffs and Trade (GATT). Under GATT, PH should remove quotas and reduce its tariff rates but these were deferred until 2005 for food security reasons.

Since then, QR has never been lifted as PH consistently requested for its extension. As a trade-off, MAV was increased from 238,940 metric tons (mt) to 350,000 mt in 2005 and to 805,200 mt in 2014. In-quota tariff was reduced from 50% to 40% in 2005 and to 35% in 2014. With QR and tariff still in effect, the TRQ system still holds to this date.

## HOW CAN THIS TRADE REFORM AFFECT FARMERS AND CONSUMERS?

Using the time series data obtained from the Bureau of Agricultural Statistics (BAS), the effects of the 35% reduced tariff on (a) farmgate and wholesale prices, (b) area harvested, (c) rice quantity supply and demand, and (d) farmers' gross income were estimated.<sup>1</sup> Furthermore, two scenarios were compared: (1) 35% tariff with QR retained ("with QR"); and (2) 35% tariff with QR removed ("without QR").

Under the "with QR" scenario, the government sets both the total volume of rice that will be imported and allocated to the private sector. On one hand, the "without QR" scenario promotes unlimited imports by the private sector subject to 35% tariff. This suggests that private importers can bring in as much rice as they want so long as it will be profitable for them to sell in the domestic market. The 35% tariff inevitably raises the price of otherwise cheaper imported rice.

### Effects on farmgate and wholesale prices

Table 1 shows that both scenarios would reduce the farmgate and wholesale prices of rice. "Without QR" reduces both prices more because of less protection.

Tariff at 35% with QR would reduce wholesale price by 2.7%, and farmgate price by 2.5%. Tariff at 35% without QR would result in a 27.3% and 25.6% drop on the wholesale and farmgate prices, respectively. If government therefore

**Table 1. Effects of Trade Liberalization on Rice Prices. \***

Scenarios	Wholesale Price			Farmgate Price (dry)		
	Change in Values		New Values (P/kg)	Change in Values		New Values (P/kg)
	(P/kg)	%		P/kg	%	
1. 35% tariff, with QR	-0.93	2.69	33.56	-0.43	2.53	16.51
2. 35% tariff, without QR	-9.42	27.43	25.06	-4.34	25.64	12.59

\* Baseline values (2013) used are P34.49/kg for wholesale price and P16.94/kg for dry paddy price.

prefers cheaper rice in the market, it must remove QR rather than just trimming the tariff rate.

Removing QR can significantly reduce the domestic price, bringing it closer to the world price. This can help reduce rice smuggling as the price advantage of selling smuggled rice is diminished. Income from smuggling would then be insufficient to compensate for the risk and high transaction costs involved.

In 2012, the cost of producing a kilogram of dry palay was P11.05 and farmgate price was P16.22 as reported by BAS. Farmers got a profit percentage<sup>2</sup> of 47% (P5.17 per kg of dry palay).

For farmers to continue enjoying this level of profit percentage, production cost per kg should decrease to P8.78 under the "with QR" scenario; P6.70 under "without QR". Production cost can be reduced by improving efficiency in input-use and/or raising the yield.

Reduced palay price means less income for farmers, if cost is not lowered. Nevertheless, lower price also means more affordable rice for consumers, which could benefit the nutrition and poverty status of many people.

### Effects on harvest area

Reduced price and income can discourage some farmers from planting rice, hence area planted to the crop will shrink. Farmers could shift to other suitable crops to gain more. Table 2 shows that area planted, as proxied by harvest area, would drop by 0.33% under the "with QR" scenario and by 3.33% under the "without QR". This implies that only competitive farmers can sustain rice production under a more liberalized trade.

**Table 2. Effects of Trade Liberalization on Area Harvested.\***

Scenarios	Area harvested		
	Change in Values		New Values ('000 ha)
	('000 ha)	%	
1. 35% tariff, with QR	-15.57	0.33	4,730.52
2. 35% tariff, without QR	-158.02	3.33	4,588.07

\* Baseline value (2013) used is 4,746,000 ha.

1 Changes in the values of farmgate and wholesale prices, harvest area, rice quantity supply and demand, and gross income were determined using regression analysis. This method estimates how the variable of interest changes as a result of a change in another variable.

2 Computed as net profit per kilogram of palay divided by the per-kg cost of dry palay.

## Effects on Quantity Supply (QS) and Demand (QD)

Farmers' decision to produce rice partly depends on its farmgate price. The higher the price, the more attractive rice production is to farmers. Based on the results, trade lib would decrease farmgate price. They can either reduce their area planted to rice or minimize their input-use to economize on costs. The possible shrinkage in harvest area and reduced input-use can lead to lower rice supply.

Consistent with the negative response of area harvested to trade lib, implementing any of the two trade scenarios would negatively affect the rice supply (Table 3). The quantity supply would reduce by 0.79% under "with QR" and by as much as 8.02% under "without QR".

On the contrary, demand for rice would increase under both scenarios (Table 3): "without QR" (9.9%); "with QR" (0.98%). This is expected because demand and prices are negatively related. Higher prices will lower demand.

**Table 3.** Effects of Trade Liberalization on Quantity Supply and Demand for Rice. \*

Scenarios	QUANTITY SUPPLY			QUANTITY DEMAND		
	Change in Values		New Values	Change in Values		New Values
	('000 mt)	%	('000 mt)	('000 mt)	%	('000 mt)
1. 35% tariff, with QR	-145.72	0.79	18,293.69	111.77	0.98	11,545.77
2. 35% tariff, without QR	-1,479.20	8.02	16,960.21	1,134.57	9.92	12,568.57

\* Baseline values used re the 2013 domestic production of 18,439,406 mt and the 2012 rice food demand of 11,434,000 mt.

## Effects on farmers' income

Changes in area harvested, domestic production, and price of palay would conspire against gross income of farmers. Table 4 shows how gross income would drop by 2.9% under "with QR" and 29.2% under "without QR" scenarios. Removing QR and reducing tariff rate at the same time would result in lower protection level, thus greater reduction in farmers' gross income.

**Table 4.** Effects of Trade Liberalization on Gross Income of Farmers.\*

Scenarios	Gross Income		
	Change in Values		New Values
	(P/ha)	%	(P/ha)
1. 35% tariff, with QR	-1,930.43	2.94	63,836.04
2. 35% tariff, without QR	-19,218.18	29.22	46,548.29

\* Baseline value used is 2013 gross income of P65,766.47/ha.

## CONCLUSION

Adopting a more liberalized rice trade can put great pressure on rice producers. Farmers have to be more price-competitive lest they be displaced from rice farming. Farmers with a poor source of irrigation and who cultivate small fields (less than 1 hectare) are more likely to be less competitive under this trade reform.

For would-be displaced small-scale farmers, trade lib can be considered as an opportunity to explore alternatives like high-value crops that can generate handsome income even under limited trade protection or free trade. These crops are those where PH has comparative advantage.

On one hand, rice trade liberalization is favorable to consumers, especially those belonging to the low-income group. This means bringing more affordable rice on their table. However, the reduced prices can be better enjoyed or felt if QR is removed.

Based on Lantican, et al. (2011), a change in price could dampen demand for rice of low-income families although at a lower rate than middle- and high-income families. This proves that the low-income group is more dependent on rice as basic food than its more privileged counterparts.

The relaxed trade barrier can affect food security through reduced market prices and rice income. According to FAO, food security is attained "when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food which meets their dietary needs and preferences for an active and healthy life". Clearly, economic accessibility is a component of food security that can be influenced by food prices and income.

Holding other given factors constant, the expected lower retail prices of rice brought about by trade lib can make consumers more rice-secure. On the contrary, if rice-based farm households fail to cope with a relatively open rice economy, their reduced income could lead to their food insecurity. But then again, if majority of these families buy more rice than they sell or eat more rice than they produce, they would also benefit from this trade reform. Nevertheless, a call to strengthen the competitiveness of those who would be victims of trade lib is being pushed.



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# CALL FOR ACTION

## BOOST FARMERS' COMPETITIVE EDGE

- Transform farmers into agripreneurs. Adopting the Nucleus Estate Strategy (NUESTRA) is one of the ways to motivate more farmers to engage in agribusiness ventures. NUESTRA establishes agribusiness nuclei near farming communities that will offer technologies, services, and strategies that can promote crop diversification and intensification (Zagado, 2014). It can make necessary production support more accessible to farmers. PhilRice pilot-tests this strategy by operating its branch stations as model nuclei.<sup>3</sup>
- Promote clustering of farms among small-scale producers. Farmers in clusters are better off because of greater bargaining power in buying inputs and marketing of produce. It also facilitates information-sharing and access to certain government services. Success stories report that farmers were able to avail of less costly inputs, access better marketing channels and farm-related information and services (Montiflor, et al., 2008 and Abecia, 2003).
- Encourage farmers to diversify their sources of farm income. Diversifying will reduce the risk of profit loss. In line with this, training on the production of high-value crops and products that use low-cost inputs, such as vermicast and mushroom, may be conducted.
- Continue support to research, development, and extension of yield-enhancing and cost-reducing technologies. Technologies developed by research will help make our farmers competitive.

<sup>3</sup> For more information about NUESTRA, please contact PhilRice.

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## ABOUT THE MATERIAL

**Rice Science for Decision-Makers** is published by the Department of Agriculture-Philippine Rice Research Institute (PhilRice). It synthesizes findings in rice science to help craft decisions relating to rice production and technology adoption and adaptation. It also provides recommendations that may offer policy triggers to relevant rice stakeholders in search of opportunities to share their knowledge on rice-related products.

The articles featured here are grounded on solid basic and applied research.

As an offshoot of the previous issue on rice smuggling, this material looks into the advantages and disadvantages of liberalizing rice trade to the lives of farmers as producers and the general public as consumers. It will walk the reader through the current import policy protection on rice as well as the implications of modifying the tariff scheme on the domestic price of palay. This issue also identifies the effects of trade liberalization on rice price, harvest area, and demand as well as on farmers' income.

Analyzing the strategies, preparations, and options to reduce production cost and maximize yield can help boost the Filipino farmers' competitiveness in the midst of trade liberalization.

For comments and requests for additional copies, please write to:

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