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Market and State in Philippine Agricultural Policy

Roehlano M. Briones



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Market and State in Philippine Agricultural Policy

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Abstract

This chapter* aims to evaluate the country's agricultural modernization strategy under the lens of the market-driven approach. The early post-War period of economic policy relates to solving the **food problem** solution for low-income countries, which minimizes farmer welfare and emphasizes benefits to the wealthier, non-farming class. This prevailed until the 1970s when the interest of the farming class began to be reasserted. By the 1990s the main issue was the **disparity problems**, which considers as almost equally weighty, the interests of poor farmers, as well as that of non-agricultural consumers. In the 1990s, the nation enacted numerous market reforms to address the anti-market policies of the early 1990s. However, progress in implementing market reform for agriculture was largely moribund until 2019, with the enactment of the Rice Tariffication Act (RA 11203). Despite the reforms already enforced, further measures should be implemented, namely: i) Producer support for agriculture should move away from market price support in favor of expenditure support; ii) Expenditure support programs should themselves be oriented away from commodity-specific towards support for public goods and general services such as extension, regulatory, and market assistance services; iii) Expenditure programs require careful design along with functional tasks, performance indicators, and M&E systems; iv) Design, performance indicators, M&E systems, and appropriate strategies, should be put together in the AFMP, and structured around SAFDZs; iv) Sustained political will behind the market approach is needed to adopt it more consistent in agricultural policy.

Keywords: Agriculture, producer support, dirigism, market reform, market price support, expenditure programs.

* "Chapter" is used to refer to this Discussion Paper, which is part of a forthcoming volume on assessing progress in agriculture and fisheries modernization of the Philippines within the framework of the Agriculture and Fisheries Modernization Act.

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Market and State in Philippine Agricultural Policy

Roehlano M. Briones[†]

1. Introduction

In 1997, AFMA decided in favor of a market orientation in its Declaration of Policy (Section 2): “The State shall adopt the market approach in assisting the agriculture and fisheries sectors while recognizing the contribution of the said sector to food security, environmental protection, and balanced urban and rural development, without neglecting the welfare of the consumers, especially the lower-income groups.” AFMA reinforces this by including in its statement of objectives: “To pursue a market-driven approach to enhance the comparative advantage of our agriculture and fisheries sector in the world market.”

This chapter aims to evaluate the country’s agricultural modernization strategy under the lens of the market-driven approach. The rest of the chapter is organized as follows: Section 2 brings together all the elements of government intervention into a conceptual framework based on a TOC, tracing linkages from the relevant AFMA interventions to outcomes and impacts; the TOC takes off from the general TOC for AFMA outlined in Chapter 1. Section 3 reviews the implementation of agricultural policies in the Philippines, tracing its historical context, together with quantitative policy indicators to evaluate the extent to which a market-driven approach has been pursued. Section 4 assesses indicators in relation to modernization of agriculture along with the ideal of comparative advantage as posited in AFMA. Section 5 reviews past assessments of government policies and programs, covering the set of direct provision programs (the set of market-enabling programs had already been covered in Chapter 1). Section 6 concludes with a synthesis and recommendations.

2. Conceptual framework

Defining a market approach

To avoid confusion, it is essential to first clarify the concept of “market approach”. The approach is best understood by positioning it within a range of alternative economic organizations (Figure 1). At the extremes are “planned economy” and “laissez faire”.

Figure 1: Forms of economic organization



Source: Author’s schematic.

Under the planned economy, the State takes on the role of deciding on how a nation’s resources are to be allocated into the various industries, how these are to be deployed, and how the

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resulting goods and services are distributed to the population. This is typically associated with socialism, in which the State owns the means of production, i.e., land and capital.

Meanwhile, under *laissez faire*, private individuals, and their voluntary associations, are solely responsible for deciding on how resources are to be allocated. This presumes an institution of private property that assigns rights of control over resources to individuals.³ There is no economic role for the state except perhaps to protect the institution of private property. Note that the form of political organization is not at issue here – a planned economy is compatible say with a democracy (in which the majority votes to nationalize private property), while a *laissez faire* is compatible with autocracy (where the autocrat refrains from economic intervention). In practice, however, planned economies are enabled by totalitarian states (Hayek, 1944), while authoritarian governments are active in economic intervention.

In between these extremes are “dirigism”, and the “market-driven approach”. Under dirigism, the private sector allocates resources under the basic direction of the State. The State decides which sectors or industries to promote, and for whose benefit. The independent Republic of India from 1947 to the 1980s was organized this way ((Mazumdar, 2011), as well as, arguably, that of the Philippines over the same period (see below). Meanwhile, the “market-driven” approach takes the opposite tack, allowing market forces to determine resource allocation and economic change, but with the State retaining some intervention power in the economy, unlike under *laissez faire*.

Elements of a market approach

Under a market-driven approach, the state refrains from introducing “distortions”, i.e., directives that lead to economic outcomes other than what would be case in its absence. For instance, subsidies may cause market prices to fall below the counterfactual free market price, also known as “shadow price”. Historically a market-driven approach has been adopted, more or less, by developing economies transitioning away from central planning, or the dirigism of the 1950s to 1970s.

In particular, by the 1980s, developing economies worldwide (Latin America, Sub-Saharan Africa, and Asia) were grappling with balance of payments crises and were resorting to emergency loans from Bretton Woods institutions, namely the International Monetary Fund (IMF) and the World Bank. These institutions made such loans conditional on the adoption of a “structural adjustment program” (SAP) supposedly to restore financial flows, without compromising long-term growth prospects (Easterly, 2005). To calibrate expectations about such structural adjustment or reform programs, Williamson (1990) made a consensus checklist of elements of an SAP, namely:

1. Keeping budget deficits manageable;
2. Re-prioritize budget expenditures, with focus on infrastructure, primary education, health, away from subsidies;
3. Tax reform towards moderate marginal tax rates and a broader tax base;
4. Market-determined interest rates, coupled with financial liberalization;
5. Competitive exchange rates;

³ Individuals or “natural persons” may band together into corporations or similar entities, which are treated as “legal persons”.

6. Trade liberalization, repealing import controls while adopting low and uniform tariffs;
7. Openness to foreign direct investment (FDI);
8. Privatization of SOEs;
9. Deregulation;
10. Securing of property rights.

Several elements of the Washington Consensus relate to macroeconomic reform; all are compatible with microeconomic reforms that seek to “get prices right”, i.e., aligning market prices with shadow prices. The Washington Consensus constitutes an excellent working definition of what constitutes a “market-driven” approach, notwithstanding some controversy e.g., the status of industrial policy within this Consensus (Spence, 2021).

Government policies worldwide have severely distorted international trade in agricultural goods, hence the market-driven approach has been a mainstay of the World Trade Organisation (WTO) Agreements. These distortions involve protection of agricultural products from imports, subsidies on domestic agriculture, and participation of SOEs in agricultural markets. Countries that join the WTO agree to the following disciplines on domestic protection and subsidy policies for agriculture (WTO, 2021):

- Foreign products within the border should be accorded the same treatment as domestic products (“national treatment”);
- Border protection in the form of tariffs are allowed; however, tariffs are capped, and the ultimate goal are low to zero tariffs;
- Border protection should avoid non-tariff barriers (NTBs), except science-based non-tariff measures (NTMs) to protect human, animal, and plant health;
- Subsidies should avoid measures that distort resource allocation (e.g. artificially increase production or the use of inputs); the size of subsidies are also capped.

Theory of change

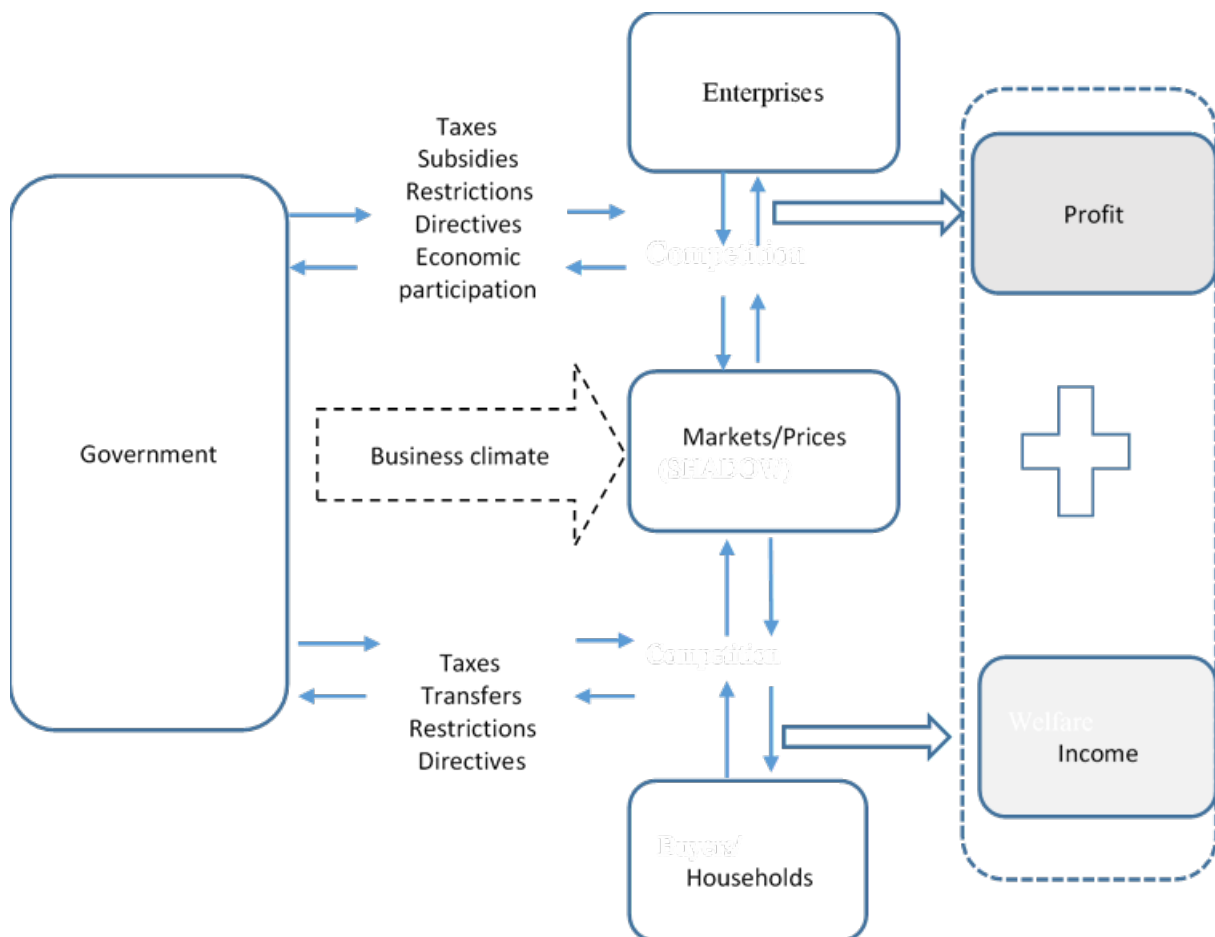
Markets are the venue in which buyers (representing both households and demand) and enterprises (representing supply) interact and exchange goods (including services) for money, with price serving as the rate of exchange. Both sides typically involve multiple parties that are competing with one another, i.e., buyers to obtain the goods from enterprises, and enterprises to obtain money from buyers. Buyers are motivated by consumption of the good itself, while enterprises are motivated by profit. Buyers fund their purchases from income, itself obtained from the ownership of factors of production; these are sold to enterprises thereby earning wages for labor, interest or dividends for assets, and rent for land. Left to their own devices, buyers and enterprises reach their own terms and conditions of exchange, including price, as a balance of forces of supply and demand.

The State may observe the resulting economic outcomes, and find these undesirable based on some societal value or goal. The state may opt to participate directly in markets by procuring or selling goods and services. It may also apply all manner of directives to promote goods that seem underconsumed (i.e., medicines, or healthy food), or restrictions on goods deemed overconsumed (e.g., drugs and alcohol, dangerous goods).

Incomes earned by an economic class of households (the “poor”) may be deemed too low to achieve some minimum living standard; hence, the government may intervene to subsidize living standards of the poor via progressive tax and transfer schemes. The most direct intervention procuring goods and services. Lastly, the policy regime set up by the State also determines the overall business climate, such as supply of local currency and resulting inflation; issuance of public debt through government bonds and setting of interest rates; and the protection of persons and private property, the system of contract enforcement and dispute settlement.

The market approach is adopted on the notion that social welfare is maximized by allowing a free interplay of supply and demand. While state intervention in the price system may favor one party (e.g., producers) and penalize others (e.g., taxpayers), in the end society’s overall welfare is served better by a market-driven approach, with state intervention limited towards addressing market failure.

Figure 2: Theory of change for market-driven approach



Explaining government interventions in agriculture

A key driver of government intervention in agriculture is the food policy regime. The evolution of food policy regimes may be related to the level of a country’s economic development, based on a typology of “agricultural problems” (Hayami and Godo, 2004).

The food problem

In low-income countries, the government's priority is industrialization, often at the expense of agriculture. Partly because of the antipathy of developing countries towards colonialism, most of them have, upon assuming political independence after the second World War, adopted industrialization policies to attain economic independence. Very popular during the three decades after the War was the "import-substitution industrialization" (ISI) strategy, which has "a common policy mix that promotes target industries to raise the domestic prices of their products by means of border protection and, at the same time, allocate to those industries an import quota of capital and intermediate goods so that they could enjoy profits from import and foreign exchange licenses allocated to them under the over-valued exchange rate" (Hayami and Good 2004, p.9).

For these countries, agriculture was a major source of income, hence government attempted to extract resources from agriculture to serve the goals of ISI. In some low-income countries, "marketing boards" enforced government monopolies to obtain farmers' harvest at below-market prices. Often, government received food aid but sold it anyway in the open market, proceeds of which went to fund government spending and subsidies for domestic manufacturing. The cheap food policy was also enforced to prevent labor cost in the manufacturing sector from rising. As a result, farmgate prices remained low, in turn weakening incentives for agricultural production and investment.

Moreover, according to Hayami and Godo (2004), agricultural workers were largely ignorant of the government policies depressed food prices to the detriment of farmers. Most of them had little schooling and resided over wide rural spaces with limited infrastructure for information and communication. Such dispersion also encumbers them from mobilize protests against urban-based politicians. Conversely, non-agricultural business and labor, concentrated in urban areas, are much better positioned for political lobbying. Politicians are therefore more concerned about high food prices associated with urban riots, compared with rural hunger in the remote hinterlands.

The protection problem

On the hand, in high-income countries, a different problem is being solved, namely the "protection problem", also known as "farm problem" (Schultz, 1953). In a high-income setting, the rate of increase in domestic food supply is "high because of the high rate of investment in agricultural research, development and extension. However, food demand increases only slowly because population growth rate is low and food consumption has been largely saturated" (Hayami and Good 2004, p.10). Market forces under slow structural change lead to depressed food prices and rates of return to resources in agriculture.

In contrast with trends in low-income economies, the number of farmers dwindle, even as they coalesce into powerful political blocs. These blocs are able to lobby successfully for protectionist policies a la Olsen: product prices reduce farmers' incentive to make efficiency adjustments, while institutional rent created from government interventions further encourages rent-seeking activities. Moreover, consumers' resistance to agricultural protection is reduced as average income level increases, and the share of primary production in the total cost of food declines.

The disparity problem

Between the low-income and high-income stage, middle income countries face a situation in which contradictory forces lead to political tension and instability. Policymakers are driven by the disparity-problem, so-called as an emerging urban middle class aggravates the sense of social deprivation of farmers. Farmers' discontent may stoke mass protests serious enough to persuade government to impose measures to protect agriculture. The implemented measures however are insufficient to close the gap between farmers and urban workers, unlike in a wealthy economy where urban consumers can afford to pay very high food prices. Moreover, as agriculture continues to contribute a relatively large share of employment, government finances are also insufficient to close the gap. The disparity problem uncovers deep economic and social contradictions that causes policy to oscillate erratically around appeasement of restive farmers while still dealing with a lingering food problem and a tight fiscal bind.

Measuring the market approach

Agricultural policy indicators

Policy indicators offer a way to measure the extent of market distortions, or conversely the degree of departure from the market approach. One set of policy indicators relate to the measure of protection. Suppose the border price BP of an imported agricultural product is taken as a proxy of the shadow price; let DP denote the domestic price, typically at the wholesale level. Based on these indicators, a common market distortion measure is the *nominal protection rate* (NPR), the proportional deviation of the domestic from the border price for a commodity i :

$$NPR_i = \left(\frac{DP_i}{BP_i} - 1 \right)$$

A similar indicator is *nominal rate of assistance*, which is a more comprehensive indicator, computed as the percentage by which government interventions have raised gross returns to farmers, above what they would have been without intervention (Anderson and Martin, 2007). For a homogenous good imported by a small economy, suppose the only source of protection was a tariff t ; hence,

$$NPR_i = \left(\frac{BP_i \cdot (1+t)}{BP_i} - 1 \right) = t_i$$

This however is a narrow interpretation at protection, as it considers only gross output. A more comprehensive view is protection of output attributed to nontradable inputs, i.e., value added. Let j index the tradable (intermediate) inputs in the production of commodity i , with given unit intermediate input requirements a_{ij} . The *effective protection rate* (EPR) is given as follows:

$$EPR_i = \left(\frac{BP_i \cdot (1+t_i) - \sum_j a_{ij} BP_j \cdot (1+t_j)}{BP_i - \sum_j a_{ij} BP_j} \right)$$

Hence, the nominal protection conferred by the output tariff, is negated by input tariffs; EPR can even turn negative when say output tariff is modest but input tariffs are very high.

The OECD has compiled a database of annual indicators to monitor agricultural policy. Here we focus on the following measures (OECD 2016, pp.17–18):

- Producer Support Estimate (PSE): annual monetary value of gross transfers from taxpayers and consumers arising from policy measures that support agriculture; “%PSE” is PSE as a share of gross farm receipts.
- General Services Support Estimate (GSSE): annual monetary value of gross transfers arising from policy measures that create enabling conditions for the primary agricultural sector. The sum of GSSE and PSE is the Total Support Estimate (TSE).
- Producer Single Commodity Transfers (SCT): annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm gate level, arising from policy measures directly linked to the production of a single commodity such that the producer must produce the designated commodity in order to receive the transfer; “producer %SCT” is SCT as a share of gross farm receipts.
- Producer Nominal Protection Coefficient (NPC): the ratio between average price received by producers at farmgate (including payments per ton of current output), and border price (measured at farmgate).

Note that NPC is similar to NPR, except the former is measured at farmgate, while the latter at wholesale.

Measures of comparative advantage

Some of the agricultural policy indicators already suggest patterns of comparative advantage; for instance, $NPR > 0$ suggests high comparative cost which provokes protectionist policy to shield local producers from imports. Conversely, $NPR < 0$ implies low comparative cost, i.e., comparative advantage of the local producer relative to the global market.

More direct measures are commonly applied in the literature. Comparative advantage can simply be inferred from the direction of trade, that is a country that is a net exporter in an industry presumably has comparative advantage in that industry; conversely a country that is a net importer in an industry presumably is a high comparative cost producer of that industry.

A more sophisticated version of this is *Revealed Comparative Advantage* (RCA), which goes beyond simply the direction of trade, and examines whether the country is a “better than average” exporter of an industry. Let X_{iC}, X_{iW} respectively denote exports of commodity i for a country and total for the world; and X_C, X_W respectively denote total exports of a country and of the world (over all commodities). The formula for RCA is as follows:

$$RCA_i = \frac{X_{iC}/X_C}{X_{iW}/X_W} .$$

Finally, a measure that is similar to EPR but which accommodates price wedges from all sources is the Domestic Resource Cost ratio (DRC). Let value added for i be generated from primary inputs indexed by k , of which unit quantities are given by x_{ik} . The shadow price of these primary inputs are given by w_k . Supposing the border prices denote shadow prices of outputs and tradable inputs, then the expression for DRC is given by:

$$DRC_i = \frac{\sum_k w_k \cdot x_{ik}}{BP_i - \sum_j a_{ij} BP_j} .$$

Hence $DRC_i > 1$ implies that it is more expensive, from a social perspective, to produce an extra unit of i with domestic resources, compared with importing that unit of i . Conversely, $DRC_i < 1$ implies that it is cheaper, from a social perspective, to produce an extra unit of i using domestic resources, compared with importing that unit of i .

3. Historical perspective of agricultural policy

From independence to the Martial Law era

Import substitution period

Elite capture of economic policy eventually led to a regime of import substitution industrialization.

The newly-independent Philippine Republic in 1946 inherited a colonial legacy of elite-dominated politics – effectively, an “oligarchy” of wealthy landed families. Patron-client relationships formed ties of loyalty from the populace to the local elite, imbuing politics with a high degree of personalism and regionalism. Nonetheless, elite factions did compete with one another for the spoils of elective office.

Initially, government implemented export-oriented policies owing to the influence of sugar lobby, then the dominant force in Congress. However, the sugar barons were politically unpopular, eventually colliding with industrialists who advocated inward-looking policies. Over the 1950s, these industrialists held sway, establishing **import substitution industrialization** as the national development strategy. Dirigism exercised by maintaining an overvalued exchange rate, a regime of import controls, and rationing of foreign exchange to favored industries. This morphed into a “Filipino First” preference: in the late 1960s, foreign investments faced tightening restrictions relative to Filipino-owned firms. In contrast, support via expenditure policy remained light; government spent just 11 percent of GNP, compared with 20 percent in Thailand and Korea, and 24 percent in Malaysia. Capital formation accounted for just one-fifth of government expenditure, largely dissipated in politically motivated infrastructure projects (Dohner and Intal, 1989).

Industrial policy in the 1950s - 60s favored manufacture of import substitutes, to the detriment of agriculture.

Industrial policy was rewarded by an initial phase of rapid expansion in manufacturing; in the 1950s, growth of industry averaged 8 percent per year. However, the composition of the country’s exports remained largely agricultural and raw material-based, namely copra, sugar, bananas, logs and lumber, desiccated coconut, coconut oil, canned pineapple, gold, abaca fiber, and copper concentrates. Rather, manufacturing growth was concentrated among favored sectors, namely non-essential consumer goods, followed by non-essential producer goods; agriculture was heavily penalized, which at the time accounted for the bulk of exports. Moreover, the policy regime proved unsustainable as it ran into balance of payments (BOP) problems, finally precipitating import decontrol and peso devaluation. Nonetheless to aims of import substitution continued to be pursued, this time by intensifying tariff protection (Tucson, 2007). In terms of the Hayami-Godo framework, the policy regime solved the “food problem” by imposing a net penalty on agriculture.

Towards export promotion

The authoritarian government of the 1970s introduced an export promotion strategy while intensifying interventions in agriculture.

In 1972, then-President Ferdinand Marcos adopted “Constitutional authoritarianism” with the declaration of martial law. He then considerably expanded the role of government in political and economic life. Government spending rose as a proportion of GDP up to 16 percent by 1975, with a large proportion of outlays allocated for infrastructure. Land reform was implemented aggressively in rice and maize areas (Dohner and Intal, 1989).

Government pivoted towards export orientation, providing tax incentives towards export-oriented industries. Exports finally began to diversify, as non-traditional exports rose to 36 percent export share, up from 8 percent at the start of the decade. However, the type of industrialization even under the new strategy was of the capital-intensive variety, contrary to the underlying comparative advantage of the Philippine economy, which was labor-intensive industry (Tecson, 2007).

The shift to export promotion began in 1970s with the devaluation of the peso. A commodity price boom in the early 1970s, including an oil price shock, precipitated a series of government interventions in agriculture. Following the peso devaluation, taxes were imposed on exports to siphon off the export windfall. The infamous coco levy was subsequently used to consolidate the coconut oil milling industry under the United Coconut Mills Inc., a parastatal entity (Clarete and Roumasset, 1983).

Meanwhile for sugar, a government monopoly was established controlling exports, consolidating refineries, sugar mills, and even transport and storage logistics. On the import side, government instituted trade monopolies on rice, maize, and wheat, simultaneous with price ceilings, in an effort to keep food prices affordable. For rice, government implemented a major production support program for rice, namely Masagana 99, aimed at rice self-sufficiency, dissemination of high yielding varieties, subsidized credit, extension, and irrigation. Notwithstanding these support programs for specific commodities, the policy regime, especially the overvalued exchange rate, perpetuated the policy bias against agriculture (Intal and Power, 1991). In the 1970s, the net penalty was estimated at about 29% of agricultural GDP (Schiff and Valdes, 1991).

In 1980 a second oil price shock led to a domestic recession, widening current account deficit, and a rising fiscal deficit as government attempted an economic stimulus. Financial difficulties led to failure of several large corporations, including financial institutions, under government guarantee, further bloating the public sector debt. Total foreign debt doubled in just three years (1979 – 1982); a large component of this was short-term debt. The government was finally forced to declare a debt moratorium in 1983, causing a deep financial crisis lasting until 1985 (Dohner and Intal, 1989).

The structural adjustment program at the time required tax reforms, including of export taxes, fiscal austerity, and import liberalization. However, the government at the time failed to comply, even as private capital financing of the current account essentially dried up over the course of the crisis (Goldsbrough et al, 2002). The resulting economic crunch and political turmoil ousted President Marcos and ushered in a democratic government in 1986 under President Corazon Aquino.

Democratic restoration and the disparity problem

Initial reform salvo

Democratic restoration led to a series of market-oriented reforms in agricultural policy.

Market reforms were more successfully pursued under the new administration. The Secretary of the Department of Agriculture at the time requested Philippine Institute for Development Studies (PIDS) and the University of the Philippines Los Baños to prepare an Agenda for Action for the Philippine Rural Sector (also known as the “Green Book”). The key recommendations from this volume are the following (David et al, 1986):

1. Remove bias against agricultural incentives and employment;
2. Institute a new land reform program;
3. Institutional reforms to increase effectiveness of government entities engaged in production support, and promote active participation of non-governmental rural organizations
4. Strengthen economic support services, including decentralization of frontline service delivery;
5. Protect the long-term sustainability of agricultural production through conservation policies;

The new administration quickly introduced a series of deregulation measures in agriculture, such as abolition of export taxes (except on logs), repeal of trade monopolies (except the rice import monopoly of NFA), and import liberalization (Balisacan, 1998). These reforms were consistent with the first recommendation above. However, the reforms were by no means comprehensive; for instance, by Executive Order (then having force of law), President Aquino established a Sugar Regulatory Administration, with the power to regulate the entire industry, including setting quotas on export and import of sugar.

The administration also lost no time in framing and promulgating a new Constitution, which took force in 1987. The new Constitution introduced provisions on the economy, development, including “industrialization and full employment based on sound agricultural development and agrarian reform, through industries that make full and efficient use of human and natural resources, and which are competitive in both domestic and foreign markets” (Article XII, Section 1). In compliance with this directive, Congress enacted a Comprehensive Agrarian Reform Program (CARP) in 1988 with RA 6657. This implemented the second recommendation listed above. The Constitution also recognized “the right of farmers, farmworkers, and landowners, as well as cooperatives, and other independent farmers’ organizations to participate in the planning, organization, and management of the agrarian reform program (RA 6657, Chapter 1, Section 2)”, consistent with the third recommendation.

The Constitution instituted autonomy for local governments (Article II, Section 25). Autonomy of local governments was legislated by the Local Government Code of 1991 (LGC) under RA 7160; under the LGC, agricultural extension services were devolved to local government units (LGUs), following the third Agenda recommendation. This corresponds to the fourth recommendation.

Policy relapse

With support from dirigism-friendly provisions of the 1986 Constitution, state intervention in agriculture was pursued with renewed intensity in the early 1990s.

Some of the economic provisions of the Constitution were a powerful enabler of the forces of dirigism. The national patrimony provisions conferred state ownership over land and natural resources, reserving exploitation and private ownership of these resources to Filipino nationals. Similar reservation applied to “public utilities”. More generally the Constitution enshrined a principle of national preference in domestic investment.

The Constitution required that trade policy serve the general welfare on the basis of equality and reciprocity (Section 13, Article XII). One of the first trade agreements after ratification of the Constitution to which the Philippines acceded was the Common Effective Preferential Tariff (CEPT) of the Association of Southeast Asian Nations (ASEAN), signed in 1992. The CEPT commits ASEAN member states to standardize tariffs on goods imported from within the trading bloc, and to tariff ceilings (20% within 8 years), and to negotiate further a schedule of tariff reductions. However, the consensus of ASEAN member states initially excluded agricultural products from the scheme.

Section 5 Article XIII required the state to provide support to agriculture through appropriate technology and research, and adequate financial, production, marketing, and other support services. Hence in 1992, Congress passed Magna Carta of Small Farmers (RA 7602). The law declares a state policy to “give highest priority to the development of agriculture”, with focus on empowerment of small farmers. State support is mandated for the following items:

- i. Infrastructure, namely farm-to-market roads (FMRs), feeder roads, bridges, piers, ports; communications infrastructure; postharvest facilities/services; and market infrastructure;
- ii. Water management and irrigation facilities;
- iii. Farm machinery and equipment;
- iv. Inputs, namely good seeds, planting materials, fertilizers, and pesticides;
- v. Agricultural credit, at below-market (75% lower) interest rate, with minimum collateral requirements, accessibility, expeditious documentation and processing procedures, and reasonable payment terms
- vi. R&D and extension, involving the Philippine Council for Agriculture and Aquatic Resources Research and Development (PCAARRD), DA – Bureau of Agricultural Research (BAR), State Universities and Colleges (SUCs), other government institutions, including Department of Trade and Industry (DTI) for agro-industrial linkages;
- vii. Technical and skills training, and marketing assistance, for income generating activities;
- viii. Preferential tariffs for farmer organizations engaged in importing farm inputs, farm machinery and equipment, and related parts (limited to items actually utilized in farmers’ projects);
- ix. Wage floors (i.e., minimum wages) and price supports, especially for rice and maize.

- x. Prohibition of imports for agricultural products produced locally in sufficient quantity.

The law instructs government to assist small farmers to establish self-help organizations such as farmers' cooperatives and associations. It provides for representation of organized farmers in the boards of agriculture-related agencies.

The support programs mandated by the Magna Carta are naturally limited in coverage and intensity by the government's ability to afford large outlays for government agencies, especially DA. This tends to skew production support, especially on importables, towards item x), i.e., tightening up on import restrictions. Non-tariff Such measures require little explicit fiscal outlay, despite the large implicit burden on consumers.

In short, while the market approach had been introduced early in the Aquino administration, policy reversals towards a state-driven approach were to later emerge. This suggest that the political economy of the Philippines, having reached a lower middle-income phase, had likewise transitioned into the "disparity problem" in the Hayami-Godo typology.

Philippines 2000

The Ramos administration embarked on an economic strategy to transform the Philippines into a newly industrializing country (NIC).

President Ramos embarked in 1994 on a development vision dubbed "Philippines 2000". According to the administration's chief ideologue, National Security Adviser Jose Almonte, the main obstacle to achieving this vision was a powerful oligarchy, which had managed to appropriate benefits from state mechanisms and regulations. The key to progress was to break the "monopolies and cartels" enabled by government regulations and state intervention (Almonte, 2010). Thus, the government unleashed a set of market-oriented reforms involving liberalization of key services (telecommunications, air transport, etc.) and privatization of SOEs.

For agriculture, the decisive shift towards a market approach was the country's accession to the WTO in 1995. This was soon followed by the Agricultural Tariffication Act (RA 8178), to great controversy as it rolled back the import restrictions of the Magna Carta of Small Farmers. The Tariffication Act phased out protection via QRs in favor of tariffs, as codified under a WTO schedule of commitments. That schedule would often include a two-tier tariff structure (called "tariff rate quota"), which involved a most-favored nation (MFN) rate, applicable to WTO trading partners, and a lower tariff guaranteed up to a specified import volume, known as the minimum access volume (MAV). The Act established the precedent of **adjustment assistance**, by creating the Agricultural Competitiveness Enhancement Fund (ACEF). The ACEF was funded by tariff collections in MAV, intended for safety net scheme for agricultural sub-sectors adversely affected by market reforms.

Notwithstanding these crucial reforms, some deviations from the market approach were already evident even as the country joined WTO. Tariff equivalents were set at very high rates, i.e., "dirty tariffication"; nor where the MAV provisions well-designed to neutralize the protection conferred by these tariffs (David, 2003). Rice was exempted from the abolition of QRs, even as the import monopoly of the NFA was preserved. Moreover, even though sugar

The mixed record on reform continues

The Ramos administration ended at the height of the Asian financial crisis of 1997-98. The boom-bust cycle of the postwar economy persisted, as the country continued to contend with macroeconomic imbalances. The nascent recovery in the 2000s was again punctuated with another external shock as the global financial crisis struck in 2008.

Furthermore, foreign trade agreements are foreign trade agreements. After WTO accession, the Philippines has entered via ASEAN into various trade agreements, namely with dialogue partners (China, Japan, Republic of Korea), together with Australia and New Zealand, and India; Philippines has an economic partnership agreement (the only bilateral agreement to date) with Japan.

ASEAN itself, in preparation for the ASEAN Economic Community (AEC) entry into force in 2015, had been widening the scope of the CEPT. Agricultural goods were eventually included in its coverage. The ASEAN Trade in Goods Agreement (ATIGA) locked in these commitments of the member countries.

Agricultural goods generally are subject to the common CEPT band of 0 to 5 percent; numerous commodities were included under the list of commodities subject to zero tariff starting 2012. However, the Agreement allowed a Sensitive list where CEPT inclusion was deferred until 2015; and a Highly Sensitive list where the tariff ceiling was set at 50 percent. For Philippines, items such as chicken, fish, and vegetables, were zero rated as of 2012; meanwhile, pork and maize were placed under the CEPT ceiling of 5 percent. Sugar was a Sensitive list product to undergo a phased reduction from 28 percent in 2012 down to the CEPT ceiling rate by 2015. Finally, rice was under the Highly sensitive list; tariff reduction was modest from 40 percent in 2012 to 35 percent by 2015.

Political pressure to resist a thoroughgoing market approach in agriculture continued to be exerted.

The tendency to accord special treatment to agriculture in the country's various trade agreements can also be seen in Philippine domestic law. Again, these represent the contending forces of political economy addressing the disparity problem, with its accompanying policy oscillations. Among these are the following:

- The AFMA broadens the concept of "food security" to include imports, towards greater food affordability. However it insists on self-sufficiency for rice and maize.
- The Fisheries Code reintroduces, contrary to RA 8178, QRs in fish importation.
- While respecting principle of market interest rate setting, the Agri-Agra Act (2009) mandates banking institutions to allocate at least 25% of their total loanable funds for agriculture and agrarian reform credit, including at least 10% for agrarian reform beneficiaries (ARBs). Banks that fail to do so are penalized the equivalent of 0.5% of non-compliant loans.

Reform in a period of sustained growth

Laws enacted during the sustained growth period (2010 to 2019) consolidated gains made under previous agricultural policy reforms.

From 2010 onward, the country began a sustained growth phase which was to last until 2020 before a pandemic wrought another global economic crisis. The country finally achieved a measure of macroeconomic stability with a declining debt-to-GDP ratio, manageable fiscal deficits, low to moderate inflation, and a comfortable balance of payments. In agricultural policy, the administrations of Benigno S. Aquino (2010-16) and Rodrigo Duterte (2016 – 2022) were content to consolidate gains made under previous reform efforts. This involved following through on the provisions of previous laws, or strengthening market regulation and adjustment assistance.

The Agricultural Mechanization Law of 2012 (RA 10601) established a National Agriculture and Fisheries Mechanization Program which, among others, sought to “establish quality, safety, and performance standards for agricultural and fisheries machinery; support the establishment of quality, safety, and performance testing centers; support the development of a local agriculture and fisheries machinery industry; and promote the adoption of certified agricultural and fisheries machinery” (Article II, Section 5). Meanwhile, the Food Safety Act of 2013 (RA 10611) consolidated various food-specific regulations under a single food safety system jointly administered by DA, and Department of Health, the former covering fresh food and meat, the latter packaged and processed food.

As the country entered the AEC in 2015, Congress enacted RA the Sugar Industry Development Act (SIDA), as it sought to boost industry competitiveness even as ASEAN imports were now able to enter at 5 percent tariff. The Act provided a Php 2 billion annual allocation for this purpose, to be administered by SRA, who found its mandate suddenly expanded from a regulation-specialized agency to one with significant development function.

The Sagip-Saka Act (RA 11321) establishes a Farmer and Fisherfolk Enterprise Development Program, which strengthens the legal basis for a cluster-based approach (already in nascent form in the AFMA) to integrating farmers and fisherfolk in modernizing agricultural value chains. It creates a Farmer and Fisherfolk Enterprise Development Council, mandates the compilation of a Farmer and Fisherfolk Enterprise information system (including a voluntary registry of enterprises), and provides a set of fiscal incentives for farmer and fisherfolk enterprises.

New laws that break from past policy but on different poles of the market approach were the Free Irrigation Service Act and RA 11203, the Act liberalizing the rice industry.

RA 10969, the Free Irrigation Service Act (FISA), was a major step away from the market approach to irrigation in the form of cost recovery schemes in both NIS and CIS. By waiving irrigation service fees (for farmers cultivating not more than 8 ha), it shifted the cost of O&M of existing irrigation systems onto the national government, which in 2021 allocated Php 7.476 billion to National Irrigation Administration (NIA) for this purpose. FISA also risks eliminating incentives for farmer participation in irrigation O&M; NIA has tried to avoid this by continuing its irrigation management transfer scheme. It is difficult to see how this policy shift will not increasingly burden taxpayers over time as existing systems age, are damaged, and are widened with annual new irrigation projects; note that in 2019, the O&M subsidy started out at just Php 2.6 billion (Briones et al, 2020).

The other major reform in this period was the Act liberalization the rice industry in the Philippines (RA 11203). Rice industry liberalization eliminated the exception accorded to rice under the Agricultural Tariffication Act, hence the law is often referred to as “Rice Tariffication Law”. The MFN out-quota tariff equivalent is set at a prohibitive rate of 180 percent, but for ASEAN imports is kept down to a ceiling rate of 35 percent owing to ATIGA.

The law goes further than tariffication though, by terminating the dirigistic role of the NFA in NFA’s commercial function to the management of a rice buffer stock. The remaining authorized NTM is the Sanitary and Phytosanitary (SPS) import clearance issued by the Bureau of Plant Industry. The law also establishes a Rice Fund to enhance competitiveness of rice farming in the country, financed by tariff collections from rice imports (though subject to a floor funding of Php 10 billion per year). The Rice Fund will be in place for at least six years after effectively of the Act.

4. Indicators of agricultural policy

Total support and its components

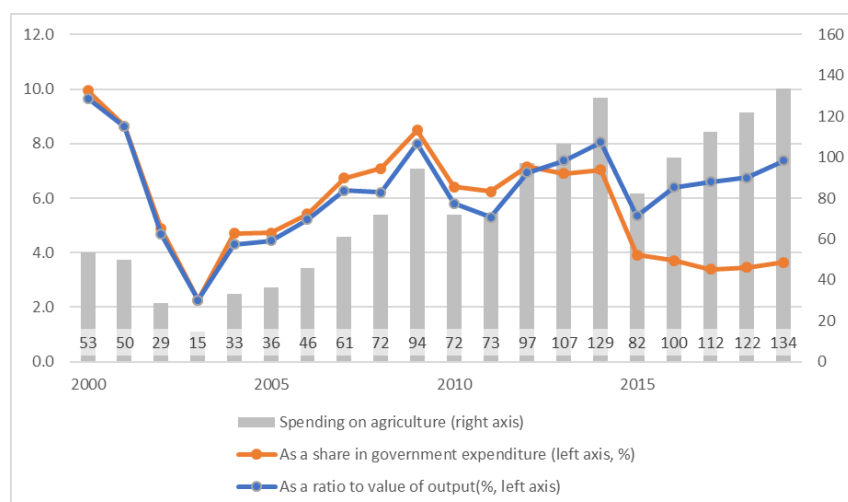
Public spending on agriculture has been volatile as a share in national spending.

Immediately after AFMA, it was possible to delineate a subset of public agricultural spending specifically devoted to AFMA. Up to 2009, the General Appropriations Act (GAA) contained line items under AFMA. However, from 2010 onward, AFMA was presented as a single budget item with Special Provisions (Oliveros, 2015). These provisions made clear that previously budgeted items under agencies such as DA, DAR, DPWH, Office of the President, etc., were also intended for implementation of AFMA. With this practice, delineation of AFMA-specific entries becomes an arbitrary exercise; hence, the following rather looks at agricultural spending as a whole.

Figure 3 presents total government expenditure on agriculture (which includes budget of DA, spending on agrarian reform, etc.). From Php 53 billion in 2000, expenditure fell to just Php 13 billion in 2003, before recovering somewhat in 2005. Such a trends violated AFMA, which mandates a minimum of Php 17 billion appropriation per year for six years (1999 – 2005), equivalent to Php 117 billion (Sect. 112). In fact, only a cumulative total of Php 61.4 billion was actually appropriated, representing a shortfall of 33.8%. Based on a study of DA Planning service, this shortfall was attributed to low absorptive capacity of DA, owing to political interference and delayed releases of cash allocation; and devolution-related problems, such as inability of LGUs to finance their counterpart requirement, as well as reluctance of some LGUs to cooperate with DA programs (UAP, 2007). However, from 2005 to 2013, the budget of DA doubled from Php 36 billion to Php 72 billion. In doing so, in doing so it fully covered the shortfall incurred in 1999 – 2005 (Oliveros, 2015).

The share of agriculture in national government spending, as well as the ratio of agriculture spending to agriculture GVA, mostly followed the same trend as the actual appropriation, up to around 2015. From 2015 onward, agricultural spending continued to rise from Php 82 billion up to Php 134 billion in 2019; likewise, the ratio to agricultural GVA increased from 5.4 to 7.4 percent. However, agriculture’s share in national government spending stagnated, within a 3.4 to 3.9 percent band.

Figure 3: National government expenditures on agriculture, 2000 – 2015, in Php billion

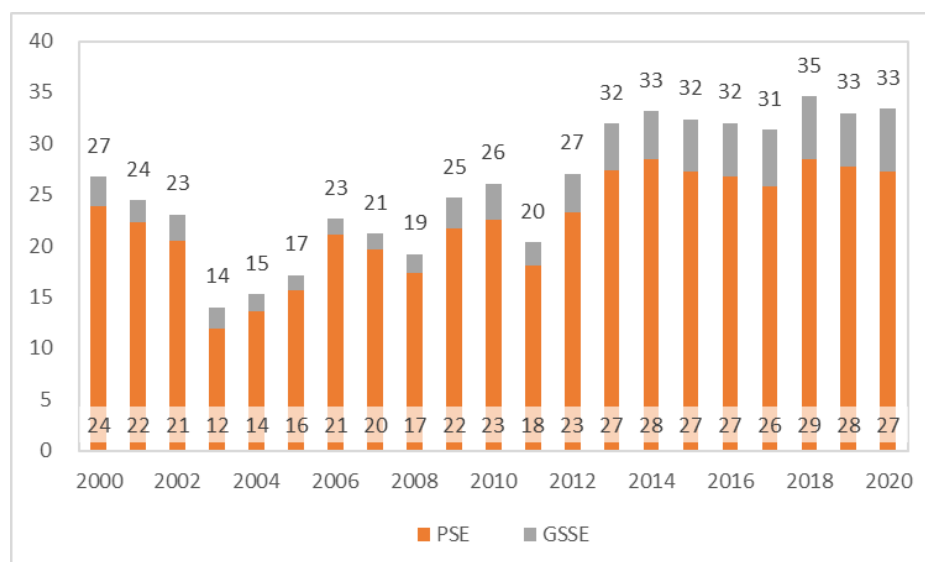


Note: includes expenditures on agrarian reform.
Source: DBM BESF, various years.

Support for agriculture, inclusive of commodity-specific production support, is sizable when gauged in proportion to the value of agricultural output.

TSEs for agriculture, as computed by OECD, are shown in Figure 4, as a ratio of value of production. TSE is equivalent to about one-third of value of production in 2020; the average for the period 2010 – 2020 is 31 percent. This is higher than the average in 2000 – 2010 when it averaged 26 percent.

Figure 4: TSE, by component, as a ratio to value of production (%)



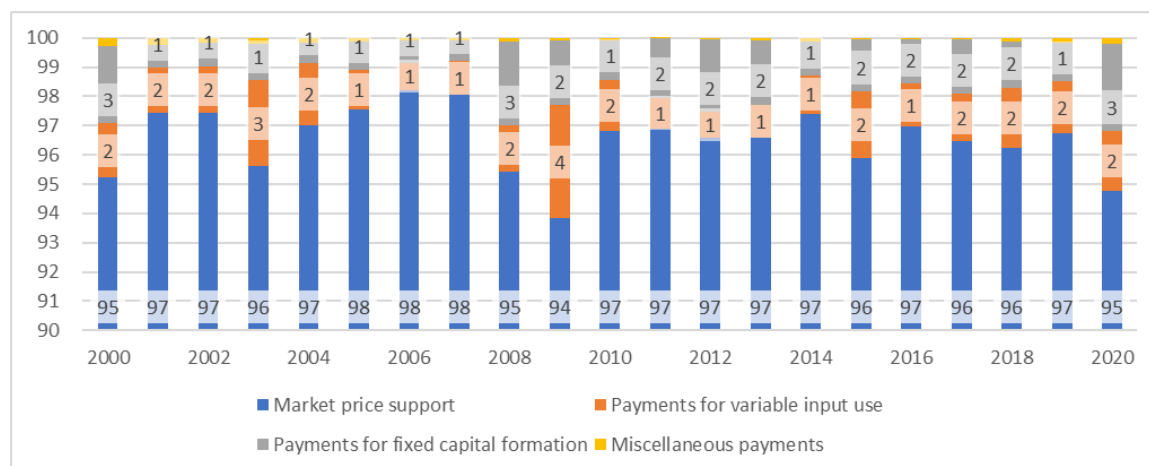
Source: OECD (2021).

The bulk of this is PSE, which tends to be commodity-specific support; in 2020, PSE was equivalent to 27 percent of value of production. The remainder is support for agriculture in general, i.e., GSSE, which was six percent of value of production. Over the period 2000 – 2020, the average PSE ratio was 22 percent, while that of GSSE was only 3 percent.

Agricultural production support is mostly provided indirectly via price policy; payments to producers meanwhile are split almost evenly between inputs and fixed capital formation.

Figure 5 provides a breakdown of producer support into its components, namely payments (in its various forms), and market price support. Payments, that typically require budgetary outlays, account for just 3.5 percent of value of output on average for 2000 – 2020; the remaining 96.5 percent is due to market price support, which is almost entirely due to import restrictions.

Figure 5: Distribution of PSE, by component, (%)



Source: OECD (2021).

Payments meanwhile are divided into payments for input use, payments for fixed capital formation, and miscellaneous payments; the average share of input payments is 1.7 percent, while that of fixed capital formation is 1.6 percent (miscellaneous accounts for just 0.1 percent). In 2010 – 2020 though the share of fixed capital formation is bigger, accounting for 1.8 percent (versus 1.6 percent for inputs over the same period). This was a decade wherein government invested in a big way in farm mechanization.

The commodity receiving the highest commodity support (as proportion to value of output) is rice, followed by sugar, and meat. Maize in recent years has been heavily protected.

Producer support is disaggregated by commodity in Table 2. Highest NPCs are found for rice, even after the tariffication law took effect in 2020, suggesting there are adjustment lags in the ability of importers to arbitrage difference between domestic and border price. The next highest protection is for sugar, owing to the SRA QR. Also maintaining high protection rates is pork, and poultry, both protected by high tariffs and non-tariff measures (NTMs), primarily in the form of SPS import clearance requirements. Lastly, maize since 2018 has seen rising NPC, reaching 33.2 percent in 2020. On the other hand, fairly low NPCs are seen for beef, and nil rates for coconut (an exportable).

The Table also shows total SCT, which typically equal to NPC. Only maize, rice, and sugar, show miniscule differences between SCT and NPC; these correspond to additional payments-based support for the corresponding commodities.

Table 1: Single commodity transfer (SCT) indicators, 2000 – 2020 (%)

	2000	2005	2010	2015	2018	2019	2020
Maize							
(1) NPC	49.4	-40.0	-12.3	-34.7	9.3	12.4	33.2
(2) SCT as a share of value of production	49.4	-40.0	-11.2	-32.9	10.6	13.2	34.0
Difference: (2) - (1)	0.0	0.0	1.1	1.8	1.4	0.8	0.7
Rice							
(1) NPC	40.8	25.2	38.9	65.0	52.3	60.7	61.5
(2) SCT as a share of value of production	41.9	26.2	39.7	66.0	53.4	61.4	62.7
Difference: (2) - (1)	1.1	1.0	0.8	1.0	1.1	0.7	1.3
Sugar							
(1) NPC	2.6	19.0	63.1	28.3	56.5	49.7	41.2
(2) SCT as a share of value of production	2.6	19.0	63.4	28.3	56.5	49.7	41.2
Difference: (2) - (1)	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Beef							
(1) NPC	9.1	9.1	9.1	9.1	9.1	9.1	9.1
(2) SCT as a share of value of production	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Difference: (2) - (1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pig meat							
(1) NPC	20.0	30.4	28.6	31.1	22.6	22.0	19.0
(2) SCT as a share of value of production	20.0	30.4	28.6	31.1	22.6	22.0	19.0
Difference: (2) - (1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Poultry meat							
(1) NPC	29.5	30.5	24.0	25.9	23.6	23.6	22.8
(2) SCT as a share of value of production	29.5	30.5	24.0	25.9	23.6	23.6	22.8
Difference: (2) - (1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Coconuts							
(1) NPC	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2) SCT as a share of value of production	1.0	0.3	0.6	3.4	1.3	1.4	1.1
Difference: (2) - (1)	1.0	0.3	0.6	3.4	1.3	1.4	1.1

Source: OECD (2021).

Historically, the most heavily protected commodity has been sugar, though since the 1990s, protection rates have increased dramatically for cereals and meat.

A related set of protection indicators is summarized in Table 3, over a longer time series. Only sugar can be seen to have enjoyed fairly consistently high protection rates since the 1960s. The other major importables started out with negative protection rates in the 1960s (except beef), transitioning to positive protection in the 1970s for meat, and later in the 1990s for rice and maize.

Table 2: NRAs and NPRs for agricultural products, 1962 – 2003 (%)

	NRAs						NPRs	
	1962	1970	1980	1990	2000	2003	1990-94	1995-00
Rice	-18	-8	-38	16	73	41	19	71
Maize	-14	-10	25	51	96	25	76	87

	NRAs						NPRs	
	1962	1970	1980	1990	2000	2003	1990-94	1995-00
Sugar	38	38	-18	29	77	84	81	106
Beef	15	15	5	20	10	10	-	-
Pigs	-30	13	48	25	6	-22	31	29
Chicken	-13	67	48	34	66	49	74	45

Sources: David (2003) for NPRs; David, Intal, and Balisacan (2007) for NRAs

Other indicators

The change in protection structure is evident in effective protection rates, which has swung in favor of agriculture since the late 1990s.

Table 4 presents estimates of EPRs compiled by Aldaba (2013), averaged for all sectors, and for agriculture. Whereas the historical record up to the 1980s showed a policy regime that tended to penalize agriculture, the reverse seems to hold from 1999 onward based on EPRs. The EPRs for agriculture importables from 1999 onward were higher than the average EPR importables over the same period. Hence not only was the policy regime succeeding to protect agriculture, liberalization elsewhere (e.g., imported inputs) allowed the EPRs to rise alongside the NPRs.

Table 3: Average EPRs, 1999 – 2004 (%)

	1999	2000	2002	2004
All sectors				
Importable	14.75	12.13	10.55	10.88
Exportable	3.45	2.72	1.98	2.36
Agriculture				
Importable	22.67	19.01	17.97	18.09
Exportable	15.36	11.31	8.89	10.30

Source: Aldaba (2013).

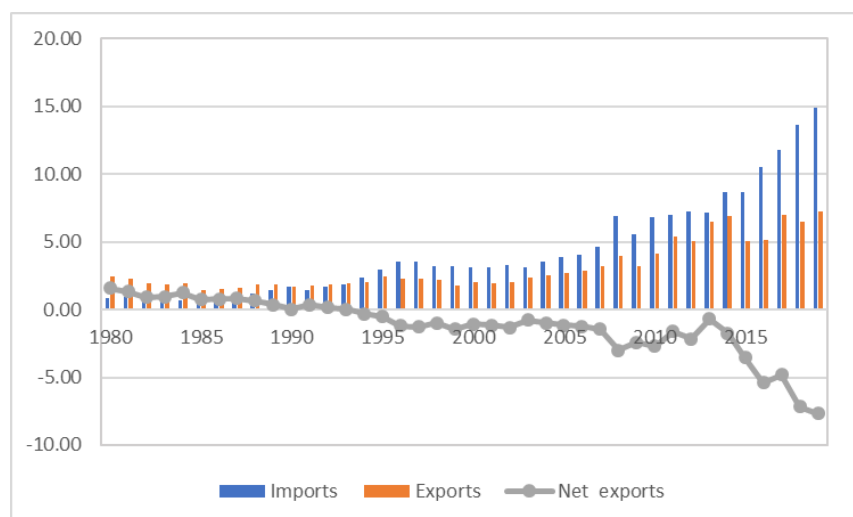
Since 1994 the Philippines has transitioned to being a net agricultural importer suggesting loss of comparative advantage for the agricultural sector as a whole.

Figure 6 displays trends in agricultural trade for the Philippines. In the 1980s the country was a minor net agricultural exporter averaging USD 1.0 billion net from 1980 to 1988. Within this period agricultural imports trended erratically whereas exports were already beginning its downward slide.

From 1989 onwards these trends solidified, with agricultural imports taking a more consistent upward trajectory, whereas exports remaining flat. By 1994, imports had overtaken exports, and never looked back; by 2019, net imports of USD 7.68 billion exceeded even the entire gross agricultural exports of USD 7.23 billion. Growth of agricultural imports can be traced to the following factors: i) economic growth raised demand for food products especially those with higher income elasticities, e.g. wheat, dairy, and meat, which are products for which the

country has no comparative advantage; ii) declining competitive advantage in traditional crops such as rice, maize, and sugar; iii) increased dependence on modern inputs which are largely imported, e.g. fertilizers, agricultural chemicals, and animal feed; and iv) trade liberalization which, despite enclaves of protection, boosted agricultural imports overall (David, 2003).

Figure 6: Agricultural imports, exports, and net exports, Philippines, 1980 – 2019, USD billions



Source: WTO (2021).

Based on revealed comparative advantage, the most competitive exports are products which tend to be fresh or lightly processed, with little change in composition over the past decades.

Whereas agriculture as a whole may not be a basic sector in which Philippines has a comparative advantage, within agriculture there are of course subsectors which remain globally competitive. The most competitive agricultural exports of the country in terms of RCA (average of 2018-2020) are listed in Table 5. The top is coconut oil, also the top export of the country, followed by bananas. Abaca fiber is also highly competitive (though not a major export), while vegetable extract (mostly from seaweed) is a major export. The top fruit export after bananas is the combination of dates, figs, pineapples, mangosteen, and mangoes.

Table 4: Ten most competitive agricultural exports of Philippines, by RCA, 2001 – 2020 (4-digit HS classification)

	2001	2005	2010	2015	2016	2017	2018	2019	2020
Coconut oil (0801)	77.8	64.7	69.6	55.8	51.5	58.4	52.5	54.3	44.5
Bananas (0803)	13.3	15.9	12.1	13.1	17.6	17.8	35.5	38.1	31.4
Abaca fiber (5305)	29.9	31.2	16.6	13.9	15.9	19.2	19.4	11.8	13.0
Nuts (0801)	10.8	13.5	12.1	5.9	6.6	7.4	8.8	8.4	8.6
Vegetable extract (1302)	4.3	4.1	7.8	9.1	9.4	7.2	6.9	7.8	6.8
Live fish (0301)	4.1	4.2	5.6	11.7	13.5	12.0	7.9	6.0	6.1
Pineapples, mangoes (0804)	7.1	5.6	4.7	6.2	8.0	5.2	5.5	7.0	6.9
Tobacco (2401)	1.8	3.5	8.4	5.9	4.1	4.7	6.7	5.4	4.4
Prepared fish (1604)	2.4	2.2	6.1	4.5	3.9	5.3	5.9	5.0	5.2
Vegetable oils (1302)	0.0	0.1	0.1	0.0	0.0	0.0	4.0	3.2	5.1

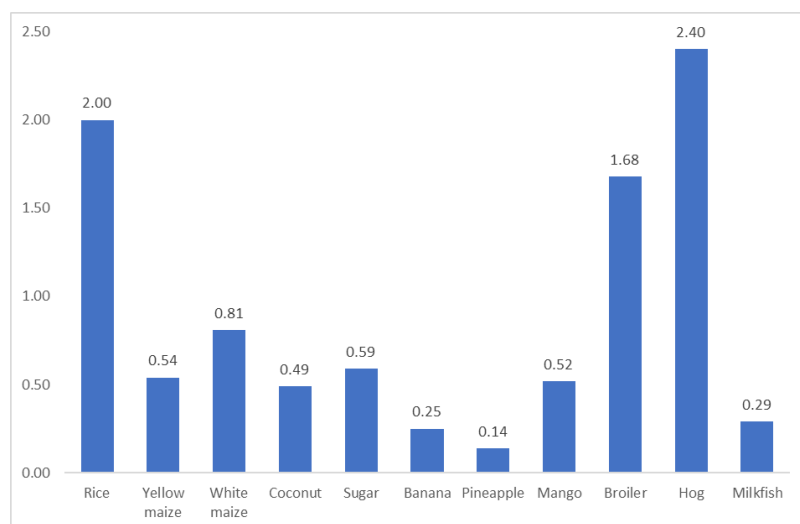
Source of basic data: ITC (2021).

The top ten exports are all fresh or semi-processed products. Moreover, the list of the top ten using RCA in 2001 shows virtually the same products, except tobacco and vegetable oils is displaced by seaweed and oilcake; the latter products are also in the top 20 for 2018-2020 RCA. The Philippines seems unable to make substantive innovation in its export basket, nor significantly expand its processed exports.

Based on DRC estimates as of 2012, rice and meat are high domestic cost items that should be imported at the margin, while exportable items are produced at low domestic cost.

The most recent DRC estimates for the Philippines are computed for 2012 and compiled in Figure 7. Rice, hog, and broiler have DRCs above unity. At the time, world prices of Sugar and Yellow maize were surging, hence DRCs were then below unity. The other commodities which are effectively non-traded (e.g., white maize) or exported (coconut, banana, pineapple, and mango), all have DRC below unity. For the main importables, the same study points out that, using market (rather than shadow) prices, the financial DRC estimates are below unity for rice (0.62), broiler (0.87), and hog (0.90). The divergence is largely due to trade barriers, which allow private cost and returns to realize a positive profit, when in fact society is at the margin producing these commodities at a loss.

Figure 7: DRC estimates for selected commodities, 2012



Source: Briones (2014).

5. Review of expenditure programs

General services support

GSSE has been mostly provided in the form of infrastructure, mainly through irrigation.

The other component of total support is GSSE, which also typically requires budgetary outlays. Table 2 provides a breakdown of GSSE by component. Outlay for GSSE has risen from Php 12.8 billion, rising nearly seven-fold to Php 84.9 billion in 2020, equivalent to 6.1 percent of value of production. Compare this with the 5 percent equivalent of value of production for commodity-based payments (Section 4.1). The largest item for GSSE is infrastructure, of which

irrigation (“Hydrologic”) accounted for 86 percent share in 2000; this was to fall to 77 percent in 2020, or 44 percent in total GSSE.

The R&D component, known as “knowledge generation”, only doubled over this period, reaching Php 2.6 billion in 2020 (based on OECD calculation), up from Php 1.3 billion in 2000. The extension component (“Knowledge transfer”) meanwhile increased more than eight-fold over the same period, reaching Php 17.6 billion in 2020 up from Php 2.0 billion in 2000. Also showing significant increases over time is Inspection and control, Infrastructure, and Public stockholding (NFA subsidy).

Table 5: GSSE by component, 2000 – 2020, in Php billions

	2000	2005	2010	2015	2018	2019	2020
GSSE, total	12.8	9.8	38.5	70.1	86.8	71.4	84.9
Knowledge generation	1.3	0.5	1.1	2.8	3.2	2.6	2.6
Knowledge transfer	2.0	1.3	4.2	8.0	13.5	10.3	17.6
Inspection and control	0.6	0.3	1.4	1.6	3.3	3.8	4.9
Infrastructure	8.3	5.6	20.8	49.3	56.3	44.3	49.2
Hydrologic	5.3	4.6	14.1	30.5	44.6	32.5	37.9
Other physical infra	3.0	1.0	6.7	18.8	11.7	11.8	11.3
Marketing and promotion	0.4	0.1	0.9	2.8	2.5	2.3	2.4
Public stockholding	0.0	0.9	8.0	4.3	7.0	7.0	7.0
Miscellaneous	0.1	1.1	2.2	1.2	1.1	1.1	1.1

Source: OECD (2021b).

Irrigation

Production support for irrigation is limited to rice and has been prone to inefficiencies.

Thought OECD classifies irrigation as GSSE, in the Philippine context irrigation investments are commodity-specific for rice. The expansion in irrigation support from 2010 to 2020 coincided with the renewed thrust towards rice self-sufficiency under the Food Staples Sufficiency Program (FSSP).

Under the first AFMA review, critical observations had already been made about the country’s irrigation program (David, 2008). AFMA did come at a critical juncture when investments in national irrigation systems (NIS) and communal irrigation systems (CIS) were stagnating, and existing systems deteriorating; an estimated 70,000 ha of rehabilitation area were required just to maintain the current service level of NIS and CIS. AFMA hoped to turn this around by introducing a shift from large gravity irrigation systems to small, farmer-managed irrigation systems; devolving the development of such systems to LGUs (already a provision of the LGC); and funding provision. In fact, after passage of the law, the country’s irrigated area rose by just 54,000 ha over the period 1998 – 2004. Funding post-AFMA still fell short of what was needed for NIS and CIS rehabilitation, let alone small irrigation systems development.

This was echoed in the second major AFMA review. Ella (2016) observed that, from 2009 to 2013, the share of irrigated to potential area had increased by only 6.3 percentage points (from 49.3 to 55.6 percent). Data and reporting systems masked key inconsistency in terms of rehabilitation accomplishment and the actual extent of deterioration of existing systems.

Moreover, based on cropping intensity, NIS fell short of the ideal of 200%, averaging just 150 percent over the period.

These concerns were echoed in a recent assessment of irrigation systems and governance of PIDS. According to Inocencio et al (2021), the country's irrigation program was riddled with numerous problems, at various stages of irrigation development, from planning and design, all the way through to O&M. The problem of irrigation program cannot be addressed by simply increasing budget for irrigation development; rather a set of institutional and science-based measures are needed to ensure optimal utilization of the public irrigation investments. In particular, irrigation program should not be treated as subservient to rice self-sufficiency, but rather towards multi-purpose water management covering diversified crop systems, drainage, as well as other water demands including for energy.

Other infrastructure

FMR and market infrastructure projects have a mixed record on effectiveness.

The biggest allocation under “Other physical infrastructure” are farm-to-market roads. Elepano (2015) noted that over the period 2001-09, government spent about Php 25 billion to construct or rehabilitate 18,211 km of FMR; from 2010 to 2013, another 4,708 km was constructed. Starting 2013, DA began requiring a 10 percent cost share from LGUs (to be paid either in-cash or in-kind). Focus group discussions (FGDs) among FMR stakeholders found that, to distribute funds to as many recipients as possible, projects were reduced to miniscule segments of 200 m each, which is as opposite of the area-based approach under SAFDZ (see Chapter 1).

World Bank (2021) notes that the FMR budget has been falling over the period 2015 – 2021, from Php 14.9 billion to Php 10.4 billion. One reason for budget reduction is the high underutilization rate, reaching 70 percent in 2019 and 58 percent in 2020. The fragmentation noted by Elepano (2015) has not really been addressed, with generally poor supervision of regional field units responsible for screening proposals. Nor are LGUs immune to this dispersion tendency, being also prone to patronage politics as national agencies. Project identification has also suffered from DA's inability to delineate “key production areas” for linking to markets, in coordination with regional and local development plans, and road network plans of LGUs. Allocation seems to be not adequately informed by high quality benefit-cost analysis, nor by poverty statistics, despite DA's avowal that poverty incidence is a criterion for identifying projects. At the maintenance stage, LGUs are also seen to suffer inadequacies. For institutional reasons, simply allocating more funds to LGUs, as will happen starting 2022 under the Mandanas ruling, will be insufficient to address this performance gap. What is needed rather is to put in place mechanisms in DA to improve monitoring of FMR projects and aligning the incentive structure at the local level, e.g., by funding LGU trainings, and making FMRs O&M eligible for conditional matching grants. The newly created Bureau of Agriculture and Fisheries Engineering (BAFE) will hopefully address this gap in supervision.

As for market infrastructure, the evaluation of Manalili et al (2015) covered municipal food terminals (MFTs) and barangay food terminals (BFTs). Under the Agri-Pinoy Food Terminal Program then in place, funding of up to Php 150,000 was provided for each BFT, while MFTs funding support ranges from Php 0.5 to Php 1.5 million. Beneficiaries must provide counterpart funds, initial operating capital, and a management team to operate the facility. The study finds that the main benefit from the food terminals is that it reduces transport expense, being closer to the farmer compared with the previous market outlet. However full utilization of BFTs and

especially MFTs is not guaranteed; for instance, one MFT in Pangasinan is underutilized as a more established wholesale market already exists in its vicinity.

Research, development, and extension (RDE)

AFMA implementation has thus far failed to address the pre-AFMA problems affecting public RDE.

AFMA establishes a Council for Extension, Research and Development in Agriculture and Fisheries (CERDAF), to serve as oversight body for the RDE system. AFMA assigns DA as the lead agency for the RDE system, to coordinate with the Department of Science and Technology (DOST). R&D activities shall be multidisciplinary and shall involve farmers, fisherfolk, and their organizations, and those engaged in food and non-food production and processing. Budgeting shall be allocated on multi-year basis and based on R&D grants. The law and its IRR sets the R&D budget to 1 percent of gross value added (GVA) of agriculture and fisheries by 2001, with an equal amount to be allocated for extension services.

Briones (2016) pointed out that, prior to the AFMA, public agricultural R&D was conducted within a complex and unwieldy system that needed to be rationalized. Budgetary outlays for agricultural R&D were low and dispersed over numerous research-oriented entities. Similarly, the extension system suffered from weak linkages with the R&D institutes upstream, as well as farmers downstream, with devolution being blamed as a contributor to the disarray. AFMA succeeded in ensuring involvement of farmers, private sector, and adoption of a multidisciplinary approach to R&D. It also succeeded in strengthening the role of national government agencies (NGAs) as enablers of the LGU extension system. However, AFMA was not able to address the complex and unwieldy bureaucracy for public agricultural R&D. One reason is that CERDAF was not functional. Furthermore, while the provision on multi-year allocation was implemented, projects continue to be short-lived (not more than three years). The 1 percent funding minimum was not achieved, either for R&D nor for extension, though recently, R&D funding has been on the rise. Owing to inadequate funding and low prioritization, the outreach of the LGU extension service has been very limited. The review recommends immediate convening of the CERDAF, immediately plugging the funding gap for RDE, and setting up an M&E and accountability system for RDE service delivery.

Public education and worker training

AFMA provisions on public education and worker training have been implemented formal schooling up to the secondary level and postsecondary education, but compliance for tertiary education has lagged.

Not included under GSSE are expenditures for formal education and postsecondary worker training, even if directed towards agriculture-related content, as these are typically not coursed through DA. Nonetheless owing to clear provisions of AFMA, elements of public education and worker training support should conceptually be part of GSSE.

AFMA identifies human resource development as a priority thrust. Accordingly, primary and secondary schooling are mandated to include an Agriculture and Fisheries Education Program, under the Department of Education (DepEd), aimed at promoting appreciation of science in agriculture and fisheries development, and increasing attractiveness of an agriculture and fisheries career. For post-secondary education (technical and vocation schooling), the Technical Education and Skills Development Authority (TESDA) is mandated to implement a

Post-Secondary Education Program for Agriculture and Fisheries, covering curriculum development, institutionalizing agriculture and fisheries skills standards, and regular upgrading of learning facilities and equipment.

For tertiary education, the Commission on Higher Education (CHED) is mandated to implement a National Integrated Human Resources Development Plan (NIHRD), covering academic, R&D, extension, and practitioners of agriculture and fisheries, including provision of a scholarship scheme for pursuing graduate degrees. Complementing the Plan is the formulation of performance standards and merit promotion system in higher education and continuing education, including the creation of an Agriculture and Fisheries Board in the Professional Regulation Commission (PRC), to establish licensing standards for A&F professionals.

Key to this plan is a network of National University or College of Agriculture and Fisheries (NUCAF), as well as Provincial Institute of Agriculture and Fisheries (PIAF). Within the NUCAF/PIAF, CHED will accredit national centers of excellence (NCE) in agriculture and fisheries, with a geographic limit (among NUCAF, only one can be accredited as NCE in each region; among PIAFs, only one can be accredited NCE in each province). The NCE system is part of a rationalization scheme in which non-NCEs will ultimately be required to phase out their A&F course offerings.

According to Briones (2016), DepEd has complied with AFMA provisions for primary and secondary schooling. In postsecondary education, TESDA has succeeded in introducing training regulations for agri-related competencies, while PRC has established an Agriculture and Fisheries Board. However, implementation of provisions for higher education have lagged. Since 2009, CHED has attempted to revitalize the NIHRDP. By 2015 it had identified eight NCEs and eight Centers of Development (targeted for upgrading to NCEs). However, to date, the rationalization scheme for NUCAFs and PIAFs remains unenforced.

Input and mechanization support

Input and mechanization support are inefficient instruments to promote AF competitiveness.

As discussed in Section 3, the main components of expenditure support for agricultural producers are input support and mechanization support. According to OECD (2017), input support had in the immediate post-AFMA period been mainly allocated to subsidize seeds, fertilizers, and other agricultural inputs. However, with the advent of the FSSP, input subsidies were devoted to new modalities such as the Community Seed Bank. Under this scheme, government seed support is provided to Irrigators Associations (IAs) and other non-governmental organizations (NGOs), with the condition that participating farmers pay back in-kind into the Seed Bank. Included under this Seed Bank is support for storage and warehouse facilities. Another roll-over scheme is the High Yielding Technology Program under the NRP, which commenced in 2015. Here the repayment for assistance is incentivized by additional rewards in the form of farm machinery and postharvest facilities, thereby morphing into a mechanization support scheme. Meanwhile, the farm mechanization program covers both on-farm machinery and postharvest facilities. A typical assistance scheme for on-farm mechanization involves grants of equipment to farmer organizations (FOs) with a 15 percent cost share scheme. Meanwhile postharvest equipment is usually in the form of drying facilities and postharvest processing, e.g., rice mills.

Benefit from mechanization in the case of rice farms has been empirically verified by Gonzales et al (2016) using PSA Cost and Returns data for 2009. On a per kg palay basis, net income of rice farmers relying on machine-based farming is usually higher than farmers in animal-based farming, *ceteris paribus*. The difference is largest (Php 1.21) for rainfed hybrid/certified systems in wet season; during dry season, there are also large income differences, i.e., Php 0.99 for irrigated farms with good (farmer's) seed, and Php 0.88 for irrigated farms with hybrid seed. Mechanization was a disadvantage only for wet season good seed farms (Php -0.99) and good seed farms (-Php 0.25). The authors also found that demand for machine services (in person-machine hours) is inelastic to the price (in Php per day rental fee), ranging from -0.401 for rainfed rice farms, up to -0.418 for irrigated rice farms.

The analysis indicates that farmers mostly benefit from mechanization, and realize this, hence are making rational choices to hire farm equipment depending on rental cost. Hence machines, just like seeds, fertilizers, and agri-chemicals are "private goods". This category of goods contrasts with "public goods" where private demand is likely to fall short of socially desirable, such as for new knowledge from R&D activity. Subsidies for private goods are a major source of resource misallocation in agricultural policy (Lopez and Galinato, 2007). They simply displace expenditures which would otherwise have taken place, often towards inferior items of spending (e.g., machines that do not conform to farmer's preferred specification), and bereft of long-term productivity gains (OECD, 2016).

A further problem with expenditure support programs is a strong bias for rice, followed (at great distance) by sugar and maize. These are all "political crops" for which DA feels responsible for achieving self-sufficiency targets. In general, the politicization of DA towards commodity support has shaped the very structure of the DA bureaucracy (Gonzales, 2015; David, 1997). The commodity-based programs and agencies (such as Philippine Coconut Authority, the Bureau of Fisheries and Aquatic Resources, etc.) are ascendant over cross-cutting functional entities such as Fertilizer and Pesticide Authority, Bureau of Agricultural Research, Bureau of Agriculture and Fisheries Standards, etc. Such a commodity orientation has entrenched the siloing of DA units and rendered it highly resistant to rationalization and reform.

6. Summary and recommendations

Synthesis

Agricultural policy has made considerable progress in adopting the market approach since the mid-1990s.

Economic policy of the independent Filipino Republic had long been characterized by pervasive government intervention. Initially the policy regime penalized export-oriented agriculture; by the early 1990s though, the policy regime was now serving to protect import-substituting agriculture. At the same time, a reform initiative was moving against legacy policies. Accession to WTO, and subsequently AFMA decisively ruled in favor of the market reforms.

Agriculture remains a basic sector in which state intervention remains pervasive, with strong reliance on propping up market price through policy-induced import barriers.

There are numerous elements of what constitutes a "market approach"; not all of these were applied to all of AF. This may be seen in the exceptional and protectionist treatment of

agricultural products and services, both in negotiated international trade agreements, as well as in domestic laws and regulations.

Other producer support takes the form of commodity-oriented expenditure programs, skewed towards input and machinery subsidies, irrigation, and for the benefit of the rice industry.

Commodity-specific expenditure programs are another important mechanism for delivering producer support in Philippine agriculture. In practice, expenditure programs are heavily skewed towards commodity-specific support, largely for irrigation (rice), as well as input subsidies and equipment subsidies (rice and banana program commodities). Subsidies that are commodity-specific and directed towards private goods are not part of a market approach. The bulk of expenditure support is not being allocated along lines consistent with a market approach, otherwise expenditures would be skewed towards subsidies that support healthy market functioning, or address market failures such as the provision of public goods.

Dirigistic tendencies and policy reversals are explained by the political economy of the disparity problem.

The inability of government to commit entirely to a market approach is by no means unique to the Philippines. As pointed out in our political economy framework, over the course of economic development, state interventions cluster along various categories of state intervention (food problem, disparity problem, and farm problem), with few if any exemplars of a pure market approach. As a middle-income economy, the Philippines is currently implementing an agricultural policy to address the disparity problem, marked by inconsistent and incoherent policies resulting from contending pressures of diverse interest groups.

In the AFMA, the market-driven approach was linked to the *comparative advantage of the agriculture and fisheries sectors* even though the country has essentially lost its comparative advantage in AF as a whole.

The language of AFMA in introducing the market-driven approach included a presumption that the country has a comparative advantage in AF. This was no longer a valid presumption since the mid-1990s. Rather than contributing to misleading expectations about the agricultural sector as a whole, the wording of the law should have been crafted with greater care about the true extent and nature of market adjustment. Comparative advantage actually emerges with the free operation of the price system, among the sub-sectors of AF. Provisions of AFMA that admit the need for encouragement for farmers to shift to more profitable crops as a result of market reform, should instead be further emphasized and elaborated.

Recommendations

- i) **Producer support for agriculture should move away from market price support in favor of expenditure support.**

Market price support via import barriers is prone to distortions that make society worse off, whereas market reform is associated with socially beneficial re-allocation (David, Intal, and Balisacan, 2009). Support for farm producers remains a valid social goal, but the preferred instrument should be expenditure support. Government programs funded by taxpayers are much more transparent in terms of who pays and who benefits from producer support.

The magnitude of market price support as estimated in Section 4.1, is equivalent to about Php 375 billion in 2020. Converting this into expenditure support is unrealistic given it is more than nine times the size of the largest agricultural budget of DA, DAR, and other agencies combined. This however demonstrates the point about transparency – consumers **are already paying this much** in terms of foregone cheaper goods from abroad, but in a way that involves little if any public discussion and debate.

- ii) **Expenditure support programs should themselves be oriented away from commodity – specific towards support for public goods and general services such as extension, regulatory, and market assistance services.**

It will not do to simply scale up the current set of expenditure programs to compensate, as it were, for withdrawal of market price support in compliance with Recommendation 1. Otherwise, the distortion and waste from market price support will simply replicate in different forms in the expenditure program as discussed extensively in Section 5. The composition rather should be oriented towards economic services such as roads and other market infrastructure, together with social services such as education and health, which have higher pay-off for agriculture and for alleviating rural poverty (David, 2003). R&D, and to some extent extension, are also public goods that merit government spending. Lastly, market linking and business development services, as authorized by the Sagip-Saka Act, and operationalized in the DA's Farmer and Fisherfolk Clustering and Consolidation (F2C2) Program, are also legitimate objects for taxpayer funding.

- iii) **Expenditure programs require careful design along functional tasks, performance indicators, and M&E systems.**

Even the aforementioned preferred forms of producer support, such as for technology generation, adoption, water infrastructure, market infrastructure, and transport infrastructure, are not free from risk of inefficiency and wastage. The design of expenditure programs should be subject to careful scrutiny; allocations should be made along core functions, and based on predefined performance indicators (outputs, outcomes, and impacts). These indicators shall serve as basis for an M&E system.

This recommendation amounts to adopting a simple, measurable, achievable, relevant, and timebound (SMART) management system. However, genuine implementation of SMART in agriculture expenditure programs will doubtless be transformational. For one, the insistence on functional allocation rules out the commodity-specific programs (and even agencies) entrenched in DA over the past three decades. Instead, the commodities will appear as desiderata within broader cores such as FMR program, irrigation program, regulatory services, etc. Furthermore, the performance indicators and functional M&E system will introduce a culture of transparency and accountability in an erstwhile opaque insulated bureaucracy.

- iv) **Design, performance indicators, M&E systems, and appropriate strategies, should be put together in the AFMP, and structured around SAFDZs.**

Compliance with recommendation iii) should be documented within the AFMP. Following the provision of AFMA, the AFMP should be organized along the five major concerns stated in the law (Section 13 – 15), namely: food security; poverty alleviation and social equity; income enhancement and profitability; global competitiveness; and sustainability. Strategies in terms of the core functions can then be spelled out towards addressing these major concerns. Drawing insight from Chapter 1, such an approach to planning will be better operationalized in relation to properly delineated SAFDZs, in contrast to commodity-based *status quo*.

This planning mode serves as an antidote towards the commodity-based and highly politicized approach pursued thus far, resulting in a heavily rice-centric expenditure allocation. An area-based approach will result in an expenditure program that is more diversified and in sync with local farm and market opportunities and constraints.

- v) **Sustained political will behind the market approach is needed to adopt it more consistent in agricultural policy.**

Policy incoherence and volatility owing to the Disparity problem is almost inevitable, especially in democratic middle-income economies. The best that can be expected under the current political economy is a gradually widening adoption of market-driven measures, i.e., gradual tariff reduction of MFN tariffs on sensitive agricultural goods; competent regulators that prevent NTMs from turning into NTBs; and phase out of state-mandated allocations such as Agri-Agra law and its ilk. Hopefully, as the country progresses over the next few decades towards a high-income economy, its policy regime is expected to transition towards solving the farm problem. Even in this mature state of political economy, the market driven regime cannot be expected to be normative; nonetheless, country will hopefully be wealthy and secure enough to easily bear the social cost an agriculture-based policy regime.

7. References

- Aldaba, R. 2013. Twenty years after Philippine trade liberalization and industrialization: what has happened and where do we go from here? Discussion Paper Series No. 2013-21. Quezon City: PIDS.
- Almonte, J. 2010. We are responsible for one another. Dialogue on Centrist Values and Policies. Makati City: Centrist Democratic Movement and Konrad-Adenauer – Stiftung.
- Bautista, R., and G. Tecson. 2003. International dimensions. In: Balisacan, A, and H. Hill. Eds. The Philippine Economy: Development, Policies, and Challenges. New York: Oxford University Press, 136 – 71.
- Briones, R. 2016. Chapter 8: Human Resource Development. In: Barrios, E. and associates. A Rapid Assessment of the Agriculture and Fisheries Modernization Act (AFMA) (Phase I Evaluation). Development Academy of the Philippines, Pasig City, 263-287.
- Briones, R. 2016. Chapter 9: Research Development and Extension. In: Barrios, E. and associates. A Rapid Assessment of the Agriculture and Fisheries Modernization Act (AFMA) (Phase I Evaluation). Development Academy of the Philippines, Pasig City, 288-232.
- Briones, R., 2015. Domestic Resource Cost in Philippine Agriculture: Measuring Global Competitiveness of Key Commodities. Philippine Journal of Development 41: (1 and 2): 155-182.
- Briones, R., R. Clemente, A. Inocencio, R Luyun, and A. Rola. 2020. Assessment of the Free Irrigation Service Act. Research Paper Series 2020-05. Quezon City: PIDS.
- Clarete, R., and J. Roumasset. 1983. An Analysis of the Economic Policies Affecting the Philippine Coconut Industry. Working Paper 83-08. Quezon City: PIDS.
- David, C. 2003. Agriculture. In: Balisacan, A. and H. Hill. The Philippine Economy: Development, Policies, and Challenges. Oxford University Press.
- David, C., W. Cruz, F. Adriano, L. Adriano, C. Arboleda, E. Bautista, F. Bernardo, L. Cabanilla, MC Cruz, W. David, L. Gonzales, C. Habito, S. Halos, M. Lamberte, F. Lantican, M. Lantin, M. Mangahas, E. Ponce, A. Quisumbing, Q. Rola, Z. Toquero. 19886. Agenda for Action for the Philippine Rural Sector. Quezon City: PIDS and UPLB Agricultural Policy Research Program.
- David, C., P. Intal, and A. Balisacan. 2009. Philippines. In: Anderson, K., and W. Martin, eds. Distortion to Agricultural Incentives in Asia. Washington, D.C.: World Bank, 223 – 254.
- David, W. 2008. Impact of AFMA on irrigation and irrigated agriculture. The Philippine Agricultural Scientist 91(3):315-28.
- De Dios, E. and P. Hutchcroft. 2003. Political Economy. In: Balisacan, A. and H. Hill. The Philippine Economy: Development, Policies, and Challenges. Oxford University Press.
- De Dios, E., and J. Williamson. 2015. Chapter 21 – Deviant Behavior: A Century of Philippine Industrialization. In: Balisacan, A., U. Chakravorty, M. Ravago, eds. Sustainable Economic Development: Resources, Environment, and Institutions. Cambridge, MA: Academic Press, 371 – 400.
- Dohner, R., and P. Intal. 1989. The Marcos legacy: Economic policy and foreign debt in the Philippines. In: Sachs, J. And S. Collins, eds. Developing Country Debt and Economic Performance. Vol. 3: Country Studies - Indonesia, Korea, Philippines, Turkey. Chicago: University of Chicago Press.
- Easterly, W. 2005. What did structural adjustment adjust? The association of policies and growth with repeated IMF and World Bank adjustment loans. Journal of Development Economics 76(1):1-22.

- Elepano, A. 2016. Chapter 6: Other infrastructure. In: Barrios, E. and associates. A Rapid Assessment of the Agriculture and Fisheries Modernization Act (AFMA) (Phase I Evaluation). Development Academy of the Philippines, Pasig City, 194-215.
- Ella, V. 2016. Chapter 4: Irrigation. In: Barrios, E. and associates. A Rapid Assessment of the Agriculture and Fisheries Modernization Act (AFMA) (Phase I Evaluation). Development Academy of the Philippines, Pasig City, 140 – 170.
- Goldsbrough, D., K. Barnes, I. Mateos, T. Tsikata. 2002. Evaluation of prolonged use of IMF resources. Evaluation Report. Washington, D.C. : IMF.
- Gonzales, E. 2016. Chapter 12: Governance. In: Barrios, E. and associates. A Rapid Assessment of the Agriculture and Fisheries Modernization Act (AFMA) (Phase I Evaluation). Development Academy of the Philippines, Pasig City, 409-470.
- Gonzales, L. C. Elca, B. Paningbatan, R. Umali, A. Gonzales, J. Ignacio. 2016. Socioeconomic analysis of rice mechanization in the Philippines. 265 – 292. In: S. Banta, ed. Mechanization in Rice Farming. College, Laguna: Asia Rice Foundation, 265 – 292.
- Hayami, Y. and Godo, Y., 2004. The Three Agricultural Problems in the Disequilibrium of World Agriculture. Asian Journal of Agriculture and Development, 1(1), pp.3-16.
- Hayek, F. 1944. The Road to Serfdom. Chicago, IL: University of Chicago Press.
- Hutchcroft, P. 1991. Oligarchs and cronies in the Philippine state: the politics of patrimonial plunder. World Politics 43(3):414-450.
- Inocencio, A., A. Inocencio, and R. Briones. 2021. Assessing the resurgent irrigation development program of the Philippines: synthesis report. In: Briones, R., Ed. Revitalizing Philippine Irrigation: A Systems and Governance Assessment for the 21st Century. Quezon City: PIDS.
- Intal, P., and J. Power. Philippines. In: Kreuger, A., M. Schiff, and A. Valdes. The Political Economy of Agricultural Pricing Policy. Baltimore: Johns Hopkins University Press, 1149 – 194.
- Lopez, R., and G. Galinato. 2007. Should governments stop subsidies to private goods? Evidence from rural Latin America. Journal of Public Economics 91(5-6):1071-1094.
- Mazumdar, S. 2011. The state, industrialisation and competition: a reassessment of India's leading business enterprises under dirigisme. Economic History of Developing Regions 26(2):33-54.
- OECD. 2016. OECD's Producer Support Estimate and Related Indicators of Agricultural Support: Concepts, Calculations, Interpretation, and Use (The PSE Manual). Paris: OECD.
- OECD (2017), Agricultural Policies in the Philippines, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264269088-en>. Accessed September 30, 2018.
- OECD. 2021a. Agricultural Policy Monitoring and Evaluation 2021. Paris: OECD.
- OECD. 2021b. OECD.Stat. <https://stats.oecd.org>. Accessed 09/10/2021.
- Oliveros, N. 2015. Chapter 13: Budget and financing. In: Barrios, E. and associates. A Rapid Assessment of the Agriculture and Fisheries Modernization Act (AFMA) (Phase I Evaluation). Development Academy of the Philippines, Pasig City, 471 – 488.
- Pante, F. 2018. PIDS at 40: revisiting its early history. In: Llanto, G., V. Paqueo, and A. Orbeta, eds. From Evidence to Policy: Celebrating 40 Years of Policy Research. Quezon City: PIDS.
- Schiff, M. and A. Valdes. 1991. The Political Economy of Agricultural Pricing Policy. Vol. 4. A Synthesis of the Economics in Developing Countries. Baltimore: Johns Hopkins University Press.
- Schultz, T. 1953. The Economic Organization of Agriculture. New York: McGraw-Hill.
- Spence, M. 2021. Some thoughts on the Washington Consensus and subsequent global development experience. Journal of Economic Perspectives 35(3):67-82.

- Tecson, G. 2007. Trade and promotion policy in Philippine industrial development. *The Developing Economies* 21(4):386 – 414.
- Williamson, J. 1990. Chapter 2: What Washington means by policy reform. J. Williamson, ed. *Latin American Adjustment: How Much Has Happened?* Washington, D.C.: Institute for International Economics.
- WTO. 2021. Agriculture: fairer markets for farmers. https://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm3_e.htm Accessed 30 September 2021.