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THE AGRI-COOPERATIVE IN THE DEVELOPMENT OF THE PHILIPPINE AGRICULTURE: A POLICY BACKGROUND PAPER FOR THE AGRICULTURAL COOPERATIVE DEVELOPMENT AGENDA

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The Agri-cooperative in the Development of Philippine Agriculture: A Policy Background Paper for the Agricultural Cooperative Development Agenda

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Abstract

This study serves as a background policy paper for the preparation of an Agricultural Cooperative Development Agenda based on a bottom-up, evidence-based and multi-stakeholder process driven by agricultural cooperatives themselves. It finds that government policy is shaped by the goal of enabling cooperatives to function as a viable organizational form of economic enterprise, towards economic development and social justice. For agriculture, cooperatives are seen as a vehicle for realizing collective action, economies of scale, strengthening bargaining power, and professionalization of organizational management. The economic theory of cooperatives points to potential advantages of the cooperative form in realizing a plurality of objectives (beyond profit maximization); as well as addressing problems in contract enforcement, asymmetric information, and imperfect competition.

Secondary and primary data (collected via online survey) on cooperatives show the following: Only a minority of farmers and fisherfolk are members of a cooperative; most agri-coops operate within a small geographic scope, fall in the micro to small category in terms of number of members and value of assets, have a median age of 11 years, have manageable debt, pays out substantial amounts as members' benefit, but is just about breaking even. Benchmarking against other countries in Asia, agri-coops remain far serving as viable economic enterprises for most farmers, fisherfolk, and agri-fisheries workers in the Philippines. The onus remains on the state to go beyond registering and regulating cooperatives and to actively promote cooperatives to them. While establishing institutional mechanisms towards this aim is important, it is equally critical to allocate public funds to organize and strengthening of agri-cooperatives, in the context of commercial partnerships with modern agribusiness.

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1. INTRODUCTION

This report is a background paper towards the preparation of an Agricultural Cooperative Development Agenda (ACDA) based on a bottom-up, evidence-based and multi-stakeholder process that will be driven by agricultural cooperatives themselves who are participating in the project. The resulting agenda is intended to to serve as policy framework, develop or improve government programs and services, guide banks, private sector, and donors in engaging agri-coops.

This background paper focuses on the agricultural policy component of ACDA. It examines the state of agricultural development in the Philippines; looks at the role of cooperatives from an economic perspective; and describes the state of agri-coops in the Philippines.

2. THE STATE OF AGRICULTURAL DEVELOPMENT IN THE PHILIPPINES

Agriculture and the economy

Agriculture remains a major contributor to the Philippine economy. Three decades ago, agriculture already had smallest share among the basic sectors at 19 percent, while services had the largest at 43 percent (Table 1). Since then, agriculture's share continued to drop, bottoming out at 9 percent in 2019 before the pandemic, while the services share reached 61 percent. Agriculture's share in GDP recovered slightly to 10 percent in 2020 during the pandemic.

Table 1. Shares in GDP, current prices, 1990 – 2020 (%)

	1990	2000	2010	2019	2020
Agriculture	19	14	14	9	10
Industry	38	35	32	30	28
Services	43	51	54	61	61
Total	100	100	100	100	100

Source: Philippine Statistics Authority (PSA) (2021a).

The contribution of agriculture becomes more prominent in terms of employment. In parallel with its output share, since 1991 agriculture's employment share had also been falling; nonetheless it still contributed 23 percent of employment in the country in 2019. Moreover, the share of agriculture in output is much smaller than its share in employment; hence, agricultural workers must be much less productive compared to their counterparts in other sectors.

Poverty is highly concentrated among farmers, farm workers, and fisherfolk. PSA (2021) computes poverty measures by basic sector. In their most recent estimate (2018), poverty incidence of the population was 16.7 percent; however, poverty incidence among farmers was 31.6 percent, and among fisherfolk was 26.2 percent. This is consistent with the aforementioned low productivity of agricultural jobs. Moreover, 62 percent of the working poor in the country are working in agriculture. Even if rapid economic growth pre-pandemic were to resume in the near future, such growth will only succeed in solving mass poverty if income gains reach vast numbers of agricultural households.

Performance of agriculture

Growth of agriculture lagged in the 2010s. Agriculture achieved respectable rates of growth in the 1990s and 2000s, but faltered in the 2010s (Table 2). During that decade, East Asia and the Pacific (mainly China), as well as Sub-Saharan Africa managed to keep their growth rates at 3.4 percent per year, while that of the Philippines dropped to under 2 percent per year.

Table 2. Annual growth rate of agricultural GVA by decade, 1990 – 2019, in 2010 USD (%)

	1990s	2000s	2010s
East Asia & Pacific	2.9	3.9	3.4
Latin America & Caribbean	2.3	3.1	2.3
Philippines	2.1	3.5	1.7
Sub-Saharan Africa	3.0	5.5	3.4

Note: Regional averages omit high income countries.
Source: World Bank (2021).

Climate change and other environmental shocks has been making agricultural growth volatile. Growth in Philippine agriculture has been pulled down by volatility in crop production, driven in large part by climate shocks. For fisheries meanwhile, production in capture fisheries has dwindled owing to decades of overfishing and destruction of marine habitats. (Briones, 2019). Finally, livestock has very recently suffered a severe contraction owing to African Swine Fever (ASF).

Since the 1990s, the Philippines has emerged as a major agricultural importer owing to rising demand and poor export performance. Since 1980, the growth rate of agricultural imports of Philippines is 8 percent, same as that of Thailand and similar to that of Indonesia (7%), though much slower than that of Vietnam (12%). However, export growth in Thailand, Indonesia, and Vietnam have kept pace with their respective import growth, respectively growing 6 percent, 6 percent, and 11 percent (since 1997) respectively. However, for the Philippines, export expansion was much slower, at 3 percent per year. Hence Indonesia, Thailand, Vietnam, remain large net agricultural exporters, but Philippines has, since the 1990s, become a net agricultural importer.

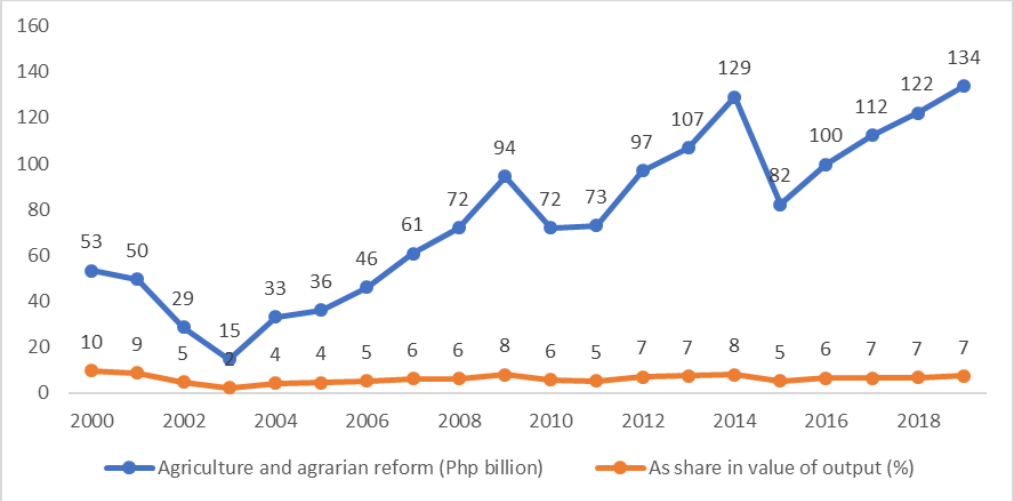
Table 3. Value of agricultural exports and imports, in USD millions, 1980 – 2019, selected countries

	1980	1990	1997	2000	2010	2019
Exports						
Indonesia	4,774	4,154	8,548	7,764	35,957	42,953
Philippines	2,412	1,683	2,299	2,026	4,129	7,225
Thailand	3,712	7,786	13,021	12,220	35,136	42,982
Vietnam			3,063	3,954	16,835	29,943
Imports						
Indonesia	1,757	2,126	5,656	5,727	15,644	22,841
Philippines	825	1,665	3,557	3,104	6,823	14,904
Thailand	821	3,230	4,960	4,484	11,985	17,112

	1980	1990	1997	2000	2010	2019
Viet Nam	327	236	852	1,269	10,272	26,023

Source: World Trade Organization (2021).

Philippine agriculture has been supporting its agricultural sector with price support and various subsidies. In the Philippines, government spending on agriculture and agrarian reform (based on DBM data) bottomed out to Php 15 billion in 2003; from there it trended upward (with a few reversals) until the present (Figure 1).



Source: Data up to 2014 from DBM (2021); data 2015 onward from PSA (2021b)

Figure 1. Agriculture and agrarian reform expenditures (obligation basis), amount and share in value of agricultural output

Public spending peaked at Php 134 billion in 2019. Relative to value of agricultural output, public agricultural spending has also been increasing, reaching 8 percent in 2014, before levelling off to 7 percent by 2016 – 2019. The rising outlay for agriculture reflects improved affordability of bigger budgets and structural change: Philippines is now a middle-income economy generating most of its tax revenue from the 90 percent of economic activity outside agriculture.

The value of government support for producers ("producer support") is shown in Table 4, based on OECD data. By 2020, the Philippines has been supporting agriculture more than USA or EU (as a share in value of agricultural output). The bulk of support is, however, extended by indirect measures via trade protection of key products. USA and EU have by contrast been supporting agriculture using direct payments. Of these, distortionary subsidies (i.e. payments for input use, or conditional on current production) range from 7 to 10 percent of output in USA and EU, compared to just 1 percent in Philippines. The relative size of distortionary subsidies is larger in 2020 than 2000 for USA, though the reverse is true for EU. Note though the level of distortionary at present is much lower than in the 1980s, as the regime of agricultural support worldwide has been evolving away from distortionary payments and border protection, towards more neutral payments and open trade (OECD, 2021).

Table 4. Indicators of policy support for agriculture, 2000 and 2020, selected countries

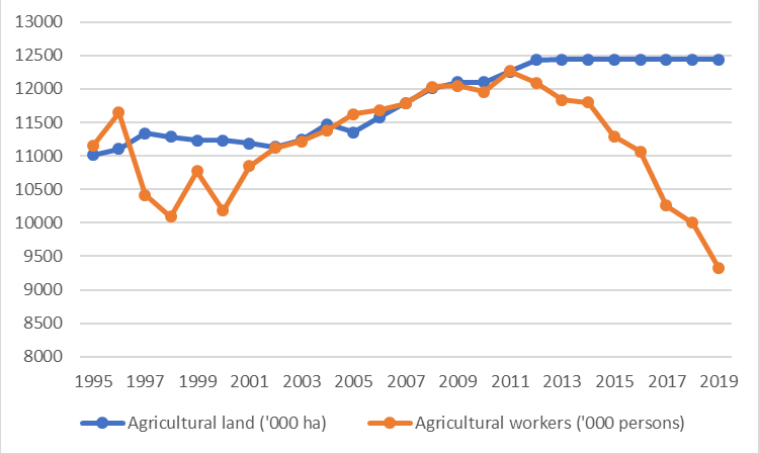
	USA		EU		Philippines	
	2000	**2020**	**2000**	**2020**	**2000**	**2020**
Value of production (USD millions)	189,318	331,458	222,748	452,748	10,242	28,000
Shares in value of production (%)						
Producer support estimate	25.4	12.3	35.9	23.1	23.9	27.3
Market price support	6.8	0.8	17.6	3.7	22.8	25.9
Support based on payments	13.1	9.6	16.3	19.4	1.1	1.4
Distortionary payments	6.6	7.4	16.2	9.9	1.1	1.4

Source: OECD (2020)

The absolute number of agricultural workers has been in long-term decline owing to overall transformation of the economy. Key explanatory factors for growth in agriculture are increases in the quantity of factors of production, namely labor and land. As for labor: the absolute number has been increasing since 1990 (except for a few years in the late 1990s) up to 2010; hence up to this year, labor has been a positive contributor to the expansion of agriculture. From 2011 though, structural change underwent a new phase with the absolute decline in the number of workers (Figure 2). Strong economic growth and employment expansion during this period has motivated the migration of workers out of agriculture into industry and services (Briones, 2017). The trend was temporarily reversed in 2020 during the pandemic, owing to contraction in services and industry; however, the pre-pandemic intersectoral migration will likely resume once the economy recovers.

Agricultural land area has remained stable and land per worker has been rising in the 2010s. Land is likewise not a significant source of growth for agriculture. The total land area for agriculture has been stable since 2011 at around 12.5 million ha (Figure 2). On the positive side, the stable area trend implies that land has not been a significant source of agricultural contraction, notwithstanding widespread belief about land conversion. Based on DAR data, between 1990 and 2015, cumulative area of legal land use conversion from agriculture to other uses was just under 152 thousand ha; 78 percent of that area was located in Region IV-A, and another 7 percent in Region III, owing to rapid urbanization of those regions relative to the rest of the country. This figure admittedly excludes illegal land use conversion; however, one must be careful not to exaggerate the role of land use conversion in the performance of agriculture as a whole.

Productivity growth has lagged considerably, as farmers lack access to technologies and extension services. If factors of production are not growing, then Philippine agriculture can only grow via productivity improvements. In fact, Philippines agriculture has lagged in terms of productivity growth. Table 5 shows the most comprehensive indicator of productivity, namely total factor productivity (TFP); as can be seen, TFP growth even turned negative in 2010s, and remained weak in the 2000s compared with neighboring countries.



Source: Agricultural land – FAO (2021); Agricultural workers – PSA (2021b).

Figure 2. Size of agricultural area and agricultural employment, 1995 – 2019

Table 5. Annual growth rate of agricultural total factor productivity, decadal averages, 1961 – 2016 (%)

	1961-70	1971-80	1981-90	1991-00	2000-10	2011-16
Philippines	0.4	2.6	0.6	1.6	1.5	-0.3
Indonesia	2.1	1.4	0.5	1.1	3.0	1.9
Malaysia	2.9	2.5	3.1	1.6	2.5	0.7
Myanmar	-0.4	1.6	-0.3	3.7	5.5	-1.8
Thailand	1.0	2.4	-0.6	3.0	1.9	2.0
Viet Nam	0.0	1.6	1.6	1.8	2.8	2.0
Bangladesh	-0.1	0.6	-0.8	0.1	2.5	1.1
India	0.8	0.4	1.5	0.8	2.3	2.5
Pakistan	2.4	0.1	2.8	1.0	-0.1	0.4

Source: USDA ERS (2021).

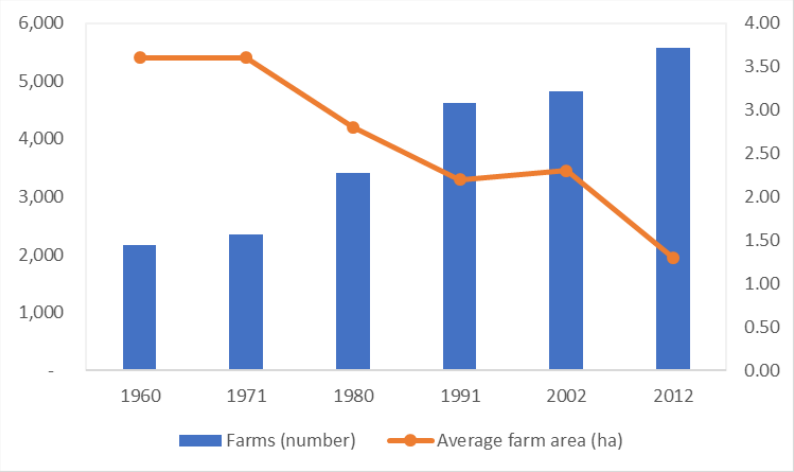
Consider productivity trends in rice: low growth in productivity has been linked to underinvestment in R&D and extension (Balisacan and Sebastian, 2006). Underperformance in extension in turn has been blamed in part to the weakness of local government service delivery since 1991 after the devolution.

Agricultural performance has also suffered from poor logistics and inadequate infrastructure. Since 2016, government has been undertaking catch-up program for infrastructure led by numerous flagship projects under the theme “Build-Build-Build” (BBB). Aside from the BBB, various government agencies

also engage in the provision of infrastructure i.e. farm-to-market roads projects of the Department of Agriculture (DA).

Nonetheless the Philippines continue to lag its neighbors in these investments. The country ranks only 60th out of 160 countries in logistical services based on the Logistics Performance Index (World Bank, 2019). Philippine agriculture has suffered gravely from the inadequate state of transport infrastructure and high logistics cost.

The country's agricultural area has been divided into an increasing number of ever-shrinking farms. In 1960, there were about 2 million farm holdings in the country, for an average size of 3.5 ha. Since then the number of farms has inexorably increased, leading to smaller and smaller average for sizes; by 2012 the average farm size was only 1.3 ha. The fragmentation is the combined impact of population growth, as well as the implementation of the Comprehensive Agrarian Reform Program (CARP).



Source: PSA (2021)

Figure 3. Number and average size of farms, 1960 – 2012

According to PSA (2020), total scope of land acquisition and distribution (LAD) of CARP was 5.43 million ha. By 2019, nearly nine-tenths of the scope had already been distributed (Table 6), leaving a balance of just over six hundred thousand ha. Across the regions, percent of scope accomplished exceeds 95 percent for six out of fifteen regions. The balance of undistributed scope is largest in Region VI, the region with second lowest accomplishment rate but second highest share in scope. The next largest balance is in BARMM, the region with the lowest accomplishment, i.e. where one-third of the LAD scope remains undistributed.

Table 6. Scope and accomplishment shares, land acquisition and distribution, as of 2019 (%)

	Scope (in total)	Distributed, in scope	Balance (in total)
Philippines	100	88.8	100
CAR	1.9	97.5	0.4
Region I	2.7	99.3	0.2
Region II	7.7	87.9	8.3

	Scope (in total)	Distributed, in scope	Balance (in total)
Region III	8.4	95.8	3.1
Region IV-A	4.0	87.8	4.4
Region IV-B	3.5	94.5	1.7
Region V	7.5	80.7	13.0
Region VI	10.4	75.2	22.9
Region VII	3.7	91.6	2.8
Region VIII	9.1	88.6	9.3
Region IX	4.4	96.9	1.2
Region X	6.7	94.4	3.4
Region XI	4.8	95.7	1.8
Region XII	13.5	95.1	5.9
CARAGA	5.4	93.1	3.3
BARMM	6.1	66.7	18.2

Source: PSA.

Fragmentation of farms and rigid land markets has been a contributing factor to low agricultural productivity. While CARP has progressed far in terms of equity, it has had the inadvertent effect of worsening land fragmentation, rigidifying land markets, and misallocating land use. Adamopolous and Restuccia (2020) have found that land reform by itself has reduced average farm size by 34 percent, and agricultural productivity by 17 percent; much of the productivity effect is due to the government assignment of land and the ban on land tenure transfer.

While land reform advocates attribute the harmful effect of CARP to the failed support service component of the Program, it remains the case that the very fragmentation of smallholdings constrained government from reaching out to adequate technical, financial, logistical, and other services. DA is now attempting to rectify this by its program of farmer and fisherfolk clustering and consolidation (F2C2). Under this program, cooperatives, along with other farmer organizations, are seen to play a key role in realizing economies of scale, facilitating the delivery of technical and other services to smallholders, and creating linkages between smallholders and more profitable activities in agricultural value chains.

Rural finance leaves out a significant proportion of small farmers and fisherfolk owing to high transaction cost. Geron and Llanto (2016) reported Agricultural Credit Policy (ACPC) survey data had 60 percent of small farmers managed to borrow in 2014; this was down from 68 percent in 2006. Of those that borrowed, 60 percent managed to borrow from at least one formal source. High risk discourages formal creditors from extending uncollateralized loans to small farmers; conversely, farmers find it difficult to comply with the paperwork and other requirements of borrowing from banks. Recently though, the percentage of borrowers went up to 64 percent in 2017 based on the same ACPC survey (Ducanes, 2020).

High transaction cost, considerably worsened by fragmentation of farmholdings, is a key constraint to rural development. As one banker explains: “An average sugarcane farmer with a 1.5 ha farm will borrow about Php 80,000 as working capital. If you put the bank’s spread of 5 percent on the loan, that’s about Php 6,000 each year. That amount is not even enough to cover the lost of loan evaluation” (AgriFinancing Summit, 2016).

3. POLICIES FOR AGRICULTURAL DEVELOPMENT: PHILIPPINE EXPERIENCE

Historical background

Spanish colonial period

The roots of inequitable development of the country were planted way back in the colonial period when Spanish conquerors instituted a system of government and a framework for commercial activity. According to Corpuz (1992, p. 137): "The economic history of the Philippines until the 1890s is largely the history of the changes in the land system and the breakdown of the single occupational class established in the 16th and 17th centuries."

The same paper offers an overview of that economic history, summarized in the following: upon conquest, the territory of the Philippines was claimed by the Spanish king. From the Crown Land, the king (through his representative) apportioned *haciendas* to the Church and to Spanish settlers, and *pueblo* lands to natives. To enable Christianization, Spanish rule, defense against raiders, and exaction of tribute, the native population was zoned into *pueblos* (*reduccion*) where families were tied to small plots (effectively under usufruct rights), and forced to pay tribute, make contributions to the church, and render forced labor. Sedentary small-scale agriculture was introduced or vastly upgraded by the introduction of plow agriculture by the friars, thereby expanding the surplus that could be claimed by the state and Church. Initially the population was literally reduced in number owing to hardship and disease; however from the mid-18th century some reform (notably the phaseout of the private land grant scheme known as *encomienda*) led to population recovery and an expansion of pueblo lands. The friar estates (*haciendas*) were also expanding during this period.

By the 19th century, a services and manufacturing economy (mostly native crafts) was emerging, and many families began to abandon their fields, even as pueblo lands were gradually being taken over by a local elite class, either by informal sale or loan forfeiture. The pueblo and friar lands were still under smallhold cultivation; on the other hand, large scale agriculture was introduced in the *realenga* (unsettled land outside the pueblos), vastly expanding the *haciendas* under private ownership. The most successful large-scale private *haciendas* were planted to sugarcane. The Spanish government however provided very little funding for wider economic development, namely development of infrastructure and a system of public education.

Independence and recolonization

The 1896 Revolution led to the formation of an independent Republic in 1898. According to DA (2021), one of the first agencies formed was the Department of Agriculture and Manufacturing. The nascent Filipino-led State clearly had economic development in mind in forming this agency.

Soon however the Philippine-American war ended with re-colonization of the country, this time under the aegis of the USA. This time the entire territory was forcibly placed under colonial rule, including the erstwhile Muslim sultanates. Agriculture fell under a Bureau placed under the Department of the Interior. In 1917, the Bureau was expanded into a Department of Agriculture and Natural Resources,

and subsequently in 1923 into the Department of Agriculture and Commerce.[2] The occupation government promoted agricultural education and extension, established a public education system, and began to invest in public works, including irrigation and village roads. The American legal system of property rights was introduced into the country; the government also redistributed friar lands (Integra LLC, 2017).

Despite this, the occupation government on the whole continued to perpetuate the overall inequity of land distribution system, while opening up large tracts of alienable public land to business investment. At the same time, the country began a gradual process of industrial and commercial development as a burgeoning population began seeking alternative livelihoods beyond agriculture. Industrial growth from 1890 to 1913 averaged 6.3 percent per annum from a small base, while the momentum was sustained from 1920 to 1938 at 3.4 percent. (Benetrix et al, 2012). At the same time, the peasantry began to get organized, in parallel with a labor movement, which led to a vigorous defense of worker and farmer rights, right up to the Japanese invasion (Agoncillo, 2012).

The postwar Philippine Republic

The 1940s were mostly a decade of war and constant conflict under the short-lived Japanese colonial government (1942-1945), followed by re-occupation by USA in 1945. In the midst of economic recovery, the Philippines regained its independence in 1946. The earliest data on GDP showed that structural change had already gone far at the start of independence: the share of agriculture in GDP was already down to 32 percent, while that of services was close to half (48%). However, agriculture remained the dominant source of the nation's foreign exchange as the nascent industrialization was mostly directly inward into domestic markets (Tecson, 2007), in contrast to the export-oriented thrust of Japan, Taiwan, and Korea.

The task of economic development was placed under the oversight of a separate Department of Agriculture and Commerce; subsequently agricultural development was spun off as a distinct social goal under the Department of Agriculture and Natural Resources. Agrarian relations began to be regulated under a series of laws; land reform was introduced under the administration of Ramon Magsaysay, and expanded in the term of Diosdado Macapagal.

The 1960s and 70s were periods of agricultural expansion, as discussed earlier; President Marcos ushered in the Martial Law era in 1972. He implemented land reform in rice and corn lands, intensified regulation and government control over agriculture. At the same time his aggressive expenditure program, fueled by foreign loans, strengthened the infrastructure base for economic development. His authoritarian regime, however, provoked agrarian unrest and intensified peasant mobilization. The debt-finance macroeconomic trends proved unsustainable, precipitating an economic crisis in 1983, culminating with restoration of democracy in 1986.

President Aquino introduced a series of market-oriented reforms, including abolition of export taxes, removal of export boards, import liberalization, and consolidation of various commodity finance funds into the Comprehensive Agricultural Loan Fund (Balisacan, 1998). Administrative reforms included the

[2] https://www.da.gov.ph/history/.

charter of DA (Executive Order [EO] 116), establishment of the Sugar Regulatory Administration or SRA (EO 18), and overall reorganization of the bureaucracy under the Administrative Code (EO 292).

Agricultural policy under the 1987 Constitution

The landmark achievement of her Aquino administration was the promulgation of new Constitution in 1987. The 1987 Constitution included an Article XII on National Economy and Patrimony, beginning with the following: *The State shall promote 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.* Enshrined in this article are simultaneously agricultural development and agrarian reform, industrialization, efficiency, and competitiveness, broadly defined to cover both domestic and foreign markets. Other key principles are:

- Sections on Agrarian and Natural Resources Reform (Sections 4 to 8);
- Preferential treatment of Filipino nationals in ownership or exploitation of the national patrimony, domestic investment, and certain businesses, such as public utilities;
- A trade policy that serves the general welfare and utilizes all forms and arrangements of exchange on the basis of equality and reciprocity (Section 13);
- Autonomy of local governments (Art. II, Sect. 25).

Subsequently several key reforms were implemented based on these Constitutional provisions:

- A Comprehensive Agrarian Reform Program was enacted (Republic Act [RA] 6657);
- Frontline service delivery in agriculture, nutrition, health, and other development functions, were devolved to LGUs under the Local Government Code or LGC (RA 7160);
- The Magna Carta of Small Farmers (RA 7602) enacted in 1992

The Magna Carta lays down the rights and obligations of small farmers. Rights include: freedom from monopoly or cartel; social security coverage; access to low-interest credit; fair hearing and representation in government; access to market information; share in the benefits of natural resources; pursue education and skills development; and access technical assistance from an appropriate government agency. On the other hand, farmers have an obligation to make use of farmers' organizations, preferably cooperatives; participate in self-help activities; aim for increased productivity; adopt production and marketing strategies to realize economies of scale; and pay government fees, premiums, and taxes.

The provision on trade policy in the Constitution was left ambiguous. The Magna Carta fleshed this out in the case of agricultural trade, by outright banning the importation of agricultural products produced locally in sufficient quantity. Aside from indirect production support, the law also mandated the state to provide direct production support in the form of input subsidies, as well as price support, with specific mention of rice and corn.

The Ramos Administration assumed power in 1992 on the vision of "Philippines 2000"; to attaining this vision, the preferred strategy was reliance on free markets. Ambitious liberalization efforts were launched, reaching agriculture in 1995 with accession of the country to the World Trade Organization.

In compliance with its treaty obligation, Congress passed the Agricultural Tariffication Act (RA 8178). The new law expressly repealed the quantitative restrictions (QRs) on imports imposed by the Magna Carta of Small Farmers, with the sole exception of rice imports.

RA 8178 also introduced the Agricultural Competitiveness Enhancement Fund (ACEF), intended to fund a safety net scheme for farmers adversely affected by tariffication. Unfortunately, ACEF was not utilized effectively for its intended purpose; according to Commission on Audit, as of 2009, ACEF funds were diverted to unauthorized use; ACEF loans suffered from high delinquency rates, and were largely uncollateralized. In 2011, releases were suspended by Department of Budget and Management (Israel, 2012). In 2016, Congress extended effectivity of the ACEF to 2022, and mandated its allocation to credit (80%, under Land Bank), R&D (10%), and agricultural education (10%).

The QR on rice was to be finally repealed in 2019 under the law on rice industry liberalization (RA 11203). The same law established the Rice Competitiveness Enhancement Fund or Rice Fund, to be endowed with a minimum of Php 10 billion a year for five years, more if the rice tariff revenues exceed Php 10 billion. The Rice Fund is to be allocated for rice farm machineries and equipment (50%), rice seed development and promotion (30%), rice credit assistance (10%), rice extension services (10%). It is however too early to tell whether the Rice Fund has been delivering effective support services for rice farmers.

The reform momentum was secured by the Agriculture and Fisheries Modernization Act or AFMA (RA 8435). Among others, AFMA adopted the market approach, free competition, and endorsed safety nets for small farmers. Among the targets for market reform was credit; the law phased out direct credit programs, though indirect programs, where financing is extended by authorized financial institutions (i.e. private and government, such as Land Bank of the Philippines) were retained under the Agro-industrial Modernization and Credit Financing Program.

One of the objectives of AFMA is to "promote people empowerment by strengthening people's organizations, cooperatives and NGO's and by establishing and improving mechanisms and resources for their participation in government decision-making and implementation" (Section 3). Organizing people's organizations, together with corporations, nucleus estates, and consolidated farms, enables economies of scale, bargaining power, and hiring of professional managers. Section 109 of AFMA provides for duty-free importation of all types of agriculture and fisheries inputs, equipment and machinery, by cooperatives and other enterprises engaged in agriculture and fisheries, for the exclusive use of the importer. The privilege was provided for the first five years of AFMA implementation, then extended to 2015 (RA 9281). However, it was found that the privileged was almost entirely exercised by large companies (UAP, 2007; Gonzales, 2015).

Despite the market orientation of AFMA, reliance on mandatory allocations for agricultural credit was enforced under the Agri-Agra Law of 2009. The law requires banks to allocate 15 percent of their loan portfolio to agriculture and the remaining 10 percent to Agrarian Reform Beneficiaries (ARBs), for a total of 25 percent. Failure to meet this threshold is meted a penalty of 0.5 percent of the shortfall. In fact, starting 2015 banks had been undercompliant in lending to agriculture; for ARBs the shotfall was even greater, meeting only 2 percent of the requirement in 2012 and below that ever since. Moreover, direct lending was only a minor share of the agri-agra lending, as banks preferred to invest in indirect

compliance (i.e. securities of Land Bank, Development Bank of the Philippines, and other eligible securities; and shares of stock in Quedancor, Philippine Crop Insurance Corporation, and other accredited financial institutions. Undercompliance has been atributed to stringent documentary and collateral requirements of banks, as well as perception of risk in lending to agriculture (Sawali, 2021); these are the same issues cited earlier in the aforementioned Agrifinancing Summit.

The Fisheries Code of 1998 (RA 8550) meanwhile introduces major reforms in the fisheries sector. It delineates municipal from commercial waters, and assigns rights to municipal waters solely to small scale municipal fishers. Following the LGC, the Fisheries Code assigns management of municipal waters to LGUs, while commercial waters were to be regulated by DA – Bureau of Fisheries and Aquatic Management.

4. COOPERATIVES AND AGRICULTURAL DEVELOPMENT

Economic theory of the cooperative

Nature and potential role of the cooperative

To understand the potential role of the cooperative in agricultural development, it is essential to first understand its basic nature. According to International Cooperative Alliance (ICA), a "cooperative" refers to "an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise." Among the seven fundamental cooperative principles, the 2nd is "democratic member control." Several of the other fundamental principles (such as member economic participation) are corollary to democratic member control. This principle distinguishes the cooperative from the mainstream alternative, namely the *investor-owned firm* (IOF); For the IOF, decision-making in the latter is based on equity ownership rather than democratic control.

Cooperatives as goal-centered enterprises

In standard economic theory, the IOF is modeled as a decision-making entity that purchases inputs, undertakes production, and sells the resulting output, with the singular end-goal of *maximizing profit*. Early economic theorizing of the cooperative adopted the model of a goal-centered enterprise, without identifying that goal with profit maximization. Royer (2014) terms such goal-centered modeling with smooth production functions and applying marginal analysis under "neoclassical theory of cooperatives".

An early goal-centered model was posited by Helmberger and Hoos (1962). A cooperative represents a vertically integrated enterprise composed of upstream members supplying raw material, and downstream producers selling processed output. The aim of the enterprise is to maximize the price of members' supply, subject to the downstream producer breaking even.

Variations on this theme are listed by Royer (2014) as follows:

- Maximization of net earnings of the cooperative;
- Minimization of net price charged by cooperative to its members;
- Maximization of member returns, including patronage refund;
- Maximization of quantity purchased from members.

Cooperatives as governance structures

Other models regard the cooperative as a governance structure that organizes interactions between individual actors; the approach deepens and complicates the representation of enterprise behavior compared with the neoclassical theory. Hansmann (1996) notes that in an agricultural setting, farmers may face information and bargaining disadvantages in dealing with independent upstream suppliers and/or downstream buyers. However, when a group of farmers is homogenous, the cost of owning the downstream or upstream enterprise is relatively low. Hence the cooperative represents the solution of the farmers to remedy information and holdup problems along the value chain. The similarity of this solution to the rationale for family farming was pointed out by Valentinov (2007). Indeed, the cooperative is interpreted as an extension of the family farm, namely an organizational form that minimizes transaction costs, realizes economies of scale, and exercises countervailing power. The last function of cooperatives also receives prominent treatment in the literature review of Candemir et al (2021) where cooperatives serve, among others, to eliminate "double marginalization" from the actions of market intermediaries.

Cooperatives in Asia's rural development

Cooperatives have long played a role in community development throughout rural Asia. Perhaps the earliest examples of the modern cooperative were established in Japan in the 19th century; in 1900 an Industry Cooperative Law was passed. Government invested heavily in agricultural cooperatives after 1906. By the 1990s, large swathes of agriculture were controlled by 3,600 agricultural cooperatives or *nokyo*s. The *nokyos* control nearly all of the country's rice crop, and 90 percent of the fertilizer market, as well as offering credit and insurance services (Klinedinst and Sato, 1994).

Agricultural cooperatives are also a prominent fixture of rural development in Republic of Korea. The first modern cooperative organization in Korea was set up in 1907 to help small farmers with their credit needs. In 1957 an Agriculture Cooperative Law was passed; around this time an Agriculture Bank had been established (1956), while an Agriculture Cooperative was found to support marketing business of farmers (1957). In 1961 the government fused the two entities into the National Agricultural Cooperative Federation (NACF), as the apex entity of an agricultural cooperative hierarchy at the city/county, and down to the village level. By 1968 about 16,000 coops had been organized, usually of small sizes (average of 139 farmer members). In 1969 the government began to consolidate village cooperatives via mergers; by 1973 the number of primary cooperatives was down to 1,500, with an average membership of 1,400 persons (Choi, 2006).

In Thailand, as early as 2005 there were 4,137 number of agriculture cooperatives, composed of nearly six million persons (a very sizable share of the farming population of the country). Government has a strong support system for agriculture cooperatives under its Ministry of Agriculture and Cooperatives (MOAC). The MOAC undertakes registration, regulation, and promotion of cooperatives; it even has a separate audit department to conduct financial audits of cooperatives, as well as build capacity among cooperatives in bookkeeping and accounting. Financial support for cooperatives can be accessed from a Cooperative Development Fund established by law, administered by the MOAC, and overseen by an Executive Board composed of government officers and cooperative representatives. Also providing financial support is the Bank for Agriculture and Agricultural Cooperatives (MAAC), a state enterprise under the Ministry of Finance (Thuvachote, 2006).

Advantages and disadvantages of agricultural cooperatives

Grashuis and Yu (2018) review the empirical literature on the impact of cooperatives on farmers. Generally, membership is a cooperative associated with higher price, yield, adoption of inputs, income, and other indicators. However, there seems to be an uneven distribution of benefits for small and large producers. However, a causal relationship from cooperative form to performance remains to be firmly established. One channel of effect may be through conferring bargaining power; in a rice supply chain of Thailand, members of cooperatives have encountered a reduced degree of exploitation and opportunistic behavior from traders (Sathapatyanon et al, 2018). Closer to home, Jimenez et al (2018) have found that membership in a cooperative led to higher household welfare (as measured by consumption expenditure) on the part of kalamansi farmers.

Within a vertically integrated set-up, the cooperative seems to exploit comparative advantage of both individual and collective action. Individual management of farms avoids high transaction cost of centralized control over cultivation. Meanwhile collective action potentially realizes post-harvest economies of scale, i.e. in packaging/processing, logistics, and marketing. These advantages seem to describe the set-up of cooperatives vis-à-vis the institutional buyer in several large banana plantations in Mindanao (Nozawa, 2016).

As to the channels through which coops achieve favorable impact, Quilloy (2015) conducts case studies on two large agricultural cooperatives in the Philippines. She finds that cooperatives can perform efficiently if they adopt vertical integration and quality upgrading. However, they need to gain access to investment resources to support these market-complementing activities; the experience of the two large coops are simply not replicated by numerous micro and small cooperatives which continue to languish with financial constraints and inefficient business operation. Hence for instance, a cooperative in Central Luzon (only 34 members) with good credit rating from Land Bank, is still experiencing difficulty in record keeping and financial management, in line with other studies which find that majority of coops in the country will need capacity development in terms of their financial and human resources (Pantoja et al, 2016).

5. PROFILE OF AGRICULTURAL COOPERATIVES IN THE PHILIPPINES

Legal framework

Cooperative Code

The law governing cooperatives in the Philippines is the Cooperative Code of 2008 (RA 6938), as amended (RA 9520). It states the government policy of enabling cooperatives to function as a viable organizational form of economic enterprise. As such, it is intended as a "practical vehicle for promoting self-reliance and harnessing people power toward attainment of economic development and social justice" (Chapter I, Article 2). The Code authorizes the Cooperative Development Authority (CDA) to register cooperatives and thereby confer on them the rights and obligations as stated in the Code. The Code also tasks the Authority with the promotion and development of cooperatives, which is bound to create some tension with its regulatory role.

The Code recognizes three categories of cooperative, namely primary cooperatives (whose members are natural persons), secondary cooperatives (whose members are primary cooperatives), and tertiary cooperatives (whose members are secondary cooperatives). Cooperatives may also be categorized in terms of geographic scope of operation, which CDA has identified as the various political subdivisions of the country (municipal, regional, national).

The types of cooperatives **based on business purpose** are as follows (Art. 23):

credit	service	cooperative bank	electric	housing
consumers	multipurpose	transport	financial service	insurance
producers	advocacy	dairy	fisheries	water service
marketing	agrarian reform	education	health service	workers

Of these, the most relevant for the agricultural cooperative are: *agrarian reform, dairy,* and *fisheries*. There is no "agricultural cooperative" as such. However, the same Article of the Code also authorizes the CDA to determine other types of cooperative. In 2015 the CDA issued Memorandum Circular (MC) 2015-05, "Guidelines for the Registration of Agriculture Cooperative." In this MC, an agriculture cooperative "refers to a primary cooperative which or whose members are involve/engage in raising/culture of plants, animals, fungi, and other living organisms for productive and economic purpose and in related activities that lead to the reduction of cost and/or value addition of outputs."

Defining "agricultural cooperative"

The definition of "agriculture cooperative" in the MC equivocates between adopting in its definition the agricultural activities of the cooperative, and of its members. Both types of definition are accepted in Philippine law; the Agriculture and Fisheries Modernization Act or AFMA (RA 8435) offers a legal definition of farmers and fisherfolk's organizations and associations (FFOs). The term refers to "cooperatives, associations, or corporations duly registered with appropriate government agencies and which are composed primarily of small agricultural producers, farmers, farm workers, agriarian reform beneficiaries, fisherfolk, who voluntarily join together to form business enterprises or non-business organizations which they themselves own, control and patronize." AFMA meanwhile defines "small farmers and fisherfolk" as *natural persons dependent on small-scale subsistence farming and fishing activities as their primary source of income*. FFOs are therefore defined based on the occupation of its members.

On the other hand, the Sagip-Saka Act (RA 11321) defines a "Farmer and Fisherfolk Enterprise" as "an enterprise engaged in agriculture and fishery-related economic activities." This approach goes back to the original Code typology based on business purpose, although the types of activities need not be strictly agricultural, but can be "agriculture and fishery-related".

Findings from government surveys

In 2011 the Bureau of Agricultural Statistics (later absorbed into the Philippine Statistics Authority) implemented a Survey on Characterizing Small Farms in the Philippines (SCSFP). Part of the survey is to ask about membership in organizations and benefits received from organizations (Table 7).

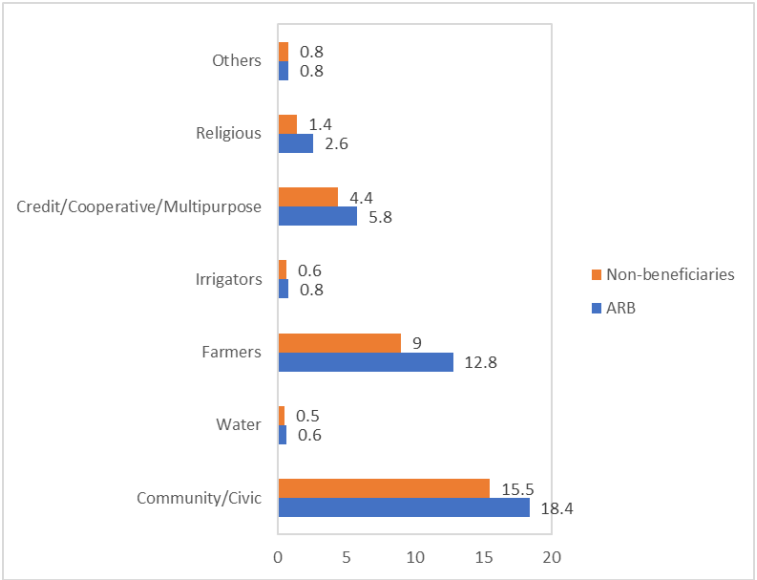
Table 7. Share of sample operators, SCSFP, by type of operator (%)

	Crop farm	Livestock farm	Poultry farm
Member of enterprise-related organization	17.6	2.7	1.2
Assistance received, share by type of operator:			
Training/seminars	70.0	75.9	81.8
Financial/credit support	17.5	21.2	18.2
Input support	16.9	11.4	14.6
Marketing support	5.6	3.0	4.6
Irrigation	6.3	-	-
Animal dispersal	-	3.8	-

Source: PSA (2012).

Overall, only 18 percent of crop farm operators are members of an enterprise-related organization; the proportion goes down drastically to just 1 – 3 percent for livestock and poultry operators. Across types of operators, the most common form of assistance received is training; a much lower share (about one-fifth) received credit support, and a lower share received input support. Marketing support is uncommon.

In 2015 the Philippine Statistical Research and Training Institute (PSRTI) conducted a survey of farmers in agrarian reform areas, sampling both ARBs and non-beneficiaries. One of their questions pertains to membership in an organization. Results are shown in Figure 4. The kinds of organization in the questionnaire are community/civic, water association, farmer organization, irrigators association, cooperative (credit, multipurpose, or other), religious, and others. The most common is the community/civic organization, followed by the farmer organization. Cooperatives account for just 4 to 6 percent of the sample. In each kind of organization, a greater share of ARBs are members compared with non-beneficiaries.



Source: PSRTI (n.d.)

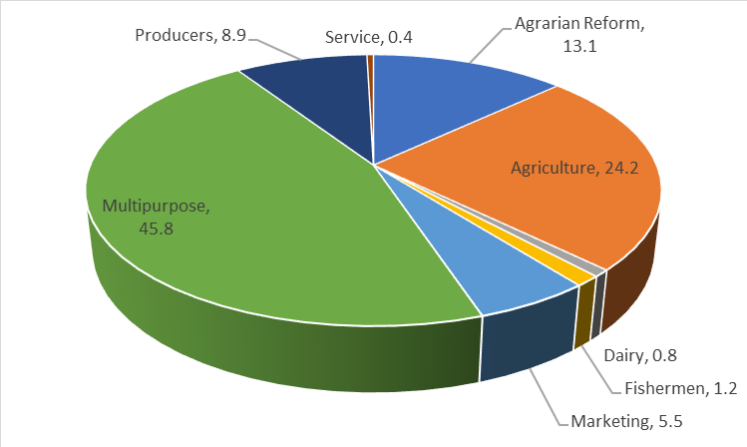
Figure 4. Share of ARBs and non-beneficiaries who are members of an organization (%)

Findings from CDA data

In response to a request dated April 19, 2021, the CDA released a data set based on its registry of cooperatives covering the following:

- Classified as agriculture, agrarian reform, dairy, fisherman;
- Classified as multipurpose, marketing, producer, or service, but indicates in its registration a sub-set activity as agriculture or farmers

As of 2021, cooperatives meeting these criteria, denoted here as "agri-coops", numbered 5,758, of whom 37 are secondary and 5,721 are primary. The breakdown of primary cooperatives by type is shown in Figure 5. The most common type of agri-coop is multi-purpose at 46 percent, followed by agriculture at 24 percent, then agrarian reform at 13.1 percent (Figure 5).



Source: CDA (2021).

Figure 5. Distribution of agri-coops, by type (%)

We re-classify the types of agri-coops into "Agricultural" (agriculture, agrarian reform, dairy, fishermen); Multipurpose; and Others. The distribution of agri-coops using this typology is shown in Table 8. The Agricultural type accounts for 37 percent of agri-coops, while others account for 17 percent. Across the coops, the region with the greatest share of agri-coops is Central Luzon, followed by Northern Mindanao, then Central Visayas. Distribution of each type of cooperative across regions are broadly similar to the overall distribution of agri-coops across regions, though Others will tend to have a greater concentration in Central Luzon, followed by Cagayan Valley.

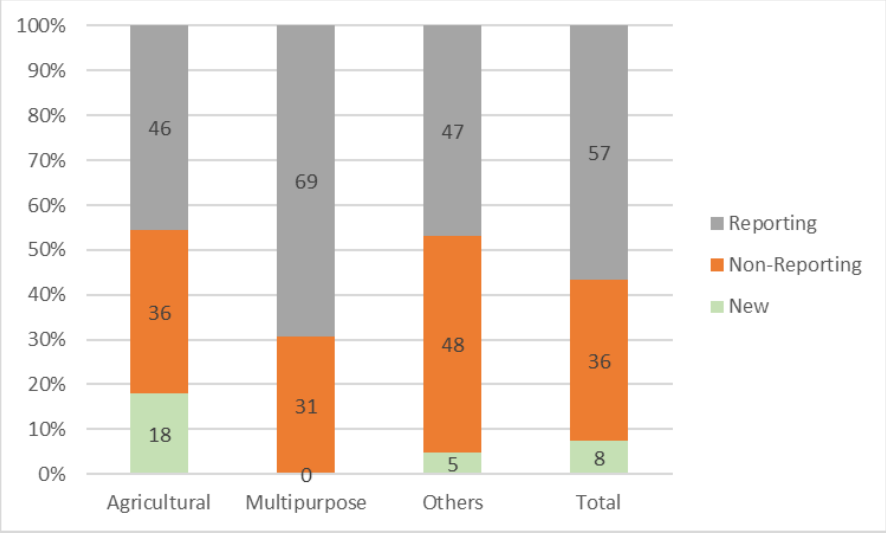
Table 8. Shares by region, by type of cooperative (%)

	Agricultural	Multipurpose	Others	Total
CAR	4.3	5.8	2.4	4.7
CARAGA	5.3	4.7	6.7	5.2
NCR	0.2	0.8	1.0	0.6
Region I	8.8	10.4	3.3	8.6
Region II	8.1	5.9	8.7	7.2
Region III	16.4	12.3	19.4	15.0
Region IV-A	4.6	7.4	4.0	5.8

	Agricultural	Multipurpose	Others	Total
Region IV-B	4.6	6.2	6.2	5.6
Region V	7.5	3.7	8.0	5.8
Region VI	7.7	5.2	5.5	6.2
Region VII	3.7	15.3	3.1	8.9
Region VIII	5.2	2.0	3.1	3.4
Region IX	4.2	2.8	4.3	3.6
Region X	11.9	7.6	6.7	9.1
Region XI	4.4	5.6	8.4	5.7
Region XII	3.3	4.4	9.1	4.8
Share in total	**37.3**	**45.8**	**16.9**	**100.0**

Source: CDA (2021).

00**Relatively few agri-coops are newly registered; of the older cooperatives, majority are current in their reporting to CDA.** Reporting status data is shown in Figure 6. A significant share of registered agri-coops are "non-reporting"; multipurpose coops have the smallest share of non-reporting, while the largest share of non-reporting belongs to Other agri-coops. Note that the type with the highest share of newly registered coops is agricultural, owing to the novelty of the cooperative type.



Source: CDA (2021).

Figure 6. Shares by reporting status, by type of agri-coop (%)

Most agri-coops operate within a small geographic scope (not beyond their municipality). Data on area of operation is shown in Table 9. Note that only 61 percent of the registered agri-coops provided information on area of operation, with Multipurpose having the greater frequency of coops with information. Among agri-coops with information, the most common area of operation is municipal (about half of the agri-coops), followed by barangay.

Table 9. Shares of by area of operation, by type of cooperative (%)

	Agricultural	Multipurpose	Others	Total
No information	48.4	28.2	48.5	39.2

	Agricultural	Multipurpose	Others	Total
With information:				
Barangay	29.3	21.6	23.5	24.3
Municipal	48.6	46.2	52.1	47.8
District	1.0	0.8	2.4	1.1
Provincial	15.0	18.2	12.7	16.4
Regional	5.4	10.4	7.4	8.4
National	0.6	2.7	1.8	1.9

Source: CDA (2021).

Most agri-coops fall in the micro to small category in terms of number of members and value of assets. Data on membership size is shown in Table 10. Unfortunately, just 62 percent of the agri-coops report membership size; nearly half of Agricultural and Others fail to report membership size. Among those that do report: the smallest category of 0 to 50 members accounts for the most agri-coops. at about 20 percent. The frequency goes down as the membership size increases. The high frequency of small cooperatives (100 members or fewer) is consistent with the small area of operation (municipal or smaller). The type of cooperative with the larger membership sizes is the Multipurpose type.

Table 10. Shares of by size of membership, by type of cooperative (%)

	Agricultural	Multipurpose	Others	Total
No information	47.3	26.2	46.9	37.6
With information:				
0 to 50	43.1	18.8	55.9	31.8
51 to 100	23.3	21.3	29.3	23.1
101 to 150	10.4	14.6	6.8	12.2
151 to 200	6.4	8.4	2.5	6.9
Over 200	16.8	36.9	5.5	26.1

Source: CDA (2021).

Data on asset size is shown in Table 11. Most agri-coops (98.2%) do provide this information to CDA; about 68 percent report asset size of Php 3 million or less; those that report Php 15 million or less account for 86 percent of agri-coops. The type with the largest share of Micro agri-coops is Agricultural, followed by Others; the Multi-purpose tend to have the larger asset sizes.

Table 11. Shares by asset size, by type of agri-coop (%)

	Agricultural	Multipurpose	Others	Total
Micro	82.8	52.2	76.9	67.8
Small	11.5	25.3	10.9	17.7
Medium	3.8	17.1	3.5	9.8
Large	1.4	5.1	0.1	2.9
No information	0.6	0.4	8.6	1.8

Note:

1. Micro (Php 0 to Php 3,000,000)

2. Small (Php 3,000,001 to P15,000,000)
3. Medium (P15,000,001 to P100,000,000)
4. Large (over P100,000,000)

Source: CDA (2021).

The more members the wealthier the cooperative; within each asset category the distribution of assets is highly unequal. It is unsurprising that larger agri-coops by membership tend to be the ones with larger assets (Table 12). It is striking though that there are some small agri-coops with large memberships (i.e. 3.7% of agri-coops with more than 200 members are micro in terms of assets), and a few wealthy coops by assets with few members (i.e. 3.1% of agri-coops with 50 or fewer members are large in terms of asset size).

Table 12. Indicators of membership size, by asset category

	Micro	Small	Medium	Large
By membership size:				
0 to 50	24.5	14.6	5.9	3.1
51 to 100	14.6	20.2	8.4	3.7
101 to 150	6.4	14.1	7.3	1.2
151 to 200	2.8	9.4	7.1	1.8
Over 200	3.7	29.4	62.0	86.0

Source: CDA (2021).

Larger agri-coops tend to be older. Asset size is at least partly a function of age (Table 13). Obviously, the older agri-coops have had more time to perform asset accumulation. The median Micro agri-coop is about 8 years old; the median Small, Medium, and Large agri-coop is 11 years old. The oldest cooperative (in the Large category) is 30 years old.

Table 13. Shares by age of agri-coop, by asset range (Php '000)

	Micro	Small	Medium	Large	Total
By years from registration					
0 to 5	40.4	5.3	1.2	1.8	28.5
5.01 to 10	15.1	15.6	8.7	2.4	15.3
10.01 to 15	43.8	78.0	88.5	93.9	55.3
15.01 to 20	0.2	0.2	0.2	0.0	0.2
Over 20	0.5	0.9	1.4	1.8	0.7
Years since registration:					
Mean	7.3	10.6	11.3	11.7	8.4
Median	7.8	11.4	11.6	11.7	11.1
Minimum	0.6	1.9	3.0	1.7	0.6
Maximum	29.6	29.7	29.0	30.4	30.4

Source: CDA (2021).

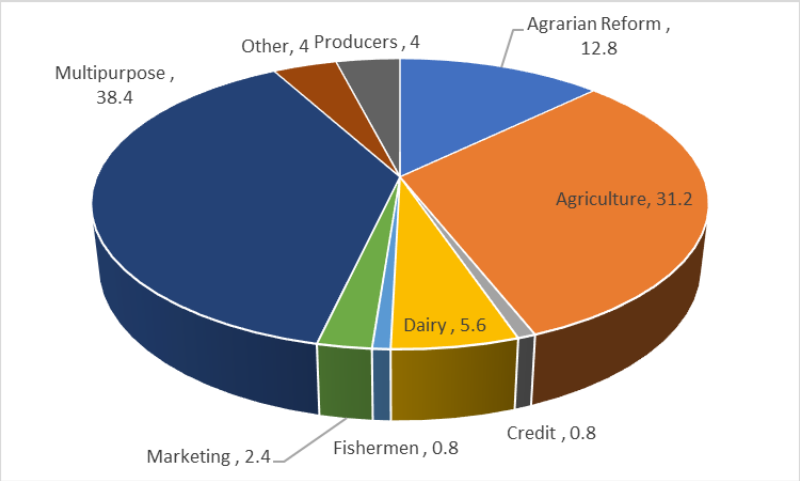
Findings from the ACDA online survey

The survey is conducted online using LimeSurvey platform. It is self-administered where a knowledgeable member of the cooperative is requested to answer. The electronic questionnaire is in English and Filipino. There are two primary ways to share the survey link and gather responses. First, an email invitation is sent to cooperatives that are on the CDA list of cooperatives engaged in agriculture. Only 46 percent of cooperatives in the list have an email, and most of the invitations were left unopened. Second, Agriterra Philippines shared the survey link to their network of cooperatives and ACDA Facebook page. A very small number of respondents sent a scan copy of the accomplished questionnaire which was encoded in the survey platform.

To date, the survey has the following observations:

- Total number of samples is 134;
- 125 samples are primary coops (93%)
- 9 samples are secondary coops (7%)
- Most samples are reporting (94%)

The most common type of agri-coop is multipurpose, followed by agricultural, then agrarian reform. The distribution of primary agri-coops in the sample by type of cooperative is shown in Figure 7. Multi-purpose cooperatives account for 38 percent of the sample, while agriculture cooperatives account for 31 percent. Least common are fishermen cooperatives (0.8%) and marketing cooperatives (2.4%). In the rest of the discussion, the agrarian reform cooperatives are combined with fishermen and dairy cooperatives, called "agrarian reform plus"; multipurpose cooperatives are combined with the remaining types, called "multipurpose and others."



Source: ACDA Online Survey.

Figure 7. Distribution of primary agri-coops, online survey, by type of cooperative (%)

The most common geographic scope of agri-coops is municipal/city, followed by provincial. In contrast to the CDA data, a much larger share of agri-coops in the online survey operates at the provincial level (Table 14). About a quarter operate at the regional level or higher. Agricultural and agrarian reform-plus agri-coops tend to operate at the provincial level or smaller, while a larger share of multipurpose and others agri-coops operate at the regional/national scale.

Table 14. Geographic scope of operation of agri-coops, online survey (%)

	Agriculture	Agrarian reform-plus	Multipurpose and others	Total
Municipal/City	28.2	58.3	30.7	35.2
Provincial	41.0	16.7	30.7	31.2
Regional	18.0	4.2	16.1	14.4
National	5.1	4.2	16.1	10.4
Other (including barangay)	7.7	16.7	6.5	8.8

Source: ACDA Online Survey.

A few agri-coops have a disproportionate share of members; multipurpose cooperatives tend to be larger; and majority of agri-coop members are female. A total of 342,000 individuals were captured in the online survey, despite the small sample size; the reason is that the mean membership size is over 2,700 members, with the largest agri-coop having 52,490 members. Note that the median is much lower at 143, hence the distribution of members is heavily lopsided in favor of the largest coops. The minimum size is 15 (the statutory minimum to register any cooperative). The type of agri-coop with the largest membership size are multipurpose coops. Another striking finding is that the majority of members, regardless of type of agri-coop, are female, although agricultural and agrarian reform agri-coops have close to a 50:50 split between male and female members.

Table 15. Distribution of agri-coops, online survey, by membership

	Agriculture	Agrarian reform-plus	Multipurpose and others	Total
All members	8,382	4,573	328,827	341,782
Mean	215	190	5,304	2,734
Median	78	75	421	143
Minimum	15	24	15	15
Maximum	1,689	1,318	52,490	52,490
Share male	49.4	48.9	39.4	39.8
Share female	50.6	51.1	60.6	60.2

Source: ACDA Online Survey.

Most agri-coops fall into the largest membership size category. Unlike the CDA database, the largest membership category (above 200 members) commands the largest share in the sample (41%); the large share of this category is due to the multi-purpose cooperatives, for whom nearly 60 percent of survey respondents are in the largest size category. For Agriculture cooperatives the largest share actually belongs to the smallest agri-coops, while for agrarian reform – plus agri-coops, the largest share is the next smallest category (51 – 100 members).

Table 16. Distribution of membership sizes by range, online survey, by type of agri-coop

Number of members	Agriculture	Agrarian reform-plus	Multipurpose and others	Total
0 to 50	33.3	16.7	8.1	17.6

51 to 100	30.8	45.8	14.5	25.6
101 to 150	5.1	4.2	9.7	7.2
151 to 200	5.1	16.7	8.1	8.8
201 and above	25.6	16.7	59.7	40.8
Share in total	31.2	19.2	49.6	100.0

Source: ACDA Online Survey.

The average agri-coop is 11 years old, from as young as 1.5 years and as old as 30 years. Larger agri-coops tend to be older. The mean age of agri-coops is only 9 years, though the median age is 11 years, implying an age distribution with a slight positive skew. The averages are very similar across categories except the smallest, implying that, beyond a certain age, most cooperatives essentially stop growing. Even for the smallest category, the average age is 7 years, meaning many agri-coops stay small for quite an extended period (with a maximum of 27 years!)

Table 17. Age indicator in years, online survey, by membership size

	0-50	51-100	101-150	151-200	Over 200	Total
Mean	7.2	9.2	10.4	10.9	11.3	9.4
Median	6.7	11.4	11.4	11.5	11.6	11.4
Minimum	1.5	1.6	2.2	2.0	1.9	1.5
Maximum	27.3	29.1	26.2	28.5	30.4	30.4

Source: ACDA Online Survey.

Key informants for the online survey are able to identify only a minority of members as agriculture or fisheries operators, or their kin.

Across the sample, our respondents were only able to identify 16 percent of members as agriculture operators, and another 2 percent as fisherfolk operators. While it may be surmised that next of kin are joining the cooperative on behalf of the agriculture/fisheries operator, it turns out that just 6.3 percent of members are living in the same household as an agriculture operator, while 1.6 percent are living in the same household as a fisheries operator. The low share of members with agriculture occupations is perplexing; even among agriculture and agrarian reform-plus agri-coops, the share of agriculture operators does not exceed 30 percent.

The reason for such low shares may be lack of information of survey informants regarding the true occupation of their members. Alternatively, it may be the case that many persons who do not have farming or fishing as a primary occupation, but nonetheless have joined an agri-coop, for the following reasons:

- They are part-time farmers, farmworkers, or fisherfolk;
- They used to be full-time farmers or fisherfolk, but have since stopped farming, but remain active in the agri-coop;
- Their full-time or part-time occupation is related to farming or fishing, i.e. they are agricultural traders, are employed in agro-processing, etc.;

- They are ordinary rural folk who simply find membership in an agri-coop beneficial owing to members' income, agri-coop services (e.g. credit, retail service, etc.)

Table 18. Percentage share of members with agri-related occupations, online survey, by type of agri-coop

	Agriculture	Agrarian reform+	Multipurpose and others	Total
Agriculture operator	30.5	29.5	15.7	16.3
Fisherfolk operator	1.0	1.8	2.4	2.3
Kinship with agriculture operator	9.2	4.5	6.3	6.3
Kinship fisherfolk operator	0.6	2.0	1.7	1.6

Source: ACDA Online Survey.

The data suggests that great care must be taken not to merely assume that most agri-coop members are actually farmers or fisherfolk, but that such an assumption be first empirically verified.

The average agri-coop is small, has a manageable debt, pays out substantial amounts as members' benefit, but is just breaking even. Table 19 presents some key financial indicators of agri-coops. The median values are all far lower than the mean values, again pointing to the presence of outlier agri-coops in the sample, especially considering the extreme sizes of the maximum values.

Table 19. Financial indicators, agri-coops (Php '000)

	Mean	Median	Minimum	Maximum
Assets	119,898	5,059	0	3,593,177
Liabilities	80,825	2,144	0	2,743,180
Current income	15,755	307	-500	584,012
Current expenses	18,349	807	0	499,519
Net income	-1,242	0	-32,700	722,630
Members' income[a]	4,741	205	0	68,715
Capital expenditures	15,533	192	0	499,350
Retained earnings	2,428	8	-12,806	100,000

[a]Interest earnings, dividends, and patronage refunds.
Source: ACDA Online Survey.

Hence, median values is a better gauge of the sample average. The median asset size is about Php 5 million, in the small asset range; the median liability is less than half as much as assets. Median expenses exceed median income; note that the mean net income is negative, though the median net income is at break-even. Average members' income is a sizable share of the median income (about two-thirds). Median investments (capital expenditure) is substantial (nearly as much as median members' income). Hence, agri-coops tend to hold only a small amount of retained earnings.

Coops that are larger (in terms of membership) and older, tend to have more assets, debt, and sales. Table 20 and 21 provide breakdowns of financial indicators by membership category, and age category. The smallest agri-coops by membership, have miniscule levels of asset, liabilities, sales,

members' income, and investment; however, expenses are equal to sales. The other membership categories incur average expenses above their sales. Meanwhile the youngest cooperatives (5 years and below) have acquired assets only 0.5 percent of the oldest cooperatives; median debt among the youngest cooperatives is zero. However, the younger cooperatives (10 years and younger) earn sales in excess of their expenses, hence the excess of expenses over income is entirely due to financial performance of the oldest agri-coops.

Table 20. Median levels of agri-coop finances, by membership size (Php '000)

	0-50	51-100	101-150	151-200	Over 200
Assets	46	484	2,555	13,327	25,549
Liabilities	3	90	1,113	5,418	15,637
Current income	11	81	151	439	2,000
Current expenses	11	87	150	877	7,300
Capital expenditures	0	50	90	1,504	2,337
Member's income[a]	0	5	7	193	300
Retained earnings	0	1	45	43	154

[a]Interest earnings, dividends, and patronage refunds.
Source: ACDA online survey.

Table 21. Median levels of agri-coop finances, by age category in years (Php '000)

	0-5	5 -10	Over 10
Assets	72	2,300	15,654
Liabilities	0	105	9,333
Current income	20	290	1,126
Current expenses	15	265	2,936
Capital expenditures	12	126	1,838
Member's income[a]	0	7	199
Retained earnings	0	29	76

[a]Interest earnings, dividends, and patronage refunds.
Source: ACDA online survey.

6. CONCLUSION

Government policy is shaped by the goal of enabling cooperatives to function as a viable organizational form of economic enterprise, towards economic development and social justice. For agriculture, cooperatives are seen as a vehicle for realizing collective action, economies of scale, strengthening bargaining power, and professionalization of organizational management. The economic theory of cooperatives points to potential advantages of the cooperative form in realizing a plurality of objectives (beyond profit maximization); as well as addressing problems in contract enforcement, asymmetric information, and imperfect competition.

There are in fact a large number of agri-coops currently active, over 5,000 by a recent count of the CDA. If the cooperative movement finds "strength in numbers", then this fact is heartening; there are however contrary indications about weaknesses in the cooperative movement in agriculture. Most operate only at the municipal level of lower; and even if classified as an agri-coop, most members are

not in fact agricultural or fisheries operators. Most of them continue to operate at a small or even micro scale, despite attaining a median age of 11 years (and a mean age of 8 years). Understandably, the medium to large scale cooperatives tend to be older, but many older cooperatives have a relatively small asset and membership base.

Considering these population features, and benchmarking against other countries in Asia, clearly agri-coops remain far serving as viable economic enterprises for most farmers, fisherfolk, and agri-fisheries workers in the Philippines. The policy environment does encourage; indeed it obligates, farmers and fisherfolk to participate actively in cooperatives. Nonetheless the onus remains on the state to go beyond registering and regulating cooperatives and to actively promote cooperatives. While establishing institutional mechanisms (such as the local cooperative development office) towards this aim is important, it is equally critical to allocate public funds to organize and strengthen agri-cooperatives, in the context of commercial partnerships with modern agribusiness.

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