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Philippines agricultural protection and insulation in international perspective

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Philippines agricultural protection and insulation in international perspective¹

Kym Anderson and Roehlano Briones

Abstract

For decades the Philippines has protected many of its farmers from import competition, taxed farm exports, and insulated domestic markets from fluctuations in international prices. Policy developments to the mid-1960s are summarized by Power (1971), and were updated to the mid-2000s by David, Intal and Balisacan (2009). This paper looks at what has changed in terms of agricultural assistance and food market insulation in the two decades since then, with emphasis on the extent to which those rates of assistance have fluctuated from year to year with international price movements as governments attempted to stabilize the nation's domestic prices of farm products, most notably for rice. Philippine policies have been similar to those of other food-importing countries in adopting farm-support policies but have been unusual in being so protectionist so early in the country's economic development. The paper explores the prospect of re-purposing support away from price-distorting measures – which are highly inequitable – toward more-direct forms of support for just the poorest rural households and boosting investment in rural public goods such as infrastructure and agricultural research. The latter would benefit a larger proportion of rural people as well as reduce food prices in urban areas.

Keywords: Agricultural assistance policies, Philippines' economic development, Food security, Repurposing farm support

JEL Codes: F13, F14, Q17, Q18

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Introduction

For decades the Philippines has protected many of its farmers from import competition, taxed farm exports, and insulated domestic markets from fluctuations in international prices. The story is summarized by Power (1971) to the mid-1960s, assisted by Cristina David. Nearly four decades later Cristina contributed to an updating to the mid-2000s (David, Intal and Balisacan 2009). This chapter looks at what has changed in terms of agricultural protection and food market insulation in the two decades since then. It does so by drawing heavily on the annual assessments by OECD (2024).

This chapter first describes developments in the country's agricultural price and trade policies since the 1960s (Section 2). It then outlines measures used to capture the changing extent of governmental distortions to prices of agricultural and other products (Section 3). Section 4 brings earlier estimates of assistance up to date by adding nearly 20 more years of nominal rates of assistance by farm product. It also looks at the extent to which those rates of assistance have fluctuated from year to year with international price movements in an attempt to stabilize the nation's domestic prices of farm products, most notably for rice. Section 5 discusses the context of Philippine policies in relation to domestic policies of agricultural exporters and importers. Philippine policymakers have been similar to those of other food-importing countries in the adoption of farm-support policies, but were unusual in having become so protectionist so early in the country's economic development. Section 6 explores the prospect of re-purposing support away from price-distorting measures – which are highly inequitable – toward more-direct forms of support for just the poorest rural households and boosting investment in rural public goods such as infrastructure and agricultural research. The latter would benefit a larger proportion of rural people as well as reduce food prices in urban areas. Together these measures would lower the extent of poverty among both farm and non-farm households.

Policies affecting Philippine farmers

Key economic trends

The Philippines economy has undergone the expected structural transformation over the course of its development, albeit at a relatively slow pace. The contribution of agriculture to GDP fell from 30 percent in 1960 to 9 percent by 2022, as did its share in employment, from 61 percent to 24 percent between 1960 to 2022. However, unlike the rapid industrialization that characterized economic growth among the Asian tigers, the share of industry in the economy stagnated at about one-third over the period, with the employment share rising from 16 percent to 19 percent between 1991 and 2022. Services have evolved as the largest sector, its GDP share rising from 41 percent to 63 percent and its employment share rising from 39 percent to 57 percent over those three decades.

Annual growth rates in the gross value added (GVA) of agricultural commodities have been erratic. The crop sector grew rapidly prior to 1980 because of the Green Revolution in rice and the world commodity price boom, but it performed poorly in the 1980s and 1990s, when the average growth rate was far below the growth rate of population. Another commodity boom in the mid-2000s led to recovery of the sub-sector, but growth again collapsed in the 2010s. This general slowdown may be

observed across crop commodities. Growth in livestock and poultry subsectors, on the other hand, has accelerated in recent decades [Table 1].

Table 1: Annual growth rates of GVA in agriculture by commodity, 1960 to 2020 (%)

	1960-70	1970-80	1980-90	1990-00	2000-10	2010-20
Total crops	3.8	6.3	1.6	1.3	4.6	0.6
Palay	4.5	4.7	2.7	2.3	1.5	0.9
Corn	5.3	5.9	3.5	-0.9	4.1	1.5
Coconut	2.3	4.9	-4.9	-0.6	2.4	-0.7
Sugar	4.8	2.9	-5.3	0.5	-1.0	3.7
Banana	5.5	15.6	-3.0	4.4	5.0	-0.5
Other crops	3.6	9.5	1.1	1.2	1.8	0.7
Total livestock & poultry	3.2	3.0	4.7	4.9	3.4	3.2
Livestock	3.1	0.5	4.9	4.4	2.9	2.2
Poultry	3.7	9.2	4.4	5.6	4.3	4.7

Source of basic data: National Statistics and Coordination Board, Manila

Note: GVA for 1960 to 2000 at 1985 prices; 2000 onward at 2018 prices.

Key trends suggest that the country has been losing its comparative advantage in agriculture.

Agricultural growth in the Philippines has been slower compared with other developing Asian countries. Moreover, agricultural exports have stagnated, signifying a loss of comparative advantage. The ratio of the share of agricultural and food products in an economy's merchandise trade to the global average share for these products, which is a standard index of revealed comparative advantage, decreased sharply for agriculture as a whole. Likewise, revealed comparative advantage has declined for each of the major agricultural industries, from their baseline levels in the 1980s and 1990s (Table 2).

Key policies

Economic development of the Philippines had been constrained by an import substitution industrialization strategy, which dominated economic policies up to the late 1970s. These policies defended an overvalued peso and thus penalized exports, including from agriculture. Under the authoritarian rule from the 1970s onwards, tariff protection was raised on many import-competing goods, including primary and processed food and agricultural products, chemical products, metal manufactures, electrical appliances, machinery and transport equipment. The average tariff rate eventually exceeded those of its Southeast Asia neighbors (Intal and Power 1991). At the same time, expenditure programs heavily favored import substitution to the point of self-sufficiency, especially for rice, which the government invested in heavily in the 1970s with massive irrigation and an accelerated roll-out of high yielding varieties under Masagana 99 program.

Table 2: Revealed comparative advantage (RCA) indexes and self-sufficiency ratios (SSR) of major agricultural commodities, 1960 to 2020^e

	1960	1970	1980	1990	2000	2010	2020
RCA							
All agriculture ^b	3.0	2.6	2.9	1.6	0.6	1.1	1.2
Coconut	116	145	224	212	71	69	70
Sugar ^c	18	21	12	4	1	2	2
Banana	-	4	30	23	11	15	19
Pineapple:							
Canned	32	48	83	70	28	47	54
Fresh	-	3	45	56	9	12	15
SSR							
Rice	0.95	1.00	1.03	0.94	0.95	0.81	0.85
Corn	1.00	1.00	0.93	0.93	0.91	0.99	0.91
Sugar	1.07	1.05	1.06	1.01	1.00	1.09	0.93

^a Estimated as the ratio of the share of a commodity group in a country's exports to that commodity group's share of world merchandise exports.

^b Includes fisheries.

^c Note that sugar has been historically exported to the US typically at a premium price (i.e., preferentially

higher than world prices). Hence a value greater than unity in this case does not reveal comparative

advantage, but the sharp declining trend may still be interpreted as a rapid deterioration in the country's comparative advantage.

^d Self-sufficiency ratio is the ratio of production to production plus imports minus exports.

^e Except for 1960, all are 3-year averages centered on the year shown.

Source of basic data: FAOSTAT

A trade liberalization program was initiated in 1981, but was suspended in the midst of a balance of payments crisis. A tariff reform program was initiated in 1981, as well as liberalization of import licensing, and programmed over several phases (Tecson, 1983). However, implementation of the program was suspended with the balance of payments crisis of 1983 (Power and Medalla, 1986).

The Aquino government continued policy reforms in agriculture with strong resolve. With the restoration of democracy under the Aquino government in 1986, the country adopted a new Constitution in 1987, which provides for "industrialization and full employment based on sound agricultural development and agrarian reform". It also mandates the State to undertake, by law, "an agrarian reform program founded on the right of farmers and regular farmworkers, who are landless,

to own directly or collectively the lands they till or, in the case of other farmworkers, to receive a just share of the fruits thereof.”

In practice agricultural development was anchored on a program of modernization, culminating in the enactment of the Agriculture and Fisheries Modernization Act (RA 6657) of 1997 (AFMA). Also influential was the Local Government Code of 1991 which provided for devolution of agricultural extension and decentralized administration of local public goods such as communal irrigation systems, farm-to-market roads, and so on. The Aquino administration was also quick to abolish all policy instruments taxing agricultural exports. These reforms were politically expedient, as revenues from export taxes were associated with rampant cronyism under Martial Law.

Some key commodities retained high levels of protection. It proved politically infeasible to dismantle the long-standing government trade monopoly on rice and corn held by the ANFA, as well as non-tariff barriers (NTBs) in sugar and other food commodities widely believed to be necessary to attain food self-sufficiency objectives and insulate the country from the volatility of world food prices. Hence, despite the wide-ranging scope of unilateral trade liberalization measures introduced from the late 1980s onward, the price and trade protection conferred on major import-competing agricultural products remained largely untouched. Despite agreements under the World Trade Organization (WTO) and other regional trade agreements, non-tariff trade barriers continue to distort the domestic prices of major agricultural commodities in the Philippines.

The commodity receiving the most policy and expenditure support is rice. Rice has always been the main staple and the single most important crop. Rice continues to receive the bulk of public expenditure in the sector, notably input subsidies, and it has also benefited from increasing price protection (David and Inocencio, 2000; David et al., 2009). In particular, the government’s monopoly on rice imports through the NFA has been extremely costly without achieving its conflicting objectives of lowering food prices to consumers, raising producer prices, and stabilizing those prices.

Non-traditional export crops have performed well compared with traditionally important crops. Rice imports as a share of the total supply of rice have risen since the 1980s, reflecting the country’s declining comparative advantage in producing rice and rising incomes that are shifting consumers in the southern regions of the country away from corn as their food staple. Corn production has experienced declining growth rates despite rising price protection. Likewise, traditional export crops such as coconuts, sugar, abaca and tobacco have performed relatively poorly, compared with banana, pineapple and mango – despite the latter receiving virtually no assistance.

Meanwhile, it was relatively easy to resist the opening of domestic markets for import-competing food staples by playing up the national sentiment for food self-sufficiency. The Agriculture and Fisheries Modernization Act (AFMA) elevates food security as a key principle of agricultural development, together with poverty alleviation and social equity, rational use of resources, global competitiveness, sustainable development, people empowerment, and protection from unfair competition. Food security under AFMA may be pursued “through local production or importation or both, based on the country’s existing and potential resource endowments and related production advantages.” Such apparent flexibility is immediately qualified by the statement: “However, sufficiency in rice and white corn shall be pursued.”

The rice price crisis of 2008 renewed the government’s thrust towards self-sufficiency. The FIELDS (Fertilizer, Irrigation, Extension, Loans for inputs, Dryers and other postharvest infrastructure, and Seed subsidies) program was launched to provide expenditure support for rice and wean the country off rice imports. This was superseded by the Food Staples Sufficiency Program (FSSP) beginning in 2010, which ramped up the budgetary support for rice as the country’s fiscal space grew during a

period of sustained economic growth. Implicit in these programs was a more restrictive stance towards rice imports, which was under the direct control of the NFA (Briones, 2016). Expenditure support through the National Rice Program (NRP) continued to expand through most of the subsequent administrations, together with rising outlays for expanding irrigated rice areas under the National Irrigation Administration (NIA).

Political pressure to raise agricultural protection has also been strengthened by the expanded lobby groups consisting of farmer organizations, large landowners, and agri-business firms such as livestock and poultry, millers, seed companies, and the input suppliers. They have been quite effective as their families and party list groups have been the major political leaders at the helm of Congress, and the national and local executive branches of the government.

Measuring distortions to agricultural incentives

The major forms of policy distortion to agricultural incentives have been evolving over the past decades. Typically, agricultural and nonagricultural trade measures (border taxes and NTBs, together with multiple exchange rates) have distorted product prices more commonly than have trade subsidies, direct domestic producer or consumer subsidies, or domestic taxes or quotas that alter product or input prices. However, in high-income countries, export subsidies grew in importance in the 1970s and 1980s and, since the late 1980s, domestic support measures (that were decoupled to varying extents from production decisions) began to play a larger role. Furthermore, since the inception of the WTO in 1995, most NTBs have been converted to tariffs. In many countries, however, those tariffs have been legally bound at well above applied rates, and are specific to the quantity imported rather than a percentage of the import price, such that countries have been able to continue to vary the extent of their border restrictions as international prices or their domestic supplies, fluctuate from year to year.

A summary measure of the policy distortions to agricultural incentives is the nominal rate of assistance (NRA). The NRA captures the extent of government interventions affecting farmer incentives, by estimating the gap between the current domestic price and the price that would exist under free markets under a ‘small-country’ assumption. For a set of policies that tend to raise gross returns to farmers, NRA is the percentage by which gross returns have been raised above what they would have been had the government not intervened, i.e. $NRA > 0$. For a set of policies that tend to reduce gross returns to farmers, NRA is the percentage by which government policies have lowered gross returns, i.e. $NRA < 0$. The rate includes the output-price-altering equivalent of any product-specific input subsidies or taxes.

Empirical indicators of agricultural price distortions have been provided annually since the late 1980s by the Organisation for Economic Co-operation and Development (OECD 2024) for its 38 member countries plus several large developing countries including the Philippines. Data for earlier decades for developed economies, and for another 30 or so developing countries, were compiled by a large World Bank project that built on the seminal work of Krueger et al. (1988, 1991). That database was first released by Anderson and Valenzuela (2008), and it was updated and extended by Anderson and Nelgen (2013). The NRA part of it has been further updated by a consortium of international organizations and made available at www.ag-incentives.org. Its comprehensive coverage of countries, products, and years offers a

reliable picture of long-term trends and fluctuations in policy indicators for individual countries and commodities, as well as for country-groups, regions, and the world (Box 1).

Box 1: A global NRA database

The database of www.ag-incentives.org covers a large group of countries that account for between 90% and 96% of the world's population, farmers, agricultural GDP, and total GDP. The sample countries also account for more than 85% of agricultural production and employment in each of Africa, Asia, Latin America, and the transition-economies region of Europe and Central Asia, as well as for all of agricultural production and farm employment in OECD countries. Not all countries had annual data for the entire 1955–2010 period, but the average number of years covered is 45 per country. Policy indicators are computed for 75 different farm products, with an average of almost 11 per country. This product coverage represents approximately 70% of the gross value of agricultural production in each of the focus countries and just under two-thirds of global agricultural production, valued at undistorted prices over the period covered. Of the world's 30 most valuable agricultural products, the indicators cover 77% of global output (ranging from two-thirds for livestock to three-quarters for oilseeds and tropical crops and five-sixths for grains and tubers). These products represent 85% of global agricultural exports.

Another common indicator of agricultural incentive distortions is the Producer Support Estimate (PSE) compiled by the OECD. In contrast to NRA, the PSE is expressed as a percentage of the distorted rather than the undistorted price, and hence is typically smaller than the NRA and cannot exceed 100%.

A weighted-average NRA for all available products is derived using the value of production at undistorted prices as product weight. To this NRA for available (covered) products is added a 'guesstimate' of the NRA for noncovered products (on average, approximately 30 percent of the total in value terms), along with an estimate of the NRA from nonproduct-specific forms of assistance to (or taxation of) farmers, such as a subsidy to all purchased fertilizer.

Since the late 1980s, some high-income governments have also provided decoupled assistance to farmers. Because this support, in principle, does not distort resource allocation, its NRA has been computed separately and is not included for comparison with the NRAs for other sectors or for agriculture in developing countries. Each year, each covered commodity's industry is classified as either import-competing, as producing an exportable, or as producing a nontradable. The aggregate noncovered industry group is also subdivided into these three categories. This classification allows a comparison of average NRAs for exporting versus import-competing producers to capture changes in the antitrade bias that typically prevails.

Also reported is a production-weighted average NRA for nonagricultural tradables, so that this rate may be compared to the rate for agricultural tradables via the calculation of a relative rate of assistance (RRA). The RRA recognizes that farmers are affected not just by prices of their own products but also by the incentives faced by nonagricultural producers bidding for the same mobile resources. That is important because it is relative prices, and hence relative rates of government assistance, that affect incentives to producers. The RRA for agriculture is defined in percentage terms as:

$$RRA = 100 * \left[\left(100 + NRA_{ag} \right) / \left(100 + NRA_{nonag} \right) - 1 \right]$$

where NRA_{ag} and NRA_{nonag} are the percentage NRAs for the tradable parts of the agricultural (including noncovered) and nonagricultural sectors, respectively (Anderson et al. 2008). Note that if

both of these sectors are equally assisted, the RRA is zero. This measure is useful because, if it is below (or above) zero, it provides an internationally comparable indication of the extent to which a country's sectoral policy regime has an anti- (or pro-) agricultural bias. A lowering of the RRAs in absolute terms is generally welfare improving for the country; conversely an increase in RRAs in absolute terms is generally welfare reducing.

The cost of government policy distortions in terms of resource misallocation tends to be greater as the degree of substitution in production increases. In the case of agriculture, which involves the use of land that is sector-specific but transferrable among farm activities, the greater the dispersion of NRAs across industries within the farm sector, the higher will be the welfare cost of those price-distorting market interventions.

In addition to the above producer support measures that stimulate movements along the supply curve, the farm sector is also assisted by general support services such as public agricultural research and extension investments and expenditures on rural infrastructure such as roads to farms. They lower the supply (marginal cost) curve for the sector. In their absence there would be more under-investment in these sectoral public goods.

Distortions to agricultural incentives in the Philippines

Import-competing products have been much more highly assisted than exportable commodities. In fact, coconut (copra) production has been penalized by negative NRAs over most of the study period, its NRA averaging -11 percent from the 1970s to the mid-1980s. By the end of last century most taxes on agricultural exports had been removed, but meanwhile assistance to import-competing products, especially rice, have been rising over time [Table 3].

Price and trade intervention policies penalized agriculture until the mid-1980s. But since then, policy reforms have led to the phasing out of export taxes and the raising of NRAs for import-competing farm industries so that the sector's average NRA has increased though time.

Differences in the level of the individual product NRAs are prominent and have widened between two clusters of import-competing product. The NRAs for the most important commodities – rice, corn, and sugar – have increased, while those for higher-valued livestock products have grown little or declined. The latter are nonetheless significant enough to render high-protein food less affordable for consumers.

Rice has received between 30 percent and 55 percent of the dollar value of all direct farmer support this century. Transfers have been made in the form of a higher domestic price thanks to restrictions on rice imports (Figure 1(a)). Quantitative import restrictions had historically been the form of protection, but in March 2019 the country switched to import tariffs and tariff-rate quotas on rice, as agreed when the country joined the WTO in 1995. In the case of rice, whose tariff was set at 35 percent for ASEAN suppliers and 40 percent MFN, input subsidies were raised and paid for out of that new tariff revenue beginning from 2019, similar to what Japan and Korea did for cattle raisers (Anderson 1983).

Table 3: Decadal and five-year averages of nominal rates of assistance, by commodity, 1962 to 2022 (%)

	1962-69	1970-79	1980-89	1990-99	2000-09	2010-14	2015-19	2020-22
Import-competing products ^a								
Rice	-3	-14	-10	-18	44.5	91	131	53
Corn	20	19	14	24	20	4	14	33
Sugar	57	-5	-12	2	60	77	81	168
Beef	15	11	12	10	5	10	10	10
Pork	-8	-2	3	-6	36	40	40	40
Chicken	29	29	29	28	38	32	34	38
Eggs						7	7	9
Exportable products								
Coconut	-4	-9	-14	-4	-16	0	0	0
Bananas	0	-4	-4	-4	-4	0	0	0
Pineapples						0	0	0
Mangoes						0	0	0
Covered products ^a	7	-7	-6	-8	-5	31	35	29
Dispersion, all products ^b	24	24	25	22	29			

^a Weighted averages, with weights based on the unassisted value of production.

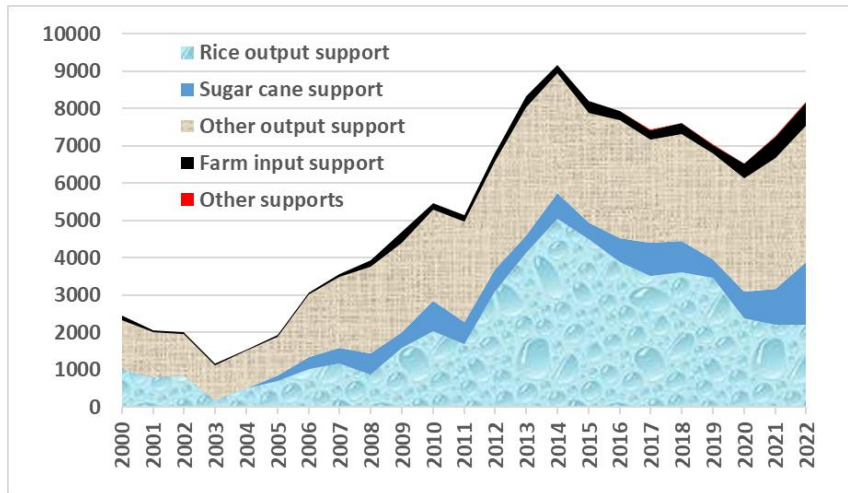
^b Dispersion is a simple five-year average of the annual standard deviation around the weighted mean of the NRAs of covered products.

Source: Updated from David, Intal and Balisacan (2009) by drawing from OECD (2024).

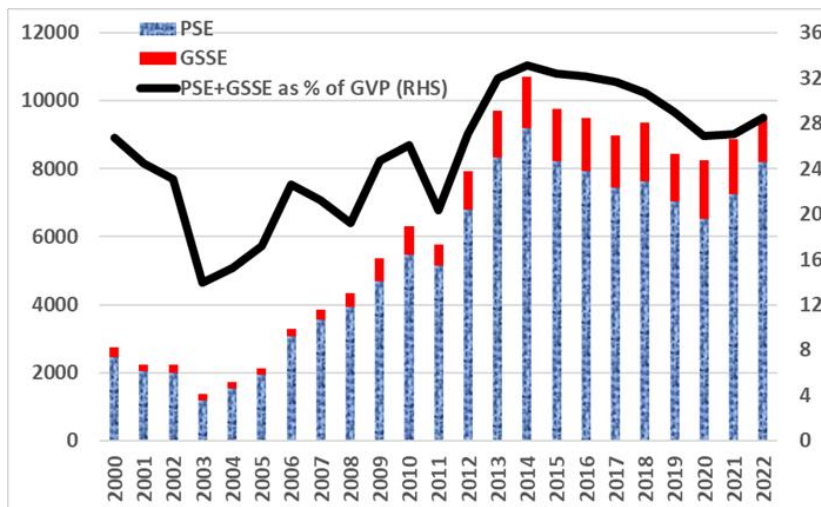
Most of the input subsidies shown in Figure 1(a) have been dedicated to rice farmers, contributing to the NRA differences across farm industries. Together, these three facts mean the dispersion of NRAs among agricultural products within the farm sector has not diminished over time until 2020, implying that the efficiency of resource use within the farm sector remains compromised by the country's diverse agricultural policies.

Figure 1: Output, input, other direct producer support estimates (PSE), and general services support to Philippine farmers, 2000 to 2022 (US\$ million)

(a) Output, input and other direct support (PSE, US\$ million)



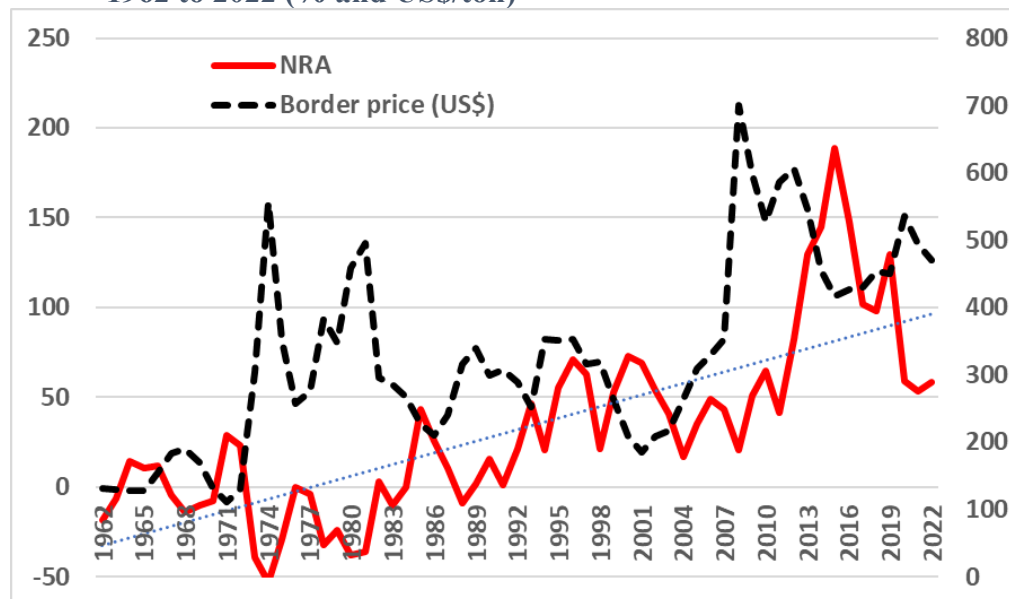
(b) direct producer support plus general services support estimates (PSE+GSSE, US\$ million) and as a % of gross value of agricultural production inclusive of PSE (GVP)



Source: OECD (2024).

NRAs have fluctuated from year to year, mostly in response to world price changes and sometimes to exchange rate adjustments. For example, the NRAs for import-competing agricultural products were below trend in 1973-74, 1980, and 2007-8, when international prices were high, but they were above trend from the mid-1980s to the mid-2000s when international prices were relatively low. This can be seen clearly in the case of rice [Figure 2]. It implies that domestic price stabilization has been an additional objective of agricultural price and trade policies, over and above that of moving away from taxing agricultural exports and gradually raising assistance to import-competing farmers.

Figure 2: Nominal rate of assistance to rice^a and the rice border price, 1962 to 2022 (% and US\$/ton)



^a The upward trend in the rice NRA over this period is shown in the blue dotted line.

Source: Updated from David, Intal and Balisacan (2009) by drawing from OECD (2024) for NRA and World Bank (2024) for the border price (Thai rice 5% broken, inflated by the 2000-04 cif/fob difference) for the years after 2004.

In addition to direct support to farmers, governments have also assisted the farm sector by the provision of public goods such as agricultural R&D and rural infrastructure. Such public investments in general services of benefit to the sector equaled close to 5 percent of the sector's value of production in 2020-22, almost double the value observed 20 years earlier. It is dominated by investments in infrastructure such as irrigation systems and farm-to-market roads and in the agricultural knowledge and innovation system (although mainly extension programs rather than R&D). Over the past decade, that has added another five percentage points to value of total government supports to the sector as a share of the gross value of agricultural production when measured at distorted prices, up from just two percentage points in the 2000s (Figure 1(b)). Overall, total support to the agricultural sector accounted for 2.3 percent of GDP in 2020-22, down from 2.9 percent in 2000-02 but still the highest among emerging countries reviewed by the OECD (2023).

The relative rate of assistance to agriculture has increased dramatically since the 1980s. Assistance to non-agricultural sectors has steadily diminished since the 1960s, such that the average NRA for the agricultural sector is now much greater than the average NRA for non-agricultural sectors. Specifically, the RRA has risen from an average of -15 percent or lower prior to the mid-1980s to an average of around 25 percent over the past three decades [last row of Table 4, and Figure 3]. This trend indicates that the efficiency of resource use in farming relative to the production of non-agricultural tradables first increased as RRAs became less negative and then decreased as RRAs became more positive. The above trends are consistent with the series of studies estimating effective rates of protection for all tradables in the Philippine economy (Tan 1979; Aldaba 2005a,b).

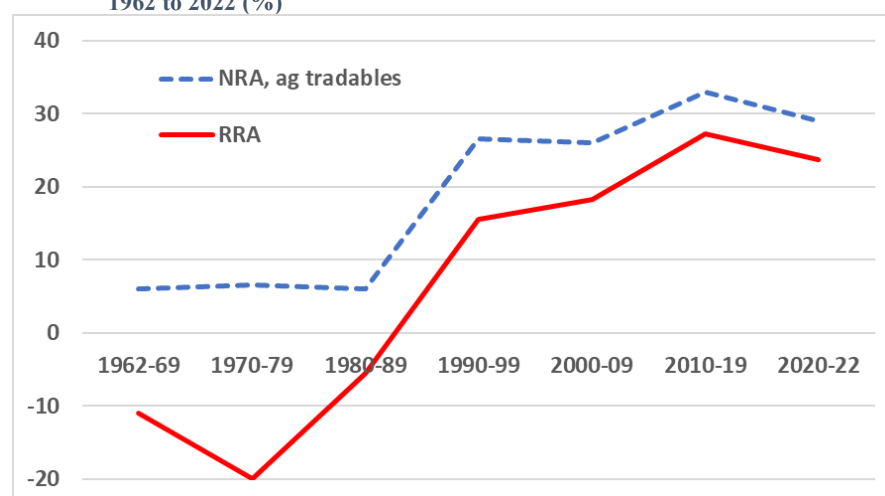
Table 4: Nominal rates of assistance to agricultural relative to nonagricultural industries, 1962 to 2022 (%)

	1962-69	1970-79	1980-89	1990-99	2000-09	2010-14	2015-19	2020-22	1962-69	1970-79
All agricultural products	5.9	-6.1	5.4	24.2	24.8	31.5	34.5	29.0	5.9	-6.1
Agricultural Tradables	6.0	-6.5	6.0	26.5	26.0	32.0	35.0	29.0	6.0	-6.5
Non-agricultural tradables	19.5	16.5	12.0	9.5	7.0	5 ^a	4 ^a	4 ^a	19.5	16.5
RRA ^a	-11.0	-20.0	-5.5	15.5	18.5	25.0	29.0	24.0	-11.0	-20.0

^aImputed, based on the WTO's trade-weighted average estimate of MFN applied import tariffs on non-agricultural goods.

Source: Updated from David, Intal and Balisacan (2009) by drawing from OECD (2024) and WTO (2023 and earlier).

Figure 3: Nominal and relative rates of assistance to agriculture in the Philippines, 1962 to 2022 (%)



Source: See Table 4.

Comparison with distortions to agricultural incentives in other countries

The agricultural and food sector has been subjected to more heavy-handed governmental interventions than any other sector. Agricultural trade-related policies in the 2000s accounted for an estimated 70 percent of the global welfare cost of all merchandise trade distortions,

even though the agricultural sector contributes only about 6 percent of global trade and 3 percent of global income (Anderson et al. 2010, Table 2.3).

For advanced economies, the most articulated reason to restrict food trade has been to protect domestic producers from import competition as they come under competitive pressure to shed labor. Such measures harm not only domestic consumers and exporters of other products but also foreign producers and traders of food products. For decades, agricultural protection and subsidies in high-income (and some middle-income) countries have depressed international prices of farm products, lowering the earnings of farmers and associated rural businesses in developing countries.

Meanwhile, developing countries' policies have on average further depressed the price incentives for their farmers, thus exacerbating the deleterious effects of the richer countries' farm policies. In the past, governments of many developing countries taxed their farmers more heavily than producers in other sectors. In addition, as in the Philippines, many developing countries chose to overvalue their currency and to pursue an import-substituting industrialization strategy by restricting imports of manufactures. Together, these measures indirectly taxed producers of other tradable products in developing economies, most of whom have been farmers.

The disarray in policies led to overproduction among high-income countries, underproduction among lower-income countries, and worsening global price volatility. This disarray also means that there was less international trade in such products than would have been the case under free trade. The end result has been thinner and thus more volatile markets for these weather-dependent products (Anderson 2009).

Agricultural policies became newsworthy globally during 2008–12 because international food prices spiked upwards three times in that period. Biofuel policies partly caused these price spikes, and in turn, the effects of biofuel policies were exacerbated by the trade-policy responses of numerous countries at a time of low global grain stocks. Responses by food-surplus developing countries typically involved restrictions on exports, while those by food-deficit developing countries involved a lowering of import barriers. The NFA in particular went into a precautionary buying spree in 2008, even as export stocks on offer began to dry up, amplifying the already sharp volatility in the first half of the year (Dawe and Slayton, 2010).

The ostensible motivation of policymakers has been to prevent a decline in national food security: each country has aimed to protect its domestic consumers (and indirectly, to protect the current government from losing power) during the upward food price spike. Together, however, these measures amplified international price spikes so that each country's measures harmed other countries' consumers (Carter, Raussier and Smith 2011; Martin and Anderson 2012; Jensen and Anderson 2017; Martin, Mamun and Minot 2024).

Changes in food prices create winners and losers, especially among the poor. It has been argued for decades that such distortions have added to global inequality and poverty, because three-quarters of the world's poorest people depend, directly or indirectly, on agriculture as their major source of income (World Bank 2007). Protectionist policies of high-income countries have been partly responsible for international income inequality and poverty in developing countries, but so too has the anti-agricultural and anti-trade biases of many developing countries' policies, according to a set of economy-wide empirical studies (Anderson et al. 2010).

This set of empirical indicators reveals distinct patterns of price distortions across countries and over time, as well as policy turning points. These patterns are summarized here under four headings: sectoral distortion variation across countries; intra-sectoral distortion variation

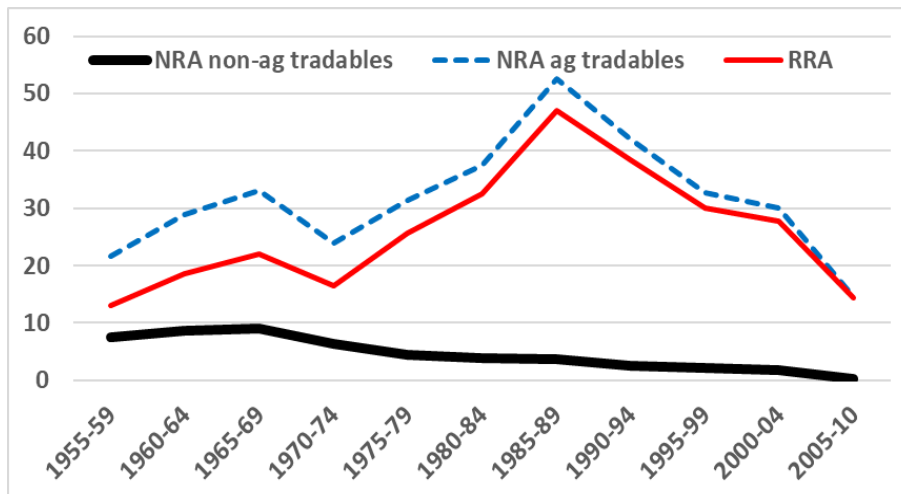
across farm products; year-to-year variations in rates of distortion; and policy-instrument choices.

5.1. Variations in sectoral distortions

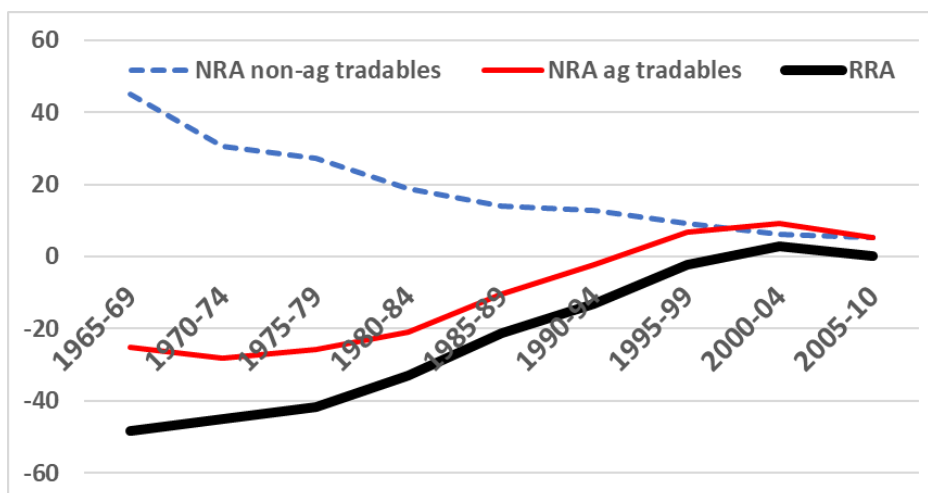
Countries with higher per capita income tend to have higher NRAs and RRAs. More generally, policy regimes, on average, have had a pro-agricultural bias in high-income countries and an anti-agricultural bias in developing countries. However, since the 1980s, both the anti-agricultural policy bias in developing countries and the pro-agricultural bias in high-income countries have diminished, and the two groups' average RRAs have converged toward zero (Figure 4).

Figure 4: NRAs by subsector, and RRAs, 1955 to 2010 (%)

a) High-income countries



b) Developing countries



Source: Anderson (2009) with updates from Anderson and Nelgen (2013).

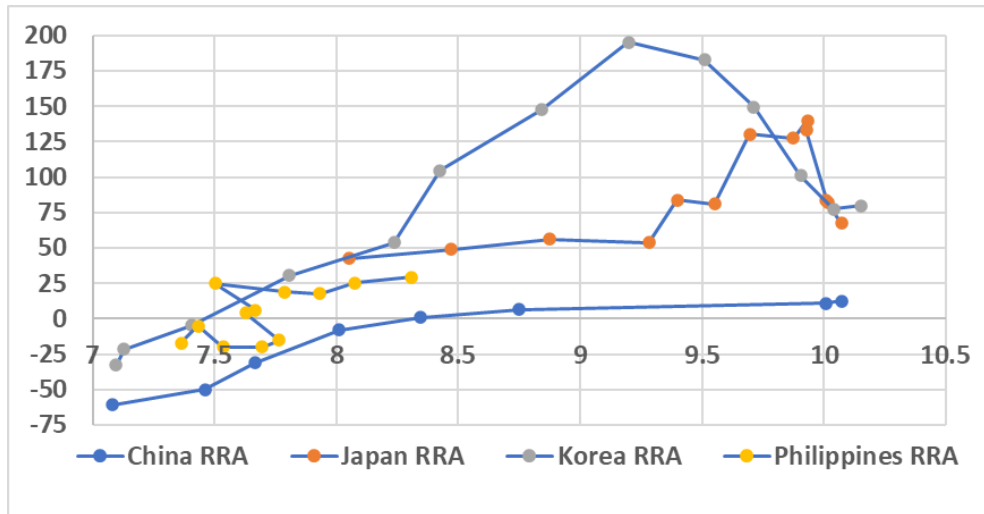
In the case of developing countries, it is clear from Figure 4(b) that the rise in their average RRA is due as much to a decline in assistance to non-farmer sectors (especially cuts to manufacturing protection) as to declines in agricultural disincentives (especially cuts to export taxes). However, the extent and speed of convergence vary across regions. Among developing countries, convergence has been greatest for Asia and least for Africa; among high-income countries, it has been greatest for the EU and almost nonexistent for other Western European countries. The sole exception is the dip for most countries in 2005–10, when international food prices rose steeply.

The averages reported in Figure 4 hide the fact that both the level and rate of change in distortion indicators still vary considerably across countries. National RRA estimates for 2005–09 varied from approximately -40 percent for several African countries to approximately 100 percent for a few high-income countries (Anderson 2013). Much could be gained from further reforms to remove these cross-country differences, which would lead to international relocations of production and consumption.

The extent to which RRAs vary at any level of per capita income or comparative advantage is substantial. Based on regression analysis over the full time series from 1955 to 2007, per capita income and comparative advantage account for 59 percent of the inter-country variation in RRAs globally (Anderson, 2009). Note that the average RRA for developing countries, which converged toward zero from the 1980s, did not stop at zero but ‘overshot.’ For Korea and Taiwan, this evolution to a positive RRA occurred in the early 1970s, and for China, Indonesia and Malaysia it happened in the first decade of the current century. As shown in Figure 3, for the Philippines it happened in the latter 1980s.

The Philippines is unusual in having the highest rate of farmer assistance of the emerging economies monitored by the OECD, despite low income per capita and high comparative advantage in some farm products. It has also had one of the more erratic economic growth performances, with real GDP per capita declining in some periods. Hence its path toward higher farmer support as its per capita income grew has been jagged, unlike the smoother paths of its East Asian neighbors [Figure 5].

Figure 5: Relative rate of assistance to agriculture in East Asian countries (% , vertical axis), by real per capita GDP expressed in natural logs (horizontal axis), 1955^a to 2022



^a From 1962 for the Philippines and from 1980 for China.

Source: Authors' compilation based on updating data in Anderson and Nelgen (2013).

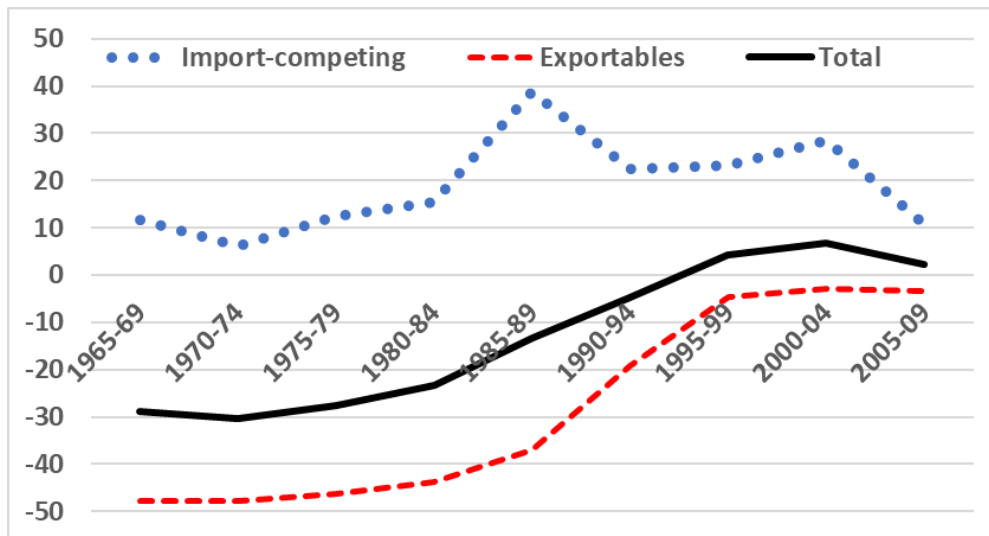
5.2 Intra-sectoral distortion variations

Product NRAs within agriculture vary widely in each country. Some commodity product NRAs are positive and high in almost all countries (sugar, rice, and milk). Others are positive and high in developed economies but have been highly negative in numerous developing countries (most noticeably cotton). Still other product NRAs are relatively low in all countries (feed grains and soybeans as inputs into intensive livestock; pork and poultry as standard-technology industrial activities).

The failure of global variability across commodities to decrease significantly suggests that the movement of each national average NRA toward zero has not been accompanied by a fall in the variance across commodities within the sector. As is the case for variations in sectoral distortion across countries, much could be gained from intra-country resource reallocation within national agricultural sectors and from the altered consumption patterns that would emerge from removing cross-product differences in NRAs.

A crucial component of the NRAs' product dispersion is that the agricultural policy regimes across countries tend to have an anti-trade bias. This bias has declined over time for the developing-country group, mainly owing to declines in agricultural export taxation, and despite growing agricultural import protection (Figure 6). But in the Philippines, the anti-trade bias has increased.

Figure 6: NRAs to cover agricultural products in developing countries, by product category, 1965 to 2009 (%)



Source: Anderson (2009), updated from estimates in Anderson and Nelgen (2013).

High income economies undertook reforms from the 1980s onward to reduce support to their farmers, whereas developing countries with low comparative advantages in agriculture shifted to increasing farmer support. Table 4 presents a breakdown of NRAs in selected countries, listed in descending order of NRA in 2020. In high-income countries (Korea, Japan, EU, USA, Canada, and Australia), NRAs in 2020 are all lower than support in the 1980s, although Korea, Japan, and EU continue to impose much higher NRAs compared with Canada, Australia, and USA (although for the latter, this may no longer be the case in 2025). Meanwhile in developing countries dependent on agricultural imports, NRAs have increased between 1980-2010 and 2020, i.e. Philippines, Indonesia, and China; for net agricultural exporters, NRA remains negative (notably Vietnam and India).

Among trade-distorting policy instruments, the extent to which export taxes have been phased out by developing countries is clear from Figure 6. Up to the 1980s – and in some cases the early 1990s – it was quite common for developing-country governments to intervene in their market for foreign exchange. Such interventions added to the anti-trade biases that were targeted at tradable sectors, including agriculture. However, these interventions largely disappeared by the mid-1990s, as initiatives took hold to reform overall macroeconomic policies. In China, for example, trade taxation associated with the country’s dual exchange rate system accounted for almost one-fifth of the (negative) RRA in the 1980s. However, since the mid-1990s, that system has been abolished (Huang et al. 2009) and China has followed Japan and Korea in moving from taxing to assisting farmers (Anderson 2018).

From the 1990s, numerous OECD countries began to move away from price supports to more-efficient and more-equitable policy instruments. Initially direct domestic subsidies to farmers became more important in some countries (Brink and Orden, 2023), and then some payments became somewhat decoupled from production. Most recently, efforts are under way to encourage the repurposing of farm support away from trade and price mechanisms (World Bank and IFPRI, 2021; Anderson and Strutt, 2023).

Table 5: NRAs for agriculture in selected countries, 1986 - 2020

	1986-88	2001-03	2017-19	2020
	%			
Korea	165	95	86	91
Japan	135	111	71	69
Philippines	na	23	37	37
Indonesia	na	10	30	25
EU	63	43	24	24
China	na	7	16	14
USA	26	21	13	12
Canada	53	23	9	11
Australia	11	4	3	2
Vietnam	na	8	-6	-6
India	na	-5	-5	-7

Source: Anderson (2009), updated from estimates in Anderson and Nelgen (2013).

5.3 Year-to-year variations in NRAs

NRAs fluctuate from year to year, owing to a policy-induced negative correlation with the international price. Around the long-run trend for each country, much fluctuation is seen from year to year in individual product NRAs. This tendency has not diminished since the mid-1980s for developing countries, and it has even increased for high-income countries. The negative correlation of a commodity's NRA with movements in its international price is largely responsible for this pattern. On average, barely half of the change in an international price is transmitted to domestic markets within the first year. Governments are keen to prevent domestic prices from being affected by spikes in international prices. In both agricultural-exporting and agricultural-importing countries, and in high-income as well as developing countries, large changes in NRAs occur during periods of international price spikes – whether up, as in 1974 and 2008, or down, as in 1986 (Anderson and Nelgen, 2012; Jensen and Anderson, 2017; Martin, Mamun and Minot, 2024). The Philippines is no exception in this regard.

5.4 Relative contributions of policy instruments

Policy instruments towards agricultural support have evolved, with the current policy mix focusing on price supports, followed by input subsidies. Across countries and time periods, governments have used a broad array of policy instruments. These include distortions to input markets (largely subsidies, plus controls on land use), production quotas, marketing quotas, target prices, price subsidies or taxes in output markets, and, especially, border measures that directly tax, subsidize, or quantitatively restrict international trade. In developing countries, as assistance to import-competing agricultural subsectors has grown, the relative importance (from a national welfare perspective) of import taxes has increased dramatically. This accounts for the high output support in Philippines, Indonesia, and China; meanwhile domestic price support is more prominent in Vietnam and India, which are agricultural

exporting economies. Meanwhile input support is relatively high in Indonesia, China, and high income countries (except Korea and Japan).

Table 6: Composition of PSEs, 2019

	Output support	Input support	Payments				Total
			Current production-based	Non-current production-based	Environment and resources	Others	
				In %			
Korea	91	3	3	4	0	0	100
Japan	85	3	5	7	0	0	100
Philippines	97	3	0	0	0	0	100
Indonesia	89	11	0	0	0	0	100
EU	19	14	26	27	14	0	100
China	67	10	15	7	1	0	100
USA	21	17	46	12	4	0	100
Canada	46	12	35	6	0	1	100
Australia	0	55	23	21	1	0	100
Vietnam	113	-11	-2	0	0	0	100
India	276	-145	0	-29	0	-2	100

Source: Anderson (2009), updated from estimates in Anderson and Nelgen (2013).

Meanwhile, public agricultural-research investments amount to less than 2 percent of the gross value of agricultural output at undistorted prices in high-income countries. In developing countries, an even smaller percentage (1 percent) has been devoted to research and development (Anderson, 2009). Country expenditures on public-good research investments pale in comparison to losses resulting from commodity price distortions.

6 Prospect of re-purposing farm supports away from price-distorting measures

The Philippines has barely begun to move in the direction of greater evenness and equity of its producer support policies. This was discussed in relation to Figure 1; hence, there is scope for its policy makers to learn from other countries who have or are undergoing a similar shift. There are favorable signs of this taking shape: subsequent to rice tariffication, in 2021 some of the new tariff rates were lowered temporarily to ease food inflation, notably for rice, pork and chicken. A further cut was made in 2022 on corn; in mid-2024 a landmark decision was made to cut the tariff on rice by twenty percentage points, to 15 percent, and to hold these cuts until 2028. Simultaneously, rice has commanded increasingly larger budgetary outlays, mostly in the form of input and machinery subsidies, as well as irrigation support. It remains to be seen how the dispersion of NRAs will evolve in the current decade.

Prospects for policy reform will be increasingly influenced by the changing landscape of organized economic interests (Anderson, Rausser and Swinnen, 2013). Interactions between farmers and

landowners, agribusiness, food and retail companies, environmentalists and other groups have been influencing agricultural policy negotiations and debates in numerous countries (Resnick and Swinnen, 2023). The vertical relationships between farmers and agribusinesses are often critical in sustaining policy reforms. Capturing opportunities to form new coalitions among the interests of farmers, downstream agribusiness, food consumers, and environmental groups will influence sustainable policy reforms that promote the provision of local public goods, agricultural productivity, and markets for environmental services. Certainly the many complex factors that contribute to distortions of agricultural and food markets can impede as well as promote progress, but hopefully policy persistence, along with heightened scrutiny of new developments, will promote greater transparency and socially beneficial cooperation.

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