Compensatory payment scheme for rice farmers after tariffication

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Overview

In 1995, the Philippines was granted special treatment in rice, which allowed the country to maintain its import monopoly and quantitative restrictions (QRs). The expiration of this privilege in 2017 signals a greater competition from imports and the decline in domestic prices, which will reduce farmers' income.

This *Policy Note* presents an assessment of agricultural support options for rice farmers upon the lifting of the special treatment. It discusses and assesses program features of alternative schemes based on their compliance with the standards of the World Trade Organization (WTO), financial viability, and political acceptability.

Disciplines on agricultural support

The WTO Agreement on Agriculture (AoA) was created to promote liberalization in the agricultural sector. Commitments under it can be summarized into three pillars: (1) market access, (2) export competition, and (3) domestic support.

The first pillar compels member-countries to convert nontariff barriers to equivalent tariffs. Table 1 outlines the reduction schedules for developing and developed countries. Meanwhile, the second pillar involves the mandatory reduction of the value and volume of export subsidies. The third pillar classifies domestic subsidies into three boxes, namely, Amber Box, Blue Box, and Green Box measures based on the degree of market distortion. Of the three, Amber is most distortive (e.g., government procurement) and Green Box is the least

(Figure 1). WTO members commit to reduce Amber and Blue Box measures, and deliver agricultural support via Green Box measures.

Options for competition reform

Domestic subsidies are typically provided through productivity-oriented programs, direct payments, or a combination of both. Productivity-oriented programs include research and development and irrigation investments. On the other hand, direct payments are classified into three types, namely, traditional support, deficiency payments, and decoupled payments.

While still acknowledging the importance of productivity-oriented programs, our assessment focuses on direct payments. The Philippines is already spending considerable amounts to support rice farmers under the self-sufficiency program. Such budget prioritization may be maintained. However, productivity-oriented programs tend to impact the medium to long term, whereas the removal of QRs has immediate impacts. Likewise, direct payments appear to be a more appropriate safety net.

Types of direct payments

Traditional support is delivered through price support and procurement programs. This type of support is considered highly distortionary and falls under Amber Box measures. Prominent examples include the National Food Authority's (NFA) support price in the Philippines (Briones and dela Peña 2015) and the paddy pledging scheme of Thailand. For the latter, soft loans are extended to farmers, with harvest accepted as collateral.

Deficiency payments compensate farmers for extreme price falls. Payments under this type are equal to the difference between a target price, which the government guarantees the farmers to receive, and a benchmark price, which serves as the proxy for the market price. Examples include the United States (US) deficiency and countercyclical payments (CCP), South Korea's variable payments (Song 2006), and Thailand's price insurance scheme (Prasertsri 2009). If capped at low levels, deficiency payments could qualify as a Blue Box measure.
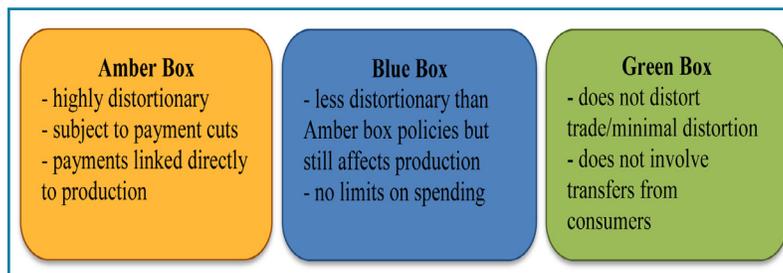
Decoupled payments refer to lump-sum payments unrelated to price or quantity. As

Table 1. Main provisions of the WTO agreement on agriculture

Negotiated Reduction	Implementation Period	
	Developed Countries, 1995–2000 (in %)	Developing Countries, 1995–2004 (in %)
Market access		
Average tariff cuts for all agricultural products	-36	-24
Minimum tariff cuts per product	-15	-10
Domestic support: Total cuts	-20	-13
Export subsidies (value cut)	-36	-24

Source: Burfisher (2001)

Figure 1. Classification of domestic subsidies based on AoA

Amber Box
- highly distortionary
- subject to payment cuts
- payments linked directly to production

Blue Box
- less distortionary than Amber box policies but still affects production
- no limits on spending

Green Box
- does not distort trade/minimal distortion
- does not involve transfers from consumers

Source: Authors' compilation

these payments are a form of assistance to farmers in their transition to a free market, they are time bound and expected to reduce over time. Computation of payments is based on farmers' past performance (e.g., historical production or historical acreages) and capped through limits on eligible acres, tonnage, or payment itself. Various countries that distributed such payments include the US through Agricultural Market Transition Assistance, Mexico through the Farmers Direct Support Program, the European Union through the Single Payment Scheme, Turkey through the Agricultural Reform Implementation Project (ARIP), and South Korea through the Direct Payment for Rice Paddy Farming. Due to minimal distortion, decoupled payments are considered as a Green Box measure.

Ex-post assessment of direct payment schemes

Review of country experiences shows that *traditional support* schemes, such as the market price support and consumer subsidy, are prone to high fiscal burden, leakage, and market distortion. This happened in Thailand, where the paddy pledging program resulted in massive stockpiles of rice worth USD 1 billion (Alavi 2012). The situation worsened in 2011–2014, where the fiscal cost for the program was estimated to reach almost USD 18.48 million[1] (Poapongsakorn and Pantakua 2014). The same also occurred in the Philippines in 2008, where the budget for the NFA procurement system increased five folds to stabilize prices, thereby transferring the burden to the consumers (Table 2).

Contrary to traditional support, *deficiency payments* harness allocative efficiency. In the case of Thailand, the price insurance schemes reduced budgetary outlays and increased the number of beneficiaries, from 1 to 3.2 million farmers (Titapiwatanakun 2012). However, problems may still arise when prices fall at unexpected levels, which could alternately bloat program cost.

Meanwhile, decoupled payments address the problems afflicting the efficiency of the aforementioned programs. One way of ensuring wide coverage is through the registry system of the Philippines. Consequently, absurd costs could be mitigated by ensuring a modest formula for calculating payments.

However, efficiency of the decoupled payments could be compromised by an inaccurate farmer registry. For instance, in

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[1] Exchange rate in 2014: 1 USD = 32.48 THB (http://www.x-rates.com/)

Table 2. Consumer price subsidy in the Philippines, 2006–2008

Measure	Unit	2006	2007	2008
Effective NFA program cost	billion pesos	16.4	18.6	68.6
MOOE	billion pesos	6.4	1.6	4.2
Less: net profit (loss) from sales	billion pesos	-10	-17	-64.4
Consumer price subsidy	pesos per kg	5.6	6.5	12.4
Imputed volume of NFA sales	million tons	1.6	1.9	2.5
Total consumer subsidy	billion pesos	8.7	12.4	31
Cost-benefit ratio = NFA cost/ consumer subsidy		1.89	1.5	2.21
Cost-benefit ratio, assuming 50% leakage		3.77	3.01	4.42

Source: Jha and Mehta (2008)

the case of Turkey under the ARIP, the farmer registry was incomplete due to ownership disputes and lack of property documentation, which undermined the program effectiveness (Burrell and Kurzweil 2008). Such payments may not also be enough to compensate farmers' income loss at the event when prices become too low. This happened in US and Mexico, compelling their governments to reinstitute CCP payments and price support, respectively (Baffes and Gorter 2005).

Table 3 provides a summary of the advantages and disadvantages of each payment type.

Mechanisms of the compensatory payment scheme

The benefits of decoupled payments outweigh the costs, making it the preferred option over traditional support and deficiency payments. In the following, we evaluate a possible compensatory payment scheme that would serve as a safety net from the projected drop in prices. The program is budgeted for one administration, from 2017 to 2022. Rice farmers registered under the Registry System for Basic Sectors in Agriculture, or their heirs, are eligible to receive payments. A *payment compensation formula* is posited as follows:

The gross margin is based on the difference between the NFA support price (PHP 17/kg) and the cost of production in 2012, based on the cost and returns data of the Philippine Statistics Authority. Normal level of imports may be estimated from the scenario analysis that follows.

To compute payments for each farmer, total payments from the payment compensation formula shall be divided by the area harvested. This will be distributed per cropping season, which is twice a year. To avoid fiscal problems, eligible farm area is capped at 2 hectares per farmer. In practice, actual imports and area harvested will be approximated by the previous year's figures.

Tariff conversion

Tariff rate for rice in 2017 is based on Annex V of the AoA. Tariff equivalent shall be based on the difference between the domestic price (proxied by wholesale price) and international price (cost, insurance, and freight unit value or CIF) for 1986–1988 (Table 4). Unfortunately, we could not use the CIF unit value in the computation as it is too remote from the free-on-board (FOB) price of medium-quality milled rice (Thailand). Rather, we applied the landed cost adjustment from CIF and FOB data, with Viet Nam rice 5 percent (average for 2010–2014). The result is an average nominal protection rate of 53.3 percent. With a mandatory 15 percentage points deduction (based

$$\text{Total payments (PHP)} \;=\; \text{P5/kg} \; x \left(\begin{array}{c} \text{alternative} \\ \text{scenario imports} \end{array} - \begin{array}{c} \text{average baseline} \\ \text{scenario imports} \end{array} \right) \Big/ 0.654$$

Gross margin

Displacement by imports

Milling recovery

on provisions of the AoA), the resulting tariff equivalent is 38.3 percent. This figure is almost identical to the 2017 in-quota tariff rate, as well as the 2015 ASEAN Free Trade Area rate (applied to Thailand and Viet Nam, the main import sources of the Philippines). Hence, 35 percent is an appropriate estimate of the tariff equivalent of the rice QR.

Table 3. A summary of the ex-post assessment of direct payment schemes

	Advantages	Disadvantages
Traditional payment	● Farmers are self-identifying	● High administrative costs
Deficiency payment	● Farmers are self-identifying ● Could benefit more smallholder farmers through proper targeting ● Farmers have the freedom to capitalize on the price spread	● High costs when prices become too low ● Payments to farmers unpredictable
Decoupled payment	● Least distortionary ● Farmers not compelled to present actual proof of production ● Promotes diversification	● Identification of eligible farmers (e.g., flawed farmer registry) ● High cost (depending on provisions of payment)

Source: Authors' compilation

Assessment

The assessment of the financial viability of the program employed an economic model, Total Welfare Impact Simulator (TWIST). Table 5 shows the baseline data.

TWIST was used to assess two scenarios: *baseline scenario* and an *alternative scenario*. The former assumes QRs are maintained, with a fixed farm gate price of PHP 17/ kilogram [kg] (NFA support price). The baseline is the basis for the normal rate of imports in the compensation formula. The alternative scenario adopts the same assumptions, except that it posits the repeal of QRs, and imposition of a 35-percent tariff equivalent (2017 onwards). The latter scenario is the basis for evaluating the payment compensation formula.

Results

The assessment of the baseline scenario shows that domestic output will increase, yet not enough to meet higher demand. Imports will

Table 4. Data for estimating tariff equivalent based on Annex 5 provisions of AoA

	1986	1987	1988	Average
USD/ton based on CIF data[a]	638.21	453.32	399.29	496.94
USD/ton, FOB[b]	104.12	191	258.09	159.31
USD/ton, CIF (imputed)[c]	116.31	171.74	245.2	177.75
CIF (imputed), in PHP/ton	2,371.31	3,532.30	5,172.38	3,692.00
Domestic wholesale price (PHP/ton)[e]	5,400	5,500	6,080	5,660
Exchange rate (PHP/ton)	20.39	20.57	21.09	20.68
Nominal protection rate,%[d]	127.72	55.71	17.55	53.30

[a] Pertains to nonglutinous, semi- or wholly milled rice (PSA 2016)
[b] World Bank Pink Sheet. Pertains to Thai white rice 25 percent brokens
[c] Based on the ratio of CIF to FOB values, average of 2010–2014, Viet Nam rice 5 percent brokens (www.trademap.org).
[d] Domestic wholesale price/CIF (imputed) – 1
[e] Alcalde (2002)
Source: Authors' compilation

be doubled, from 1.074 million tons in 2014 to 2.17–2.26 million tons annually.

For the alternative scenario, the QR lifting with a 35-percent tariff will lower *palay* prices by PHP 4.56/kg and PHP 6.97/kg at the farm gate and retail level, respectively. From an average of 2.2 million tons in the baseline scenario, imports will be doubled, reaching 4.4 million tons (Table 6).

Table 5. TWIST baseline data

	Value	Units
Quantity	18,968	in '000 tons
Imports	1,074	in '000 tons
Retail price	38.93	in PHP/kg
Farm gate price	20.07	in PHP/kg
Wholesale price	36.78	in PHP/kg
Population	99,880	in '000 people
Per capita income	71,726	in annual terms
Elasticity of demand	-0.3	
Elasticity of supply	0.5	
Elasticity of income	0.1665	
Tariff rate	0.35	

Source: Authors' compilation

Based on the payment compensation formula, payments equal PHP 17–18 billion annually, lower than the projected annual tariff revenues at PHP 27–28 billion. Hence, earmarking the rice tariff revenue to pay for the compensation scheme is a feasible funding strategy. Residual money from the tariff revenues could be used for other product-enhancement measures for rice farmers.

Assuming eligible area is at 4 million hectares, payments per hectare is equal to PHP 4,750. In this case, for 2 hectares of irrigated farmland, farmers could receive PHP 19,000 per year. This is greater than transfer per

Table 6. Results of scenario analysis

Baseline scenario	2014	2015	2016	2017	2018	2019	2020	2021	2022
Demand, '000 tons	12,440	13,161	13,461	13,772	14,094	14,427	14,773	15,132	15,504
Domestic supply, '000 tons	11,366	10,800	11,131	11,472	11,823	12,185	12,558	12,941	13,337
Palay output, '000 tons	18,968	18,043	18,584	19,141	19,716	20,307	20,916	21,544	22,190
Farm gate price, PHP/kg	20.07	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00
Retail price, PHP/kg	38.93	34.24	34.24	34.24	34.24	34.24	34.24	34.24	34.24
Imports, '000 tons	1,074	2,360	2,330	2,300	2,270	2,242	2,215	2,190	2,167
Tariff revenue, PHP millions	6,650	14,616	14,426	14,239	14,058	13,884	13,718	13,562	13,419
Alternative scenario									
Demand, '000 tons	12,440	13,811	14,122	14,443	14,776	15,121	15,478	15,848	16,232
Domestic supply, '000 tons	11,366	9,443	9,734	10,033	10,341	10,658	10,984	11,321	11,668
Palay output, '000 tons	18,968	15,823	16,298	16,787	17,291	17,809	18,344	18,894	19,461
Farm gate price, PHP/kg	20.07	12.44	12.44	12.44	12.44	12.44	12.44	12.44	12.44
Retail price, PHP/kg	38.93	27.26	27.26	27.26	27.26	27.26	27.26	27.26	27.26
Imports, '000 tons	1,074	4,368	4,388	4,411	4,436	4,463	4,494	4,527	4,565
Tariff revenue, PHP millions	6,650	27,044	27,172	27,312	27,467	27,637	27,825	28,034	28,264
Changes from the baseline									
Palay output, '000 tons		(2,219)	(2,286)	(2,354)	(2,425)	(2,498)	(2,573)	(2,650)	(2,729)
Farm gate price, PHP/kg		(4.56)	(4.56)	(4.56)	(4.56)	(4.56)	(4.56)	(4.56)	(4.56)
Retail price, PHP/kg		(6.97)	(6.97)	(6.97)	(6.97)	(6.97)	(6.97)	(6.97)	(6.97)
Imports, '000 tons		2,007	2,058	2,111	2,165	2,221	2,278	2,337	2,397

Source: Authors' calculations

household from the conditional cash transfer (CCT) program, which is PHP 15,000 for three children. Note that compensatory payments can be received simultaneously with the CCT.

Conclusion

Tariffication of the Philippine rice sector by 2017 is inevitable. Since our analysis suggests massive fall in domestic prices, it is imperative to provide farmers a measure for income support.

We have evaluated a compensatory transfer scheme combined with a 35-percent tariff equivalent as a possible support. Assessment shows that the compensatory transfer scheme can operate at a feasible cost, with 35-percent tariff rate applied. The scheme is also a Green Box measure as it is not linked to production decisions. It should be reiterated that the compensatory scheme aims not to displace existing programs, but as a supplementary measure to be financed from rice tariff revenues. 📑

References

Alavi, H. 2012. Going it alone versus intra-ASEAN trade cooperation: How public sector rice policies thwart regional food security, p. 57–96. In *Trusting trade and the private sector for food security in Asia* by H. Alavi with A. Htenas, R. Kopicki, A.W. Shepherd, and R. Clarete. Washington, D.C.: The World Bank.

Alcalde, P. 2002. *The food and agriculture centennial book*. Pasig City, Philippines: University of Asia and the Pacific.

Baffes, J. and H. de Gorter. 2005. Disciplining agricultural support through decoupling. World Bank Policy Research Working Paper 3533. Washington, D.C.: The World Bank.

Briones, R. and B. dela Peña. 2015. Competition reform in the Philippine rice sector. PIDS Discussion Paper No. 2015-04. Makati City, Philippines: Philippine Institute for Development Studies.

Burrell, A. and M. Kurzweil. 2008. Distortions to agricultural incentives in Turkey. Agricultural Distortions Working Paper 10. Washington, D.C.: The World Bank.

Burfisher, M.E., Editor. 2001. Agricultural policy reform in the WTO: The road ahead. Agricultural Economic Report No. 802. Washington, D.C.: Economic Research Service, United States Department of Agriculture (USDA).

Jha, M. and A. Mehta. 2008. Effectiveness of public spending: The case of rice subsidies in the Philippines. ADB Economics Working Paper Series No. 138. Mandaluyong City, Philippines: Asian Development Bank.

Philippine Statistics Authority (PSA). 2016. Foreign trade statistics. Quezon City, Philippines: PSA.

Poapongsakorn, N. and K. Pantakua. 2014. Assessing the Thai paddy pledging policy: Its performance and social costs. *World Food Policy* 1(2):2–29.

Prasertsri, P. 2009. Price insurance starts to replace mortgage scheme. GAIN Report No. TH9161. Washington, D.C.: USDA Foreign Agricultural Service.

Song, J. 2006. *Rapid growth of selected Asian economies: Lessons and implications for agriculture and food security Republic of Korea, Thailand, and Viet Nam*. Bangkok, Thailand: Food and Agriculture Organization.

Titapiwatanakun, B. 2012. Support for the Association of Southeast Asian Nations Plus Three Integrated Food Security Framework: The rice situation in Thailand. Technical Assistance Consultant's Report. Mandaluyong City, Philippines: Asian Development Bank.