Philippine Institute for Development Studies
Surian sa mga Pag-aaral Pangkaunlaran ng Pilipinas

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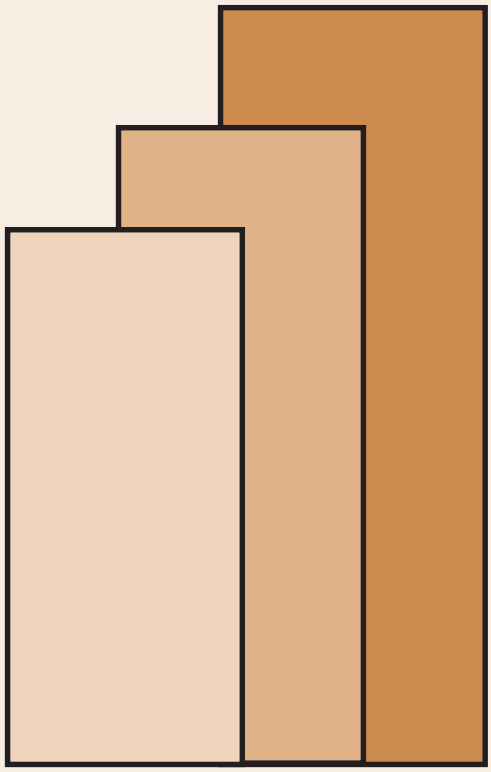
Roehlano M. Briones and Lovely Ann C. Tolin

DISCUSSION PAPER SERIES NO. 2015-46



October 2015

For comments, suggestions or further inquiries please contact:
The Research Information Staff, Philippine Institute for Development Studies
18th Floor, Three Cyberpod Centris - North Tower, EDSA cor. Quezon Avenue, 1100 Quezon City, Philippines
Tel Nos: (63-2) 3721291 and 3721292; E-mail: publications@mail.pids.gov.ph
Or visit our website at http://www.pids.gov.ph

Options for Supporting Rice Famers Under a Post-QR Regime: Review and Assessment

Roehlano M. Briones and Lovely Ann C. Tolin[1]

31 October 2015

Abstract:

Under the World Trade Organization, the Philippines has maintained special treatment for rice, which expires on July 2017. Tariffication will involve greater competition from imports and the decline of domestic paddy prices, thereby reducing income of rice farmers. This study evaluates various payment schemes to serve as safety nets for rice farmers after tariffication. Evaluation considers international experience with such schemes, based on cost, efficiency, and coverage of farmers. A decoupled payment scheme linked to above-baseline imports emerges as the most favorable option. Financial viability of the payment scheme is further subjected to scenario analysis using a supply-demand model. Results suggest that with significant financial support can be provided to the average rice farmer, with cost below the projected revenues from the rice tariff.

Key words: Tariffication, subsidy, direct payments, deficiency payments, decoupled support, welfare impact, fiscal viability

[1] Research Fellow II and Research Analyst II, respectively, of the Philippine Institute of Development Studies. This study was conducted as part of the Competition Reforms in Key Markets for Enhancing Social and Economic Welfare in Developing Countries Project of Consumer Unity and Trust (CUTS) International. The opinions expressed in this paper are the sole responsibility of the authors and are not representative of the organizations to which they are affiliated.

ACRONYMS

ACRE	Average Crop Revenue Election
AMS	Aggregate Measurement of Support
AMTA	Agricultural Market Transition Assistance
AoA	Agreement on Agriculture
APA	Agricultural Paying Agency
ARC	Agricultural Risk Coverage
ARIP	Agricultural Reform Implementation Project
ASCU	Agricultural Sales Cooperative Unions
BAAC	Bank for Agriculture and Agricultural Cooperatives
BADC	Bangladesh Agricultural Development Corporation
BPL	Below Poverty Line
CADER	Center for the Assistance of the Rural Development
CAP	Common Agricultural Policy
CCP	Counter Cyclical Payments
CONASAPO	Compania Nacional de Substencias Populares
DCP	Direct and Counter Cyclical
DPRF	Direct Payment for Rice Farming
FAIR	"Freedom to Farm" Act
FAO	Food and Agriculture Organization
FSRI	Farm Security and Rural Investment Act
FSSP	Food Staples Sufficiency Program
GATT	General Agreement on Tariffs and Trade
IAC	Inter-Agency Committee
IDPRF	Income Deficiency Payments
MAL	Marketing Assistance Loan
MLA	Market Loss Assistance
MMA	Minimum Market Access
NAFTA	North American Free Trade Agreement
NFA	National Food Authority
NFP	National Food Policy
NFRS	National Farmers' Registry System
NPR	Normal protection rate
NRA	National Risk Assessment

NRP	Nominal rate of protection
NTB	Non-tariff barrier
PFC	Production Flexibility Contract
PIS	Price Insurance Schemes
PLC	Price Loss Coverage
PROAGRO	Agricultural Activity Guarantee Program
PROCAMPO	An income transfer subsidy to farmers
QR	Quantitative Restriction
RIDP	Rice Income Deficiency Payments
RSBSA	Registry system for Basic Sectors in Agriculture
SEE	State Economic Enterprises
SPS	Single Payment Scheme
TCB	Trading Corporation of Bangladesh
URAA	Uruguay Round of Agreement in Agriculture
USDA	US Department of Agriculture
WTO	World Trade Organization

Introduction

Philippine law currently grants a monopoly on rice importation to a state trading enterprise, namely the National Food Authority (NFA). Since the 1990s, this monopoly has been exercised as a way to shield farmers from foreign competition, thereby maintaining domestic prices at average levels far above the world price, primarily by applying quantitative restrictions (QRs) on rice import (Briones and Domingo, 2015). With the accession of the Philippines to the World Trading Organization (WTO) in 1995, the monopoly and QR regime was maintained by invoking a special treatment clause for the main staple. Only four countries joining WTO (Japan, South Korea, Israel and the Philippines) were granted similar exemption. The special treatment for the Philippines was set to expire in 2005, but was extended to 2012 and finally to 2017 owing to negotiations by the Philippine government.

By now the Philippines is the only country which retains special treatment. From July 2014 to June this year, it agreed to impose 40% tariff for minimum market access of 805,200 tons; and 35% tariff for imports above the minimum access. From July this year to June 2017, the Philippines will apply a common 35% tariff rate, the same rate offered to ASEAN exporters under the ASEAN Free Trade Area. By 1 July, special treatment ends.

With final removal of special treatment, the Philippines will need tariffy its QRs, which is likely to increase competition from imports, depressing farmgate prices. Safety net measures are needed to mitigate adverse impacts on farmers, as well as increase political acceptability of competition reform in rice trade.

This study aims to evaluate options for WTO compliance and direct producer support for rice farmers in the Philippines. For the latter, this paper will mostly focus on payment schemes. Other support such as productivity-oriented programs (investments in irrigation, as well as R&D) are undeniably essential. Such programs are already well represented in current government programs, e.g. the Food Staples Sufficiency Program (FSSP); moreover, such programs will deliver benefits in the medium to long-term, whereas the impact of the QR lifting is immediate. This calls for direct payments to farmers, as compensation for expected income losses due to the influx of imports, as a complement to productivity-oriented programs.

The rest of this paper is organized as follows: Section 2 presents the background and conceptual framework for understanding agricultural payment schemes. Section 3 presents prominent examples of agricultural payment schemes in both developed and developing countries. Section 4 assesses the various options for agricultural payments in the Philippines, based on past international experience. Section 5 continues the assessment based on *ex ante* scenario analysis, using the an economic model known as TWIST (Total Welfare Impact Simulator). Section 5 concludes.

Background and Framework

Disciplines on market distortion: The WTO Agreement on Agriculture

The WTO Agreement on Agriculture may be summarized into three pillars: (1) market access, (2) export competition, and (3) domestic support. Commitments under these pillars are summarized in Table 1. In the first pillar, member countries tariffy their non-tariff barriers; furthermore, tariffs are bound and subject to scheduled reduction running to 2005. Developed countries are required to reduce average tariffs by 36 percent in 5 years from 1995; developing countries are given a period of 10 years to reduce average tariffs by 24 percent.

The export competition pillar covers a reduction of the value and volume of export subsidies. Lastly, the domestic support pillar classifies domestic subsidies into three boxes: the Amber Box, Blue Box and the Green Box. Policies in the Amber Box refers to highly distortionary support measures. This pertains particularly to support prices and payments linked directly to production. Amber Box payments are subject to cuts based on the Aggregate

Measure of Support (AMS) indicator, as scheduled in Table 1. The Agreement exempts countries who fall under the *de minimis* provision; developing countries, such as the Philippines, whose aggregate value of the support for a commodity does not exceed 10 percent of its total value of production, fall under the *de minimis* exemption.

Policies which do not distort trade, or cause minimal trade distortion, are under the Green Box. To be considered a Green Box measure, government support must not involve transfers from consumers, nor be considered price support to consumers. In the AoA, member countries commit to minimize support in the Amber Box and replace these with Green Box measures. Lastly, policies which are less distorting than those under the Amber Box but still affect production decisions belong to the Blue Box, which are intermediate to Amber and Green Box measures.

Table 1: Main Provisions of the WTO Agreement on Agriculture

Negotiated Reduction	Implementation Period	
	Developed countries (1995-2000)	Developing Countries (1995-2004)
Market access	Percent	Percent
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: WTO secretariat (as cited in Diao et al, 2001)

Agricultural payments schemes are classified into the following: i) traditional support, ii) deficiency payments; and iii) decoupled payments. *Traditional support* refer to price support and procurement programs, input subsidies and consumer subsidies, which fall into the Amber Box. The price offered by the government to buy the farmers' output is higher than the prevailing market price; the output procured from farmers are stockpiled and kept as buffer stock to stabilize prices. Such programs were commonly practiced worldwide. Meanwhile, *deficiency payments* refer to payments given to farmers in the event of a shortfall of market price from a target price. Lastly, *decoupled payments* refer to lump-sum payments that are unrelated to price of quantity, and which do not influence production decisions.

Decoupled payments are normally classified as Green Box measures. Deficiency payments may fall under Blue box, as long as the payments to farmers are capped (i.e. up to a maximum output, or a maximum acreage per farmer).

Conceptual Framework[2]

In the following we offer a conceptual framework for understanding the "distortionary" nature of government subsidy, reduction of which underlie the various disciplines enacted by WTO members. For a given agricultural commodity, let QD denote quantity demanded, *QS* quantity supplied, *P* the commodity price, with respective demand and supply functions $QD = D(P)$, $QS = S(P)$. At equilibrium, $QD(P^*) = QS(P^*)$, where P^* is the equilibrium price.

Price support

A price support scheme ideally entails a support price above the equilibrium price, with government purchasing enough output to ensure attainment of the support price. This implies purchase of the entire surplus amounting to $QS(P^S) - QD(P^S)$. As this will result in accumulation of stocks, from which government is constrained from selling domestically to preserve the support price, governments have simultaneously tried to limit domestic production of farmers.

In addition, to control costs, government may opt to cap the amount purchased at *QG*, such that $QG < QS(P^S) - QD(P^S)$. Then market equilibrium is where $QD(P^*) + QG = QS(P^*)$. The effect is to shift the supply curve leftward by the amount *QG*. This will still increase the equilibrium price, but leave it lower than P^S. Farmers able to sell at P^S receive a windfall. Government still has the problem of storing or disposing of stocks, though less than under unlimited purchase. Nonetheless, the price support scheme can still be costly depending on the divergence between support and market price, and the cap *QG*.

Input and output subsidies

Suppose industry supply is the aggregation of individual supplies of representative producers. The market supply curve may be derived from an individual supply curves of the representative producers. To condense notation, let $Q = f(x_1, x_2)$ denote a production function

[2] The nontechnical reader may skip this sub-section without loss of continuity.

with inputs x_1, x_2, and w_1, w_2 their respective prices, Denoting profit with π, the producer solves the following problem:

$$\max \pi = PQ - w_1 x_1 - w_2 x_2$$

Applying the implicit function theorem, and aggregating over producers, results a broader formulation of the supply function:

$$QS = S(P, w_1, w_2).$$

A supply curve holds input prices constant and isolates in graphical form the relationship between price and quantity supplied. When *P* rises then quantity supplied increases (movement along the supply curve); when input price falls the supply curve shifts rightward or supply increases.

Consider the case of an input subsidy: let x_1 denote hectares of farm area, and s_1 be a payment from government for every ha of farm area. Then the private opportunity cost of land is $w_1 - s_1$. This effectively reduces the price of land, which shifts the supply curve rightward (or increases supply).

Consider the case of an output subsidy: suppose government extends a payment of s_q for every unit of output produced. Denote the pre-subsidy price as P^O, then in the absence of the subsidy, the original supply function (suppressing input price) is written $S(P^O)$. With the subsidy, the effective (experienced) price to the producer is $P^O + s_q$; letting $P = P^O + s_q$, then we write $S(P)$. Hence, $S(P) > S(P^O; s_q = 0)$; with $s_q > 0$, the same pre-subsidy price generates a greater effective price *P*, in turn generating a greater supply, *S*(*P*).

This preceding discussion explains why the term "distortion" has been applied to subsidy measures. In the absence of government intervention, i.e. the subsidy, producers face true market prices and behave accordingly. However the payment of a subsidy drives a wedge between the market price and the effective price, in the form of payments from the government. This payment is financed by borrowing, tax revenue, or other state revenue. It is often perceived by competitors as conferring an unfair advantage to subsidy recipients. This can be seen especially in the case of a domestic subsidy for a large exporting country.

The export supply function with respect to world price P^F can be written $ES(P^F)$, and constructed from the domestic supply and demand functions as follows:

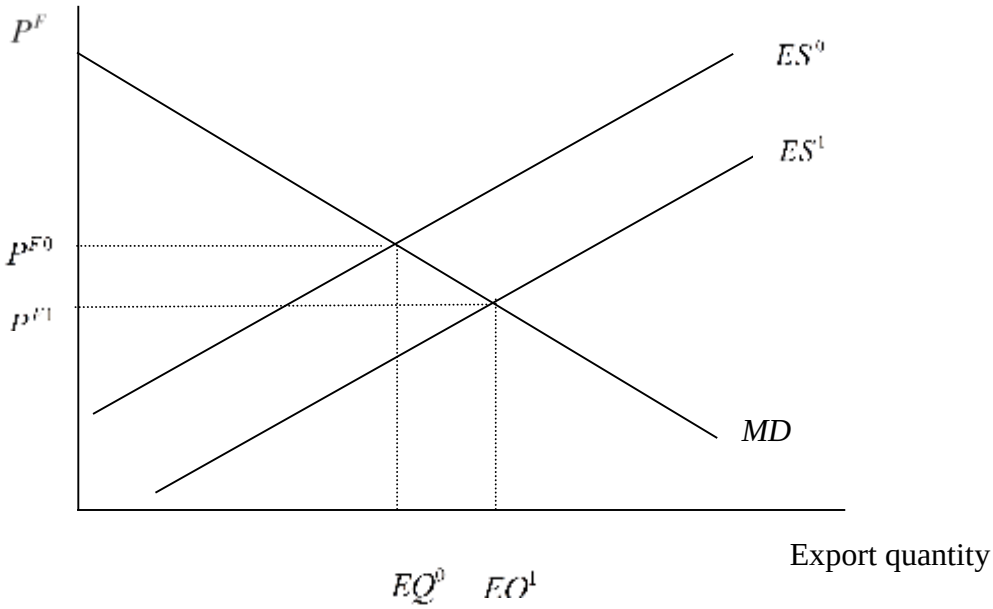
$$ES^0(P^F) = S^0(P^F) - D(P^F) \ .$$

Provided, P^F exceeds the domestic equilibrium price P^A in the absence of trade (i.e. the autarky case). A policy that shifts the domestic supply curve rightward constructs a new domestic and export supply functions:

$$ES^1(P^F) = S^1(P^F) - D(P^F) \ .$$

Now if $S^1(P^F) > S^0(P^F)$, then $ES^1(P^F) > ES^0(P^F)$. Hence the export supply curve likewise shifts to the right, causing the export or world price to fall and total exports to rise (Figure 1).

Figure 1: Effect of a shift in export supply due to domestic subsidy



Note that the effects of subsidies are distortionary when payments are conditional on the quantities produced or inputs used. When payments are subject to ceiling, then the effect may still be to shift the supply curve, but to a more limited extent than in the case of no-ceiling. The clamor from competing countries is for the subsidizing country to end output or input subsidies, or else "de-couple" payments to farmers, i.e. make payments unrelated to price or

quantity. Decoupling effectively entitles farmers to lump sum transfers, thereby eliminating the distortionary effect of direct payments.

International Experience on Market Access and Farm Support

Market access

Compliance with the market access pillar has resulted in declining Nominal Protection Coefficients (NPC) in many WTO member countries. NPC refers to the gap between the distorted market price and the border price adjusted for transportation and marketing costs. As shown in Table 2, NPC for most OECD countries have declined throughout the years, especially after the institution of the AoA in 1995.

Table 2: Nominal Protection Coefficient, OECD Countries (1986-2014)

	1986-90	1991-95	1996-2000	2001-05	2006-10	2011-14
Korea	3.57	3.57	2.66	2.33	1.96	1.98
Mexico	1.02	1.22	1.13	1.13	1.04	1.04
Turkey	1.23	1.37	1.39	1.3	1.31	1.2
United States	1.12	1.08	1.12	1.08	1.02	1.02
European Union	1.6	1.47	1.35	1.26	1.1	1.05

Source: OECD.

Nor is this experience unique to developed countries. Bangladesh is a developing country which dismantled protection of its staple crop, rice. In fact Bangladesh went all the way towards repealing both QRs and tariffs on rice altogether, while allowing the private sector to handle most of the rice import requirement of the country (Table 3). Much of its budgetary support to agriculture was allocated to productivity-oriented programs such as hybrid rice research.

Table 3: Rice Imports in Bangladesh, 2000-2011 (in '000 tons)

Year	Public Imports	Food Aid	Private Imports	Total
2000-01	0	32	529	561
2001-02	0	8	118	126
2002-03	0	4	1,552	1,556
2003-04	0	4	797	801
2004-05	72	27	1,196	1,295
2005-06	0	34	498	532
2006-07	0	25	695	720
2007-08	296	82	1,681	2,059

Year	Public Imports	Food Aid	Private Imports	Total
2008-09	396	35	187	618
2009-10	47	4	500	550
2010-11	1,297	6	290	1,593

Source: Ministry of Food, Food Planning and Monitoring Unit (FPMU)

Disciplines on agricultural support

Farm support programs long been in place in many countries with large agricultural sectors. In some cases, liberalization of agricultural trade has added impetus to scale up or otherwise reform the structure of farm support programs; this has been observed for USA on entering WTO (Baffes and Gorter, 2005), Mexico on entering NAFTA (Naude, 2002), and Turkey on entering EU (Larsen et al, 2014). This section discusses international experience in farm support, especially its evolution in the context of the WTO, through the lens of specific country experiences. Table 4 summarizes the various country experiences to be discussed.

Table 4: **Agricultural Payment Programs in Selected Countries**

	Traditional	Deficiency Payment	Decoupled Payment
Philippines	Price support; public procurement system		
Thailand	Paddy Pledging Scheme	Price Insurance Scheme	
South Korea	Price Support and Public Procurement	Fixed Payment	Variable Payment
US	Price Support	Deficiency payments; countercyclical payments; Price Loss Coverage Program (PLC)	AMTA (Agricultural Market Transition Act) Payments
EU	Intervention Price	Other direct payments	Single Payment Scheme
Turkey	Price Support		Direct payments under National Farmers' Registry System (NFRS)
Mexico	Price support		PROCAMPO direct payments

Traditional Support

Some countries continue to maintain traditional support programs; prominent examples include the Philippines through the NFA support price (Briones and Domingo, 2015) and Thailand through the Paddy Pledging Scheme. For the latter, soft loans are extended to farmers, with harvest accepted as collateral. Though it started out as a means to smoothen out seasonal movements in paddy price, in the 2000s as a form of price support. By 2011, the program offered a price 50% higher than the prevailing market price. Moreover, there was no tonnage limit on the volume of paddy eligible for payment, thus providing an incentive for farmers to produce and pledge more paddy to the government.

In other countries though traditional support programs have been downscaled, modified, or terminated. For instance, in 2005 the government of South Korea abolished the 50 year-old rice purchase policy, replacing it with the Public Stockholding System. Under the new system, government purchases rice from farmers at the current market price for food security purposes alone (Song, 2006).

Deficiency Payments

Deficiency payments are given to farmers based on the difference between insurance or target price, and the benchmark price. The insurance price serves as the price the government guarantees the farmers to receive. The benchmark price is the proxy for the market price. Benchmark prices are sometimes determined by taking the Olympic average of past prices within a reference period.[3]

United States. In 1973, deficiency payments were established in the United States. The payments were abolished in 1996, but were reinstituted in 2002, under the Direct and Country Cyclical Program (DCP). Deficiency payments were then called Counter Cyclical Payments (CCP); CCP is equal to the difference between the target price and the effective price (benchmark price). The effective price for each crop is determined by the direct payment rate plus either the national average market price received by producers during the marketing year, or the in-kind settlement rate for the national loan program.

South Korea. In South Korea, deficiency payments were first introduced through the Deficiency Payment for Rice Farming (DPRF). The said program subsidized 80% of the gap

[3] Olympic averages are computed by taking out the highest and lowest values in the time series, and then computing for the average.

between market price and the reference market price. The gap was computed by getting the difference between the Olympic averages of farm gate prices (current, lower than the reference price) and the Olympic average of farm gate prices for the past 5 years. The DPRF was later on replaced and referred to as *variable payments*. Variable payments were determined by the difference between a target price and each year's postharvest price. Farmers receive 85% of the difference when the postharvest price is lower. The target price was set at 170,083 won (USD 178) per 80kg, based on the average incomes from 2001 to 2002 (Song, 2006).

Thailand. Deficiency payments in Thailand were distributed under the Price Insurance Scheme (PIS). Under the PIS, insurance prices are computed from a formula involving average production costs plus 30-40 percent profit margin. Benchmark prices are the weighted average of wholesale dried paddy price. Only individuals included in the farmer registry based on past production records were eligible for the scheme (Meyer, 2009). Maximum output to claim payment was set at 25 tons.

Decoupled Payments

Decoupled payments refer to lump-sum payments that are unrelated to price or quantity. The scheme intends to assist farmers to their transition to a free-market, hence distribution of decoupled payments are usually time-bound and expected to be reduced over time. Farmer beneficiaries for decoupled payments are determined through a system of farm registry. The computation of the amount is based on the farmer's past performance on specified reference years (e.g. historical production or historical acreages). These payments are time-bound and are intended to be reduced over time. Capping of the amount that could be received by farmers is usually done by imposing a ceiling on eligible acres, tonnage or payments itself. In some countries, farmers are compelled to fulfill some certain requirements in order to receive payments. For instance, farmers in the US and Europe must satisfy cross-compliance requirements, i.e. minimum standards for animal welfare, product quality, and environmental safety.

United States. Decoupled payments were first introduced in the US under the "Freedom to Farm Act" in 1996. Payments under the program were called "Agricultural Market Transition Assistance (AMTA)" payments. The payments were based on historical production (base yields and acreages). Only those who operate land enrolled in supply management programs for wheat, rice, corn, barley, oats, sorghum and cotton at least once during 1991-95 were eligible. AMTA payments were later on superseded by Direct Payments under the Farm

Security and Rural Investment (FSRI) Act of 2002, but have essentially the same mechanisms as the previous programs.

Mexico. By 1994, direct payments were introduced under the PROCAMPO program, replacing guaranteed prices. This served as a countermeasure on the expected decline in domestic prices upon the establishment of the North American Free Trade Agreement (NAFTA). Direct payments under the program were set to expire after 15 years. As with other direct payment programs, payments were given in a per-hectare basis and were commodity specific, covering corn, beans, rice, wheat, sorghum, barley, soybeans, cotton and cardamom. Only farmers planting these crops prior to PROCAMPO are eligible. Payments are made twice a year (for each crop cycle). The upper limit for the amount of land eligible to claim payments is set to 100 hectares. To claim payments, farmers must present proof of planting to a CADER (Center for the Assistance of Rural Development) office. Eligibility must be verified by Local SAGAR (Ministry of Agriculture, Livestock, and Rural Development) officials with the help of municipal authorities (Sadoulet et al, 2001).

South Korea. The first decoupled payment scheme in South Korea was the Direct Payment for Rice Paddy Farming (DPRPF) in 2001. The base area in computing for the payments are the farmlands used in 1998-2000. This follows a fixed payment system, at 0.53 million won per hectare in the Agricultural Promotion Area (APA) and 0.43 million won otherwise (Kim, 2014). The payment area per farm is capped at 4 hectares. Participants of the project are subject to satisfying cross-compliance requirements. The DPRF was later on reinstituted through the Rice Income Deficiency Payment (RIDP) in 2005, and was instead referred to as Fixed Payments. Fixed payments per hectare for registered paddy fields amounted to 600,000 Korean Won ($586) per year in 2005 and has increased to 700,000 Korean Won ($732) per year in 2006.

European Union. Under the CAP reform in 2003, Europe introduced decoupled direct payments through the Single Payment Scheme. Payments under this scheme were made annually based on hectare of agricultural land (as of 2000 – 2002). The payments were still given even if the farmers decide not to produce (as long as the land passes environmental and animal welfare standards). Payments were set to be reduced till 2007 – 3 percent in 2005, 4 percent in 2006, and 5 percent in 2007 (Baffes & Gorter, 2005).

Turkey. In compliance with the AoA, the Agricultural Reform Implementation Project (ARIP) was established. Through this program, decoupled payments were introduced under the

National Farmers' Registry System (NFRS). The program provides farmers $100 per hectare; maximum ha per farmer was set initially at 20 hectares, then increased to 50 hectares (Larsen et al, 2014).

Options for Supporting Rice Farmers After Tariffication

Overview

As of now, the Philippines is the only country that has not yet tariffied the QR for its main staple. Other countries also granted with special treatment such as Japan and South Korea have already repealed their QRs. This section reviews options for the Philippines under tariffication, based on international law and experience. Box 1 excerpts the relevant provisions from the Agreement on Agriculture.

The first set of options for the Philippines is composed of price support through tariffs, under the tariffication clause of the AoA. Essentially this involves setting the equivalent tariff rate, plus provisions for minimum market access with lower duties, if any.

The second set of options involve agricultural payments, as follows:

- Traditional price support with NFA procurement;
- Input subsidies
- Output subsidies
- Deficiency payments
- Decoupled payments.

Evaluation will be based on fiscal viability, political acceptability, practicality, and minimal market distortion.

Options for equivalent tariff and minimum market access

With tariffication, a decision must be made on: a) equivalent tariff; and b) minimum market access. The existing protection structure by 30 June 2015 provides an anchor for further negotiation if any under the post-QR regime. The dominant criteria here are political acceptability, both domestic stakeholders (especially producers), and other member countries (especially rice exporters).

Box 1: Guidelines for the Calculation of Tariff Equivalents

Annex 5: Special Treatment With Respect to Paragraph 2 of Article 4

Par. 6. Border measures other than ordinary customs duties maintained in respect of the designated products shall become subject to the provisions of paragraph 2 of Article 4 with effect from the beginning of the year in which the special treatment ceases to apply. Such products shall be subject to ordinary customs duties, which shall be bound in the Schedule of the Member concerned and applied, from the beginning of the year in which special treatment ceases and thereafter, at such rates as would have been applicable had a reduction of at least 15 per cent been implemented over the implementation period in equal annual instalments. These duties shall be established on the basis of tariff equivalents to be calculated in accordance with the guidelines prescribed in the attachment hereto.

Attachment to Annex 5

1. The calculation of the tariff equivalents, whether expressed as *ad valorem* or specific rates, shall be made using the actual difference between internal and external prices in a transparent manner. Data used shall be for the years 1986 to 1988. Tariff equivalents:
   a) shall primarily be established at the four-digit level of the HS;
   b) shall be established at the six-digit or a more detailed level of the HS wherever appropriate;
   c) shall generally be established for worked and/or prepared products by multiplying the specific tariff equivalent(s) for the primary agricultural product(s) by the proportion(s) in value terms or in physical terms as appropriate of the primary agricultural product(s) in the worked and/or prepared products, and take account, where necessary, of any additional elements currently providing protection to industry.
2. External prices shall be, in general, actual average c.i.f. unit values for the importing country. Where average c.i.f. unit values are not available or appropriate, external prices shall be either:
   a) appropriate average c.i.f. unit values of a near country; or
   d) estimated from average f.o.b. unit values of (an) appropriate major exporter(s) adjusted by adding an estimate of insurance, freight and other relevant costs to the importing country.
3. The external prices shall generally be converted to domestic currencies using the annual average market exchange rate for the same period as the price data.
4. The internal price shall generally be a representative wholesale price ruling in the domestic market or an estimate of that price where adequate data is not available.
5. The initial tariff equivalents may be adjusted, where necessary, to take account of differences in quality or variety using an appropriate coefficient.
6. Where a tariff equivalent resulting from these guidelines is negative or lower than the current bound rate, the initial tariff equivalent may be established at the current bound rate or on the basis of national offers for that product.
7. Where an adjustment is made to the level of a tariff equivalent which would have resulted from the above guidelines, the Member concerned shall afford, on request, full opportunities for consultation with a view to negotiating appropriate solutions.

Source: WTO Agreement on Agriculture

The existing protection structure with a single tariff at 35% and current minimum access levels should be maintained. Consider the minimum market access: the problem with a two-tier structure of tariff is that it would concede a lower rate for a set amount of minimum access imports. For a country already conceding the QR, this may be unacceptable for domestic producers. The existing protection structure with a single tariff rate is therefore more acceptable. The uniform tariff and repeal of QR moots the minimum market access provision.

For the equivalent tariff, domestic producers will seek the highest possible tariff above 35%; meanwhile the foreign stakeholders will seek the lowest possible tariff. The compromise will be to simply apply the methodology in Annex 5 of the AoA. To apply the methodology, we assemble the requisite information (Table 5).

Table 5: Data for estimating tariff equivalent using based on Annex 5 provisions of AoA

	1986	1987	1988	Average
$/ton based on CIF data[a]	638.21	453.32	399.29	496.94
$/ton, FOB[b]	104.12	191.00	258.09	159.31
$/ton, CIF (imputed)[c]	116.31	171.74	245.20	177.75
CIF (imputed), in pesos/ton	2,371.31	3,532.30	5,172.38	3,692.00
Domestic wholesale price (P/ton)[e]	5,400	5,500	6,080	5,660
Exchange rate (P/$)	20.3857	20.5673	21.0948	20.68273
Nominal protection rate, %[d]	127.7	55.7	17.5	53.3

[a] PSA. Pertains to non-glutinous, semi- or wholly-milled rice.

[b] World Bank Pink Sheet. Pertains to Thai White Rice 25% brokens.

[c] Based on the ratio of CIF to FOB values, average of 2010 – 2014, Vietnam Rice 5% brokens (www.trademap.org).

[d] Domestic wholesale price/CIF (imputed) – 1.

[e] Alcalde, PA., 2002. Food and Agriculture Centennial Book. University of Asia and the Pacific, Pasig City.

The preferred basis for the world price which is CIF unit value cannot be used as it is too remote from the FOB price of medium quality milled rice (Thailand). Instead we apply the landed cost adjustment from CIF and FOB data, based on Vietnam rice 5% for 2010 – 2014 (as Vietnam is the largest exporter of rice to the Philippines in recent years). The final result is an average nominal protection rate of 53.3%; from which we subtract 15 percentage

points to arrive at the tariff equivalent of 38.3%. This figure is approximately the 30 June 2017 rate, hence the appropriate negotiating stance is to maintain the same rate as the equivalent tariff upon removal of special treatment.

Options for Agricultural Support post - QR

Traditional Support

Market price support and consumer subsidy schemes are prone to high fiscal burden, leakage, and market distortion. Traditional support programs may originally aim at stabilizing producer prices; these programs though tend to evolve into schemes to create artificially high prices for producers, bloating the fiscal cost. This is exemplified in the case of Thailand, where the paddy pledging program of 2002 – 2006 resulted in massive stockpiles of rice, as there was no tonnage limit imposed. Government stocks reached over 6 million tons, equivalent to $1 billion (Alavi, 2012). The 2011 – 2014 program was even worse, leading to an 18.6 million ton stockpile as of May 2014, and an estimated fiscal cost of almost 600 billion baht (Poapongsakorn and Pantakua, 2014) - approaching a quarter the total government budget. The government could not dispose the stock quickly enough, translating to a huge financial burden and deterioration of rice quality.

Likewise, the NFA procurement and retail price subsidy has contributed to the fiscal deficit and public debt of the Philippines. In 2008, the rice subsidy program budget for the NFA increased five-fold in order to stabilize prices (Table 6). The program is not a cost-effective way to reach the poor; transferring $1 of subsidy to the poor costs the NFA $2.2.

Table 6: 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)

Deficiency payments

Deficiency payment schemes avoid some of the distortions and wastage of traditional support schemes. Deficiency payments improve upon the allocative efficiency of traditional price support. For instance, with the PIS scheme, the Thai government was able to reduce its budgetary outlays for rice production support from $2.1 billion under market price support, down to $854 million. Despite lower cost, it was able to expand coverage, from 1 to 3.2 million farmers (Titapiwatanakun, 2012). The scheme allows the farmer to realize the incentive without having to sell the paddy to the government. The formula was designed to follow the market price most closely compared to the paddy pledging scheme. One risk in the scheme arises from the possibility of prices falling to unexpectedly low levels, which can bloat the cost of the program.

Decoupled Payments

Decoupled payments address the distortion and fiscal cost problems afflicting the other types of programs. The registry system in the Philippines provides a method for ensuring wide coverage with minimal leakage. As mentioned earlier, the main rationale for using decoupled payments is to minimize market distortions; meanwhile the fiscal burden can be managed by ensuring a modest formula for calculating payments per farmer.

Nonetheless some problems do remain with decoupled payments. A critical issue is identification: an inaccurate farmer registry for instance, can dampen the effectiveness of payment distribution. This happened in Turkey under the ARIP, forcing the government to pilot a program to test alternative methods for registering producers; namely, using the existing land registry, and applying the certifications by the chief of the village and farmers' association. However, despite such effort, the farm registry was still considered incomplete due to ownership disputes and inability of farmers to prove ownership (Burrell & Kurzweil, 2008). Fortunately for the Philippines, a registry system for farmers has already been set up under the Registry System for Basic Sectors in Agriculture (RSBSA) back in 2012, and is currently being updated.

Decoupled payments may not be able compensate for the whole income loss among farmers when prices become too low. This is the main reason why most countries with decoupled payments often employ simultaneously deficiency payments. Examples of which are the establishment of CCP payments in the US and resumption price support in Mexico in 2002 (Baffes & Gorter, 2005). If on the other hand, payments are set at high rates in anticipation

of depressed farmgate prices, the threat of high fiscal cost is inevitable. For instance, again in Turkey, despite a compensation of $100 per hectare which is relatively lower than the US and EU, the total amount of the direct payments still amounted to $1.25 billion (about 0.5% of the national budget). These costs are prolonged by deferment of the program termination; that is, in practice, governments find it politically expedient extend decoupled payment schemes.

Table 7 summarizes the advantages and disadvantages of the various options for agricultural payment support. Decoupled payment are still the most preferred, despite the abovementioned drawbacks, being outweighed by its advantages over deficiency payments, and especially over traditional support.

Table 7: 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	• Idenfication of eligible farmers (e.g. flawed farmer registry) • High cost (depending on provisions of payment)

Scenario analysis for a compensatory payment scheme

Two scenarios were examined. The *baseline scenario* former assumes that QRs are maintained; the government adjusts the QR so as to stabilize the farmgate price at P17 per kg of paddy, the existing NFA support price. The baseline scenario is run from 2014 – 2022 (the end of the next administration). Population and income are assumed to grow at rates assumed under the Philippine Development Plan; palay total factor productivity is also assumed to grow at an exogenous rate of 2% per year.

The *alternative scenario* adopts similar assumptions, except it posits the repeal of QRs combined with tariffication at 35% tariff equivalent, beginning 2017. Tariff revenue provides an upper cap on the budget of the compensatory payment program; this feature prevents the program from running into a fiscal spiral.

The compensatory program itself is implemented as a decoupled or lumpsum transfer scheme. The total budget for the scheme is computed as follows:

- The program is budgeted for 2017 to 2022 (the end of the incoming administration).
- The budget is computed using a unit value x quantity formula.
- The quantity side of the formula equals paddy production displaced by imports. The displacement by imports equals imports above the baseline scenario, converted to paddy equivalent (at a milling recovery rate of 65.4%.
- The unit value equals the gross margin of the farmer, assuming the baseline target price. In 2012 (the most recent cost and returns data available), the cost per unit of paddy is P12/kg; given the support price of P17.00/kg, the gross margin equals P5/kg. The formula is therefore:

Total payments (in pesos) = P5/kg x (alternative scenario imports – baseline scenario imports)/0.654.

The scenario analysis will need to check whether the scheme is financially viable, i.e. the upper cap (equal to the tariff revenues collected) is not breached. Input data for the scenarios is listed as follows:

	Value	**Units**
Quantity	18,968	in ‘000 tons
Imports	1,074	in ‘000 tons
Retail price	38.93	in P/kg
Farmgate price	20.07	in P/kg
Wholesale price	36.78	in P/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	

Data for rice prices, quantity and imports are taken from the PSA-BAS CountryStat data set. Population statistics as well as per capita income are taken from National Accounts data of the PSA. Other important assumptions in the baseline data includes supply, demand and income elasticities. The income elasticity used for this particular assessment was lifted from Sanguyo (2011).

Results

Baseline scenario. Table 8 shows the results baseline scenario. Palay output will continue to increase, reaching 22.19 million tons by 2022. Domestic supply will increase as well, but not enough to meet demand. Demand rises due to growth of population and income per capita. Imports will be doubled relative to the base year, from 1.074 million tons to 2.17-2.26 million tons annually. Tariff revenues will be moderately high, at about P13-14 billion pesos.

Alternative scenario. Table 8 also shows that lifting of the QRs with a 35% tariff rate imposed on imports will depress palay prices compared to the baseline scenario. At the farmgate level, prices are expected to decline by P4.56/kg, while at the retail level, prices are expected to go down by P6.97/kg. Palay production is expected to shrink by around 2.4 million tons. On the contrary, imports will be doubled, from an average of 2.2 million tons to more than 4.4 million tons of palay. As expected, the lifting of the QRs would also result to lower prices, benefiting consumers but harming producers.

The projected total amount of imports per year implies P17-18 billion cost for the compensatory payment scheme. This amount is well below projected tariff revenues, which are expected to reach P27-28 billion annually – considerably higher than under the baseline scenario owing to much higher level of imports. The difference between tariff revenue and the compensatory payment scheme is available for other productivity-enhancement programs targeted to rice farmers or rice farmers seeking to diversify production.

Operationalizing the compensatory payment program

The total budget for the compensatory scheme will be divided by the area harvested computed for the eligible area; this will equal the payment per ha of area harvested of rice farm. Payment shall be distributed twice a year, equivalent to two cropping seasons (dry season and wet season).[4] Hence, only farmers in irrigated areas are entitled to a dry season payment.

Eligible farm area is area of land planted as registered; eligible farm area will not be updated. The eligible farm area is capped at two hectares per farmer.

[4] The agency which will distribute the actual payments will be identified in future discussions.

Table 8: 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
Farmgate Price, P/kg	20.07	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00
Retail Price, P/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, P 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
Farmgate Price, P/kg	20.07	12.44	12.44	12.44	12.44	12.44	12.44	12.44	12.44
Retail Price, P/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, P millions	6,650	27,044	27,172	27,312	27,467	27,637	27,825	28,034	28,264
Transfers, P millions				17,455	17,646	17,856	18,089	18,346	18,631
Changes from baseline									
Palay Output, '000 tons		-2,219	-2,286	-2,354	-2,425	-2,498	-2,573	-2,650	-2,729
Farmgate Price, P/kg		-4.56	-4.56	-4.56	-4.56	-4.56	-4.56	-4.56	-4.56
Retail Price, P/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.

A person registered as rice farmer under RSBSA, i.e. in active operation of rice farm, is eligible for the program. As a check, identify of specific farmers can be subject to formal complaint by any citizen; verification of a farmer's identity the farmers shall be done on designated local government offices or barangay offices. Eligibility is transferrable only to heirs of the eligible farmer.

Total area harvested per year is about 4.7 million ha. Assuming eligible area is a generous 4 million ha, then payments per ha area harvested is P4,750; for a farmer with two ha irrigated farmland, this equals P19,000 per year. This is larger than the household's benefit from to having three children under the conditional cash transfer program, equal to P15,000; note that the rice farmer's household can simultaneously be part of the conditional cash transfer scheme.

Conclusion

The Philippines remains the only country which subjects its main staple special treatment under WTO. This special treatment is scheduled to end in 2017. Rice farmers will be adversely affected by tariffication. Scenario analysis confirms large drops in farmgate prices upon repeal of the QR, hence the need for safety nets.

Assessment of various options of safety nets leads to the a decoupled payments scheme under 35% tariff as the most viable option for the Philippines, based on cost, compliance with WTO rules, degree of distortion, and coverage of rice farmers. A compensatory payment program, as evaluated in this study, presents a unique opportunity to extend direct financial support to rice farmers. The compensatory scheme shall not displace existing productivity-oriented programs, but serve a supplementary and transitional measure to cushion the impact of liberalization. Scenario analysis shows that funding can be secured from the 35% tariff, with considerable amount left over for expanding support for productivity-oriented programs.

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