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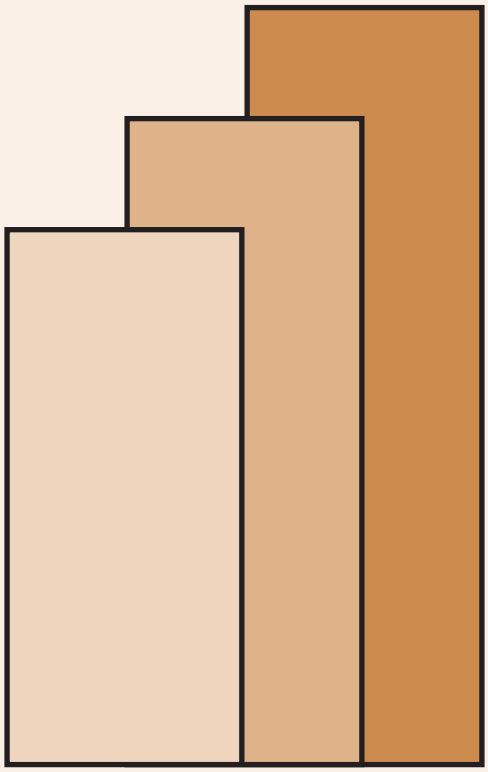

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Food (In)security and the Price of Rice Self-Sufficiency

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Abstract

The commonly touted solution to achieve food security has always been articulated as achieving self-sufficiency in rice. Since the 1960s, various government regimes have articulated strategies and executed actions to achieve this much-vaunted goal. It has been over half a century but we have yet to realize this dream. At this point, if we look at the hard facts and the numbers, the picture it paints is not pretty. Achieving rice self-sufficiency comes with a price and let's take a sober look at what it really costs.

Overview

In the Philippines, food security is strongly associated with self-sufficiency in producing food. The emotional attachment to domestically grown food is especially strong for rice, the main staple and most widely-grown crop. The quest for rice self-sufficiency is a venerable tradition: in 1968, President Marcos boasted in his State of the Nation Address (SONA):[1]

> *We have succeeded in solving our chronic food shortage. The country has attained self-sufficiency in rice and corn one year ahead of the deadline set for it by our administration. This fulfills a historic dream of several generations of Filipinos who equated the solution of the rice problem with the nation's self-esteem*.

This shows that as far back as 1968, the "historic dream" was already "several generations" old! Unfortunately, Marcos' "solution" did not seem to stick. Five presidencies later, President Aquino insisted in his 2011 SONA:

> *Ang gusto nating mangyari: Una, hindi na tayo aangkat ng hindi kailangan. Ikalawa, ayaw na nating umasa sa pag-angkat. Ang isasaing ni Juan Dela Cruz dito ipupunla, dito aanihin, dito bibilhin."*

[1] http://www.gov.ph/1968/01/22/ferdinand-e-marcos-third-state-of-the-nation-address-january-22-1968/.

That the Philippines is a rice importer is deemed a national embarrassment. It seems ironic that the country imports rice, given the advanced state of rice education and research in the country; after all it hosts the International Rice Research Institute (IRRI), has topnotch agricultural universities, and has trained generations of agricultural scientists in Asia.

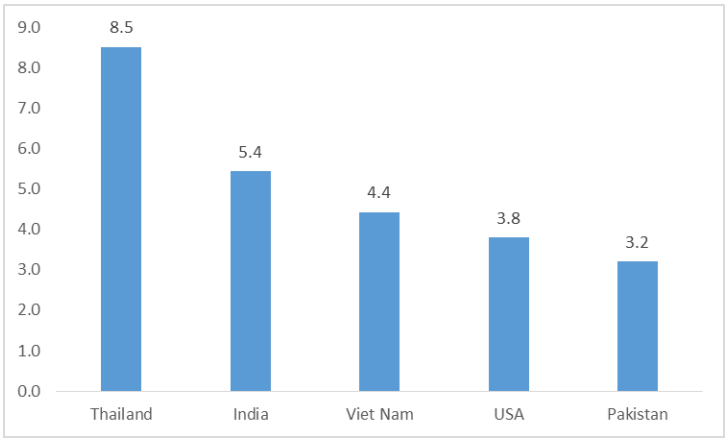
I will argue that, contrary to popular belief, being a rice importer is not the real irony. The real irony rather is that **the pursuit of food security had the unintended consequence of raising the price of rice**. Data shows that the rice self-sufficiency policy, implemented in the name of food security, pushed up the price of rice to the detriment of the poor. Self-sufficiency policy by itself need not cause the price of rice to increase. It was how the government pursued the goal of rice self-sufficiency drove up the price. There are better ways of pursuing food security, than the flawed policies that have made rice more expensive.

Background

Who imports and who exports rice

The top five rice exporters worldwide are Thailand, India, Vietnam, USA, and Pakistan (Figure 1), the same dominant countries since 2001. All are in Asia, except USA. Meanwhile from 2001 to 2010, the world's biggest importer was the Philippines, averaging nearly 1.6 million tons annually over the decade (Table 1). On the other hand, for the period 2011 – 2014, the top three rice importers become: China, Indonesia, and Saudi Arabia; the Philippines completely drops off the list, as its imports fall dramatically, averaging just over 800,000 tons per year in that period.

Figure 1: Exports of the top five rice exporting countries, 2001 – 2014, '000,000 t



Source: Trademap.

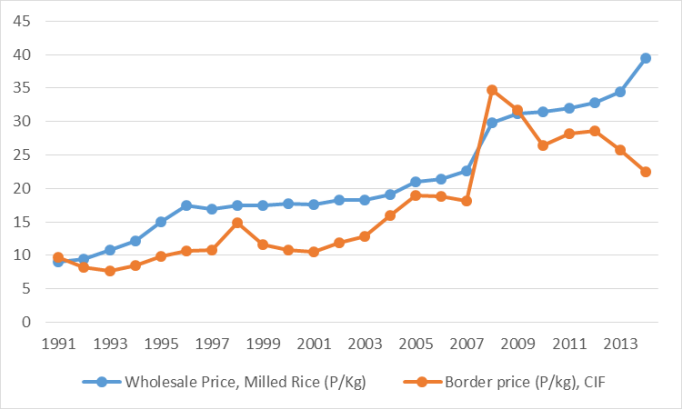
Table 1: Top Rice Importers 2001 – 2015

Rank		2001-2010		2011-2014
1	Philippines	1,587,589	China	1,930,968
2	Nigeria	1,203,190	Indonesia	1,469,419
3	UAE	1,069,843	Saudi Arabia	1,264,296
4	Saudi Arabia	1,010,410	Iran	1,237,686
5	Iran	906,606	Iraq	1,207,115
6	Iraq	888,495	Mozambique	1,151,281
7	Senegal	874,676	South Africa	1,073,279
8	Cote d'Ivoire	802,792	Senegal	1,020,986
9	Mexico	762,067	Cote d'Ivoire	989,545
10	South Africa	755,474	Malaysia	967,378

Source: Trademap.

That rice produced in the Philippines is consistently more expensive than the same rice in the world market is evident in Figure 2. That is why the Philippines tends to be a rice importer – in general, a country will import the product in which its cost of domestic production is high compared with that of other countries.

Figure 2: Border and domestic prices, 1991 – 2014, PHP/kg



Sources: Whole sale price - PSA CountryStat (2016); Border price – Trademap.

Strategies to achieve self-sufficiency

There are two strategies for achieving self-sufficiency in any domestically produced good: one is through support for domestic production; the other is by maintaining barriers to imports. The latter is called “protectionism”, and rightly so as these barriers shield local producers from foreign competition. The two strategies are often implemented together.

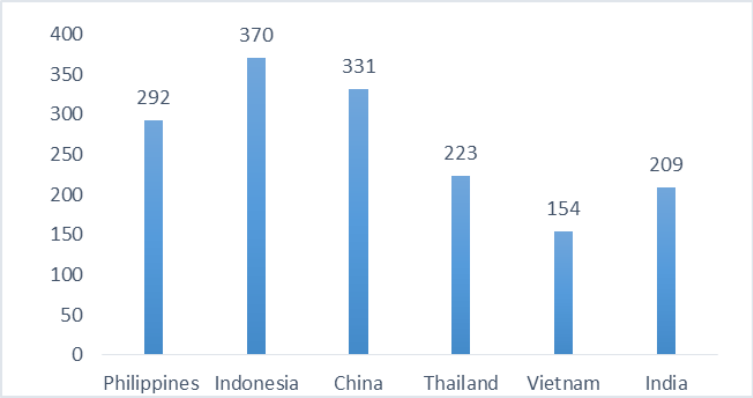
If only the first strategy were pursued, then self-sufficiency will not make the target good more expensive. In fact, it may make it cheaper depending on the type and magnitude of production support. It is the second strategy of protection which is behind high domestic prices. Protectionism prevents cheap imports from coming in. In the extreme case of a complete import ban, only domestic supply will be left to satisfy domestic demand. Initially a ban will lead to shortages; this causes prices to soar, stimulating domestic production, stifling off some of the demand, while stimulating more production. Under an import ban, shortage is eventually eliminated, and self-sufficiency attained, but consumers end up paying a high price.

Why is the rice outside cheaper than rice inside the Philippines?

The main reason why world price is consistently lower than domestic price, is that cost of production per ton of rice is lower among the main exporting countries (Figure 3). As argued by Dawe (2014), historically Philippines and Indonesia have been rice importing countries, while Thailand and Vietnam (where Philippines imports most of its rice) are historically rice exporting countries. The reason is not due to government programs, or recent improvements in technology, but rather geography and available resources.[2] Vietnam and Thailand are blessed with abundant water resources and floodplains thanks to the presence of vast river basins, i.e. of the Mekong, Chao Phraya, Red Delta, etc. Cost of production on a per kg basis must in the long term be lower in these countries, compared to Indonesia and Philippines, which are populous archipelagic countries with mostly rolling terrain.

[2] Dawe, D. 2015. Rice self-sufficiency: nature versus nurture. In: Dawe, D., S. Jaffee, N. Santos (eds.) Rice in the Shadow of Skyscrapers: Policy Choices in a Dynamic East and Southeast Asian Setting. FAO, World Bank, and IRRI: Rome.

Figure 3: Cost of production of paddy rice, in $US/ton



Source: Moya (2015).[3]

How the Philippines stopped importing a lot of rice

Background: how the Philippines imports rice

In the Philippines, the private sector has the default right to import any agricultural product, subject to compliance with safety standards, licenses, and payment of taxes. This is consistent with the WTO requirement that all trade barriers be converted entirely to tariffs, except what is necessary to safeguard human, plant, and animal health. This requirement is called *tariffication*; for which a law has in fact been passed, namely the Agricultural Tariffication Act (RA 8178).

There is one significant exception: rice. The right to import rice is vested on the National Food Authority (NFA), a government-owned corporation, by virtue of P.D No. 4. When the Philippines joined the WTO in 1995 it negotiated for and got an exemption or *special treatment* for rice until 2005. Upon expiry in 2005, the Philippines again negotiated for an extension up to 2012. Finally in 2012 it negotiated for and got a waiver to maintain special treatment, up to end-June 2017.

[3] Moya, P. F. 2015. Costs and profitability of rice farming: A cross-country comparison. Presented at the Third Research Seminar on Benchmarking Philippine Economy Relative to Major Rice Producing Countries in Asia, December 3, Makati Shangri La Hotel, Makati City, Philippines.

The exceptional status of rice is likewise provided in the Agricultural Tariffication Act. One legal problem though is that the exception for rice in the law is not qualified by time, i.e. it is implicitly a permanent exception. This seems to run afoul of the country's treaty obligation to the WTO, in which the special treatment is clearly a temporary exception.

How the Philippines stopped importing a lot of rice

The Aquino government took very seriously the goal of rice self-sufficiency, emphasized by no less than the President, as seen in the quote in Section 1. The goal was to be achieved under a Food Staples Sufficiency Program (FSSP). The FSSP is heavy on production support for the rice industry (first strategy for self-sufficiency). However, it is silent on trade policy (second strategy for self-sufficiency). There are a couple of clues though on the implications of FSSP for trade policy:

- Farmers will receive a support price "at levels that will guarantee farmers reasonable returns."
- Government intervention will be limited. As much as possible, marketing functions will be allocated to the private sector. Government will intervene only to "mitigate surges in retail prices."

Hence government is implicitly targeting a stable farmgate price. The FSSP document identifies **direct procurement from farmers** (up to 9.5 percent of palay output) as the means to achieve the support price. However, in practice, the policy of stabilizing farmgate price determines import policy. Naturally if imports are allowed to freely enter, the worry will be a collapse of farmgate price; hence limits are imposed on the amount of allowable imports. On the other hand, when retail price are increasing rapidly, government may increase imports in order to "mitigate surges in retail prices". NFA is therefore playing a balancing act of keeping farmgate prices high during stable periods, but preventing spikes in retail prices during unstable periods. Hence during normal periods, the quantitative restriction is kept very low, relaxing only when retail prices threaten to blow up. The aim of keeping high and stable farmgate prices perfectly explains the sharp cutback in imports in 2011-2015, enforced by the import monopoly and import quota policy of NFA.

How did the government's import policy affect the domestic price of rice?

The country's import policy can be summarized as follows: During normal times,

when domestic prices are stable, government restricts imports to prevent domestic prices from falling to the level of world prices. However, during abnormal times, when domestic retail prices are increasing (e.g. due to harvest failure or depletion of rice stocks), government resorts to importation to prevent prices from blowing up.

This policy is not unique to FSSP; in general, it highlights the political economy of rice policy since the beginning of the import monopoly of NFA. This has two implications:

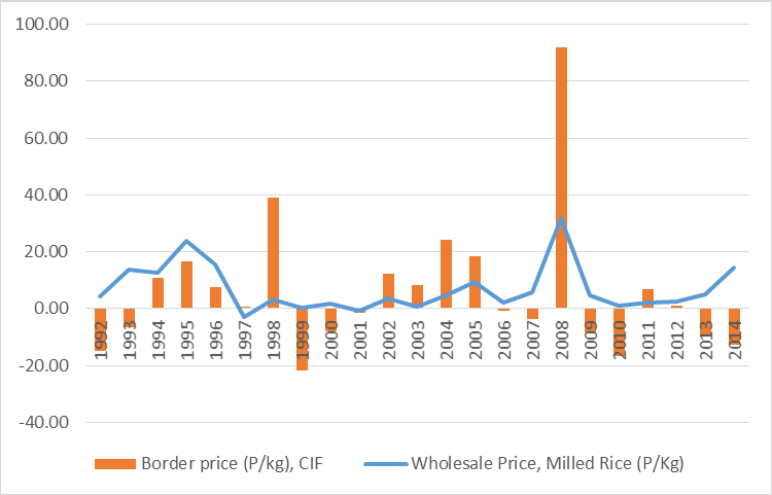
(1) *Movements in the world price do not systematically influence the domestic price*. Rather domestic price is determined by domestic supply-demand interaction, and is only intermittently affected by world price.

(2) *Over time domestic price seldom goes down; when it goes up, it does so in spurts*. This second implication is called a "ratchet effect". If world price is falling then the ratchet effect leads to a widening gap between domestic and world price widens.

To check for the first implication, we run a standard statistical test, the *Johansen cointegration test*. The hypothesis to be tested is as follows: there is **no long term relationship** between domestic price and world price. Running the test on annual data for domestic and foreign price (1991 – 2014) finds that the hypothesis cannot be rejected. To buttress reliability of the Johansen cointegration test, consider another market for which we suspect a strong linkage between world and domestic price, namely coconut oil. The same test on domestic and world price of coconut oil over the same period finds rejects the hypothesis of "no long term relationship".

To check for the second implication, we examine evidence for a ratchet effect in Figure 4. World price grows very erratically over time. Over a 22-year period, price has fallen (negative growth rate) as often as it has increased (positive growth rate). When world price falls, on average the decline is 10 percent. However, the cumulative value of the decline in absolute terms (105 percent) is smaller than the cumulative value of the increase (234 percent), which accounts for the overall upward trend in world prices (seen in Figure 2).

Figure 4: Growth rates in domestic and border prices, annual, in percent



Source: PSA CountryStat (2015)

Domestic price also grows erratically, but variability is much lower than that of world price.[4] More importantly, **domestic price rarely declines**; that is, the graph of wholesale price growth rarely crosses the horizontal axis. Annual wholesale prices have fallen only twice, in 1997 and in 2001, and only by 3 percent and 0.1 percent, respectively. Moreover, since 1997, there was a long stretch until 2008 when domestic prices averaged a growth of just 2.5 percent annually. After the price spike of 2008 - 2009, domestic prices again were kept to an average growth of 3 percent from 2010 to 2013, after which prices blew up with a 15 percent increase.

Perhaps this does not affect those in the majority, but for the 26 percent in poverty, any change in the price of rice makes a great impact on their quality of life. Statistical analysis relating regional stunting rates to regional per capita incomes and food prices finds that, as the price of rice increases, the rate of childhood stunting increases. More precisely, a 1 percent increase in the 3-year average price of rice causes a 0.6 percent increase in the prevalence of stunting among children under-5.

In short, high rice prices cause more malnutrition. In 2013-2015, the rapid increase in the price of rice coincided with the increase in the under-5 stunting rate of the nation's children (30.3 to 33.5 percent). Such an increase is (due in part to the increase in the price of

[4] Standard deviation of wholesale price is only 8 percent, that of world price is 24 percent.

rice) is deeply disturbing given the long term adverse consequences of early childhood stunting, i.e. poor cognition and educational performance, low adult wages, and low productivity.[5]

Rice self-sufficiency policy: hits and misses

The Philippine government did the right thing in pursuing production support programs for rice. In recent years, it shifted support away from ineffective and wasteful fertilizer and seed subsidy programs. There were large budget increases in production support such as irrigation, farm-to-market roads, farm mechanization, postharvest and market facilities, and so on. Of course we can quibble over the quality of program implementation, or whether too much resources went to rice; but these interventions were in the right track in terms of promoting food security by beefing up domestic production capacities.

What the government got wrong though is the extension of special treatment in 2012, thereby maintaining the restrictive policies that will only continue to drive up the price of rice. Government should have pursued rice self-sufficiency by judicious support of domestic special treatment in 2012, government should have implemented tariffication right then. production, rather than by aggressive protection of domestic producers. Instead of extending

Recommendation

The country missed its chance for removal of special treatment in 2012. The next window of opportunity is 2017, when the waiver that allows continuation of special treatment expires. The Executive should file as early as possible the long overdue amendment of RA 8178, which Congress shall hopefully pass promptly. Amendments shall include the following:

i) Repeal of the RA 8178 provision that exempts rice from tariffication.

ii) Open importation of rice to the private sector, subject to payment of tariff, and securing

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[5] Data from PhilFSIS (http://philfsis.psa.gov.ph/index.php/id/14/matrix/F90FSPCU; accessed 14 July 2016). Long term effects of stunting is based on Herrin, A. 2016. Putting Prevention of Childhood Stunting into the forefront of the Nutrition Agenda: A Nutrition Sector Review. Discussion Paper Series No. 2016-21. PIDS, Quezon City.

import permit, for the purpose of complying with health and environmental safety standards.

iii) Revisions in the role of the NFA once its import monopoly is removed. One logical option is to split the regulatory function of the agency (ensuring human and environmental safety) from the commercial function (managing a food security stock for rice).

iv) Assignment of authority for defining the WTO-compliant policy to the President. The authority covers the equivalent tariff to be imposed, as well as the disposition of revenues to be collected from rice imports.

Once the enabling law is passed, the Executive must then define the tariff equivalent to be levied against private rice importers beginning July 2017. A realistic compromise is 35 percent; this is the same rate already given by the Philippines for its neighbors in the ASEAN Economic Community. The Executive should also decide on the allocation of rice tariff collections: given the negative effect of increased rice importation on local rice farmers, it makes sense to allocate that revenue, in whole or in part, to fund safety nets for rice farmers.[6]

[6] A social safety net should preferrably be given as decoupled production support. A full discussion of safety net for rice farmers is: Briones, R. 2016. Options for Supporting Rice Farmers Under a Post-QR Regime: Review and Assessment. Discussion Paper Series No. 2015 – 46. Philippine Institute for Development Studies, Quezon City.