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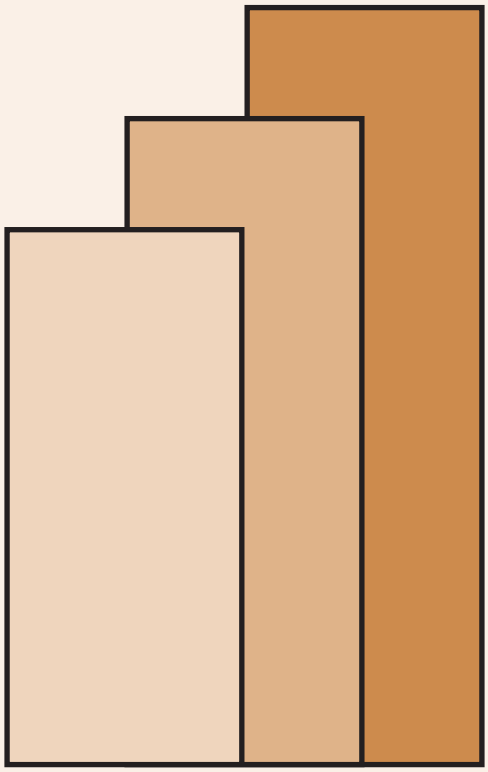

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ASSESSMENT OF AGRIBUSINESS VENTURE ARRANGEMENTS (AVAS) AND SUGARCANE BLOCK FARMING (SBF) FOR THE MODERNIZATION OF AGRICULTURE

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Abstract

After completion of their land reform program, countries such as Japan, South Korea and Taiwan implemented land consolidation to effect economies of scale specifically in the adoption of modern technologies. Land consolidation plans included the physical reallocation of parcels; joint farming through land exchanges and sale; temporary quasi land acquisition, and land renovation. In the Philippines, land consolidation to improve farm productivity and income was pursued through Agribusiness Venture Arrangements (AVAs) and the Sugarcane Block Farming (SBF). The objective of this study is to assess the performance of AVAs and SBF in increasing farm productivity and income in the agrarian sector. The case study approach was used, focusing on three export crops, namely banana, pineapple and sugarcane which were selected based on their significant contribution to the Philippines' export earnings as well as to Gross Value Added of agriculture. In particular, the AVAs considered in the study are: lease/leaseback and growership arrangements for banana and pineapple. For SBF, both cooperative managed and individually managed were examined. A framework for AVAs and SBF is provided that considers how the supply chain, the policy environment and global market influence the contractual arrangements for specific crops. The study noted several issues on production and capital investments, marketing and pricing, institutional support, and contract terms that affect the implementation of AVAs and SBFs. The study recommends that AVAs, SBF arrangements should be encouraged but government has to provide a policy environment for Philippine exports crops to be competitive. Agrarian reform beneficiaries and their associations should also be supported through capacity building activities and access to legal advice.

Keywords: *Agribusiness Venture Arrangements (AVAs), Sugarcane Block Farming (SBF), agrarian reform, banana, pineapple, sugarcane, commercial crops*

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I. Introduction

A. Rationale/Brief Description of the Study

The Gross Value Added (GVA) of agriculture of the Philippines from 2011 to 2015 averaged PhPM570,182 in real terms. Every year it rose but its contribution to the country's Gross Domestic Product had dropped continuously from 9.2% in 2011 to 7.8% in 2015 (Table 1).

Table 1. Gross Domestic Product and Gross Value Added of Agriculture, Philippines, 2011-2015

Year	Gross Domestic Product (PhPM)*	Gross Value Added Agriculture (PhPM)*	% of GVA to GDP
2011	5,910,201	545,546	9.23
2012	6,305,229	565,097	8.96
2013	6,750,631	570,572	8.45
2014	7,170,414	582,464	8.12
2015	7,593,769	587,230	7.73
Average	**6,746,049**	**570,182**	**8.45**

**constant prices at year 2000*
Source: Philippine Statistical Authority

Similarly, the share of agricultural exports declined from 2.44% in 2014 to 1.54% in 2016 with the value of agricultural export decreasing drastically by 31.13% from 2014 to 2015 and recovering slightly (5.64%) in 2016 (Table 2). Performance of agriculture could be attributed to government policies which favored import substitution while plans and programs were focused largely on food staples such as rice and corn.

The principal agricultural products for the past three years are bananas, including plantains, coconut (fresh or dried coconut oil, copra oil cake or meal, desiccated coconut), mango (fresh or dried), pineapple and pineapple products and sugar. Among these, pineapple was the only one crop which exhibited a positive growth for each year while the FOB values of the other crops dipped after 2014. It is notable that more than half of areas of commercial farms under GVAs are planted to banana and pineapple while sugarcane (together with other fruit trees) comprises about seven percent.

Table 3 shows the GVA of agriculture by commodity for the years 2011 until 2015. Livestock and poultry have consistently had the highest share of the GVA and always had positive growth rates. For the crops, pineapple and cassava had consistently exhibited positive growth rates. Expectedly, staples such rice and corn, had the highest average share of GVA at 25% and 7%, respectively, being the focus of the country's agricultural plans and programs. Nevertheless, export crops such as banana (6%) and coconut including copra (5%) are not far behind corn. Other export crops such as sugarcane, mango and pineapple had about three percent contributions each to GVA.

Table 2. Contribution of agricultural products to total exports, Philippines, 2014-2016

I T E M S	2014		2015			2016		
	FOB		FOB		% Increase/ Decrease	FOB		% Increase/ Decrease
	PhPM	% Share	PhPM	% Share		PhPM	% Share	
Principal Agricultural Products	66,611		45,872		(31.13)	48,461		5.64
Bananas, including Plantains, Fresh or Dried	27,348	41.06	10,486	22.86	(61.66)	11,838	24.43	12.89
Coconut Oil	18,413	27.64	18,450	40.22	0.20	16,769	34.60	(9.11)
Copra Oil Cake or Meal	2,160	3.24	1,393	3.04	(35.53)	954	1.97	(31.48)
Desiccated Coconut	4,729	7.10	3,050	6.65	(35.51)	3,750	7.74	22.95
Mango, Fresh or Dried	2,552	3.83	2,518	5.49	(1.31)	1,730	3.57	(31.28)
Pineapple and Pineapple Products	7,202	10.81	9,161	19.97	27.20	10,766	22.22	17.53
Sugar	4,207	6.32	814	1.78	(80.64)	2,654	5.48	225.89
TOTAL EXPORTS OF GOODS	2,726,442		2,930,100		7.47	3,148,230		7.44
% of Agri Export to Total Exports	2.44		1.57			1.54		

Source: Philippine Statistical Authority

When Republic Act 6657, otherwise known as the Comprehensive Agrarian Reform Law, was promulgated in 1988, export crops, being classified as commercial crops, were covered. Except for sugarcane which placed under the Stock Distribution Option (SDO) scheme, acquisition and distribution of all commercial crops such as banana and pineapple, were deferred up to ten (10) years to give operators the chance to recover their capital investments. Nevertheless, some farm operators opted to offer the farms they were operating voluntarily even prior to the ten-year deferment period.

After the ten-year deferment period, DAR issued Administrative Order No. 9, Series of 1998 with the rationale of optimizing the operating size of commercial farms for agricultural production efficiency and to promote security of tenure and income of the Agrarian Reform Beneficiaries (ARBs). It also intended to ensure that investment in commercial farms continues. Meanwhile, in 2012, the SBF was implemented for sugarcane farmers, the intent of which was to increase their income and productivity through the provision of support services such as extension services, introduction of new technologies and credit.

Table 3. Gross Valued Added of Agricultural Crops, Philippines, 2011-2015

Commodity	2011		2012		% Increase/ Decrease	2013		% Increase/ Decrease	2014		% Increase/ Decrease	2015		% Increase/ Decrease	Average	
	PhPM	% Share	PhPM	% Share		PhPM	% Share		PhPM	% Share		PhPM	% Share		PhPM	% Share
Agriculture	***545,546***	***100.00***	***565,097***	***100.00***	***3.58***	***570,572***	***100.00***	***0.97***	***582,464***	***100.00***	***2.08***	***587,230***	***100.00***	***0.82***	***570,182***	***100.00***
Palay	130,252	23.88	140,737	24.90	8.05	143,882	25.22	2.23	147,952	25.40	2.83	141,544	24.10	(4.33)	140,873	24.71
Corn	37,876	6.94	40,250	7.12	6.27	40,098	7.03	(0.38)	42,156	7.24	5.13	40,773	6.94	(3.28)	40,231	7.06
Coconut including Copra	29,260	5.36	30,493	5.40	4.21	29,647	5.20	(2.77)	28,296	4.86	(4.56)	28,312	4.82	0.06	29,202	5.12
Sugarcane	18,221	3.34	16,606	2.94	(8.86)	15,454	2.71	(6.94)	15,723	2.70	1.74	14,565	2.48	(7.37)	16,114	2.83
Banana	33,539	6.15	33,774	5.98	0.70	31,634	5.54	(6.34)	32,502	5.58	2.74	33,242	5.66	2.28	32,938	5.78
Mango	14,471	2.65	14,092	2.49	(2.62)	14,959	2.62	6.15	16,176	2.78	8.14	16,897	2.88	4.46	15,319	2.69
Pineapple	14,299	2.62	15,309	2.71	7.06	15,744	2.76	2.84	16,088	2.76	2.18	16,526	2.81	2.72	15,593	2.73
Coffee	3,254	0.60	3,298	0.58	1.35	2,913	0.51	(11.67)	2,791	0.48	(4.19)	2,644	0.45	(5.27)	2,980	0.52
Cassava	8,270	1.52	8,358	1.48	1.06	8,882	1.56	6.27	9,557	1.64	7.60	10,219	1.74	6.93	9,057	1.59
Rubber	3,229	0.59	3,358	0.59	4.00	3,372	0.59	0.42	3,435	0.59	1.87	3,046	0.52	(11.32)	3,288	0.58
Other Crops	40,583	7.44	41,208	7.29	1.54	41,275	7.23	0.16	41,569	7.14	0.71	41,890	7.13	0.77	41,305	7.24
Livestock	92,255	16.91	93,261	16.50	1.09	94,899	16.63	1.76	95,876	16.46	1.03	99,567	16.96	3.85	95,172	16.69
Poultry	71,262	13.06	74,536	13.19	4.59	77,686	13.62	4.23	77,982	13.39	0.38	82,397	14.03	5.66	76,773	13.46
Agricultural Activities and Services	48,774	8.94	49,816	8.82	2.14	50,125	8.79	0.62	52,362	8.99	4.46	55,610	9.47	6.20	51,337	9.00

Source: Philippine Statistical Authority

In the Philippines, there is no conscious effort towards land consolidation. Nevertheless, Administrative Order No. 9 unintentionally paved the way for land consolidation in terms of land management although land ownership could be individual or held by group such as cooperatives or farmers' associations as specified in the Collective Certificate of Land Ownership Award (CLOA). Meanwhile, SBF was implemented in 2012 to bring about economies of scale among small sugarcane farmers given the mechanization and input requirement of the crop. This scheme was supposed to be implemented in farms that are contiguous. It also intended for cooperatives to manage and operate the farm machinery that the farmers will need and through the coops, other support services needed by the farmers will be extended. In relation to the export crops, it may worth looking into the performance of farms under AVAs and SBF. Are the farms under AVAs contributing to the agricultural sector, in general? Specifically, how are these farms performing in terms of productivity and profitability?

Recently, there is a mounting concern on the continued implementation of AVAs, which caused some law makers to take action. House Resolution (HR) 919[2] directed the Committee on Agrarian Reform to conduct an investigation on the impact of the AVA considering that ARBs, other farmers and agricultural workers had been clamoring for its revocation. Two bills, House Bill (HB) 5085,[3]and Senate Bill (SB) 1351[4] had also been filed. Both bills look into the regulation of the establishment of AVAs, which include corporative schemes, contract-growing, profit-sharing agreements, block-farming, leasehold, leaseback and other arrangements, in agrarian reform lands. HB 5085 intends to "promote productive and collaborative ventures between the private sector and ARBs where in the latter are transformed into farmer-entrepreneurs of agriculturally-related businesses" without compromising their tenurial rights. SB 1351 mentioned that the "AVAs should give ARBs incentive to develop their lands and improve their productivity". Realizing that one of the weak points of the ARBs is in the negotiation of the terms and conditions, SB 1351 sees to it the needed assistance, social preparation and capacity building are extended to the ARBs.

This brings to fore the question on what are the prerequisites needed to ensure that the agreements arrived at will lead to increased income and productivity of ARBs? What framework can be used to assess the implementation of AVAs and SBF? This study attempts to come up this framework.

B. Objectives of the Study

The study aims to assess the performance of selected AVAs and SBF as a mechanism to improve productivity and sustainability of the agrarian sector.

Specifically, this study aims to:

1. Review selected AVAs and SBF arrangements of selected cases;
2. Provide the framework of assessing the implementation of AVAs and SBF in relation to land consolidation;
3. Assess the viability of selected AVAs and SBF in the Philippines and measure the productivity and profitability of lands covered;

[2] Authored by Representatives Ariel B. Casialo, Carlos Isagani T. Zarate, Emmi A. De Jesus, Antonio L. Tinio, Arlene D. Brosas, France L. Castro, and Sarah Jane I. Elago

[3] Authored by Congressman Teddy Brawner Baguilat

[4] Authored by Senator Ana Theresia Hontiveros-Baraquel

4. Examine the institutional/regulatory environment of AVAs and SBF in the country; and
5. Provide recommendations on AVAs and SBF

II. Review of Literature

A. Land Consolidation in Other Countries

Vitikainen (2004) mentioned that implementation of land consolidation arises from the need for readjusting unfavorable land division and promoting the appropriate use of the real property without changing the status of ownership. He further stated that "there are differences in the objectives and procedures of land consolidation depending on the country, as the development of the procedure has been influenced by the historical trends, culture, tradition and legislation in each of the countries".

Other countries particularly in Asia and Europe had undertaken land consolidation to bring about rural development. How have they fared compared to the AVAs and SBF? What were the arrangements they adopted? Did land consolidation in other countries increase farmers' productivity and income? Did it bring about changes in the agricultural sector?

Japan, Taiwan and South Korea had been successful in carrying out land reform, resulting in agricultural growth which eventually led to development of the urban sector and industrialization. The land reform programs in these countries fragmented farm lands, resulting in low average farm areas. However, with the advent of agricultural mechanization and modern inputs, land consolidation was implemented. Chen (2016) cited that small-scale farming, multiple-mode of inheritance and land transfer restrictions were changed through farmland consolidation in these countries with the intent of improving irrigation facilities, transportation conditions and adoption of farm machinery. Hence, farmers and farmer associations were encouraged to realize joint farming through land exchanges and sale. The government also implemented preferential policies including temporary quasi land acquisition, land renovation, and repurchase or lease of land tenure by the original owners. Efforts were made to determine the cost sharing entities according to the cost types, and divide the legislative and planning powers at the national, local and grassroots-level organizations. Relevant measures were adopted to improve the efficiency of agricultural land production, save labor input, and increase the return of funds by sorting out the "new land" without changing land ownership. Zhou (2017) also mentioned that in Japan, rural land consolidation was adopted to make rice farming more viable. This strategy enabled farmers to use large machinery, saved on labor costs while other farm production costs were reduced and increased returns to scale were gained.

Land consolidation in other Asian countries such as Indonesia and India were also done. In Indonesia, the land consolidation projects which were subsidized largely by government were concentrated in urban areas rather than rural areas where agricultural lands are concentrated. A study by Archer (1992) in one of the land consolidation projects in Indonesia, the PB Salayang Project, showed that it was not able to develop rural lands which was one of the intent of land consolidation in Indonesia. Nevertheless, it created a planned layout of roadways, public facility sites and reshaped land parcels. Moreover, government was able to acquire land without incurring any costs and were able to give landowners their registered titles. However, lands covered by the land consolidation projects remain to be unusable because of the absence of roads into the sites.

Land consolidation in India, specifically in Uttar Pradesh, is again state-initiated. Identified beneficiaries are informed that they had been recognized as project recipients but in areas where there is strong opposition to land consolidation this was not done due to expectation of failure (Oldenburg,1990). Unlike Indonesia and Taiwan, land consolidation in India is not linked to public works program of land levelling, medium-size drainage and irrigation development or road building. Individual farmers interviewed in Uttar Pradesh mentioned that benefits they derived is the ease of labor supervision, provision of road right of way and access to irrigation water. Through land consolidation, field boundaries were straightened and the provision of holdings as much as possible was reshaped in rectangular form. This improved ease of cultivation, particularly plowing and lessened disputes due to unclear demarcations and encroachments. Another advantage brought out is that through the consolidation, unnecessary field boundaries were eliminated thus area of land worked on increased and farmers save time previously spent in travelling from one field to the other. Oldenburg (1990) points out further that land consolidation succeeded in achieving goals set in India's land reform program. These include increasing the number of economically viable farmers thereby empowering them and reducing the "degree of exploitation of small and marginal farmers and to a certain degree, land consolidation was also able to decrease share tenancy arrangements and the number of absentee owners.

In Europe, several countries such as Germany, the Netherlands, France, Belgium, Luxembourg, Austria, Switzerland, Finland, Norway and Sweden, also implemented land consolidation (Vitikainen, 2004). This occurred at a time when the number of farmers was declining as these countries have become industrialized. The objectives and procedures of land consolidation in these countries may vary but the need for its implementation in these countries were brought about by the necessity for readjusting unfavorable land division and promoting the appropriate use of the real property without changing the status of ownership. Vitikainen (2004) discussed the similarities and differences in procedures of the land consolidation models in the various European country but did not analyze the effects on the agricultural sector. Van den Noort (1987) analyzed the rate of return of land consolidation to the government of Netherland and his findings indicated that it ranged from 7-9%. He did not examine the effects of land consolidation from the point of view of the farmers or beneficiaries.

A less known country in Eastern Europe, Moldova also implemented land consolidation to address problems that fragmentation caused in its agricultural sector (Cimpoieş and Baltag, 2004). Land leasing is the common scheme of land consolidation in Moldova where nearly 51% of total land owned by peasants was leased out. Registration of agreements between landowners and lessees are required to which majority abided by. Lease payment can be made in cash, in-kind and mixed forms although in-kind payment is the predominant mode of payment, reaching around 84%. While the study implied that with land consolidation in Moldova, more agricultural lands were cultivated, its effect on farm productivity was not mentioned.

B. Studies on AVAs in the Philippines

Several studies had already delved on AVAs, many of which were done to improve existing AOs or rules and regulations on this scheme while only a few have attempted to examine farm productivity and income of farmers covered under such arrangements. The latest study on AVAs conducted by the Food and Agriculture Organization (FAO) of the United Nations and commissioned by the DAR had more comprehensive objectives that included assessment of agricultural productivity of lands under AVAs. However, due to the

FAO study's numerous and multi-faceted objectives, the empirical evidence on the issue of agriculture productivity and viability of AVAs is not definite. Moreover, the studies have not really looked at the bigger agricultural sector where the AVAs given the right policy environment can be contributing considerably.

In the Philippines, there had been no conscious effort to implement land consolidation. Nevertheless, to strengthen the goal of increasing farm productivity and income in line with the implementation of CARP, DAR came out with the AO on AVAs and initiated the SBF, both of which can be considered land consolidation. In the commercial crops, forging AVAs between investors and ARBs and ARBOs were encouraged to ensure that the needed capital will continue to flow into the sector thereby sustaining pre-CARP farm productivity. Assuring the continuous infusion of capital to the commercial farms sector is critical given that these are contributing largely to Philippine exports.

A number of studies that have assessed the AVAs were either conducted or commissioned by the DAR. DAR had in-house studies, but the gathered information, results, and recommendations were used more to refine DAR's policies and strategies rather than on having an assessment of the effects of AVAs on the agricultural sector. For instance, in 2005, seven years after the first AO on AVAs, the Policy and Strategic Research Service of the DAR studied several AVAs that ARBs entered into and implemented with agribusiness firms or investors with the objective of deriving inputs for policy and program planning. It also intended to evaluate the AVAs and assess their impact.

The findings of the PSRS study revealed that some AVA types benefitted the ARBs. These include joint venture agreements, full takeover with sales and marketing agreement and production and purchase agreement between individual farmers and corporation/investor. However, lease agreements proved to be disadvantageous to ARBs due basically to low lease rentals which hardly increased over the long period (25 -30 years) stipulated in their contracts. Other issues surfaced and these include the needs of the ARBs to have supplemental incomes and sustainability of the benefits they had during the time of interview. It was stressed that the ARBs lack social preparation and training to strengthen their entrepreneurial and management capabilities. Their lack of knowledge and skills in contract negotiations were also pointed out. The ARBs lamented that their existing credit sources charge high interest rates.

After this study, AO No. 9, Series of 2006 (Revised Rules and Regulations Governing Agribusiness Venture Arrangements in Agrarian Reform Areas) was issued to reinforce the effective implementation and monitoring of the AVAs. In 2008, AO No. 2, Guidelines Governing Lease of Land under Agribusiness Venture Arrangement in Agrarian Reform Areas and the Determination of Lease Rentals Thereof, was formulated.

While these AOs were crafted to protect the ARBs, existing contracts of ARBs with investors had been entered into prior to the issuance of the AOs thus guidelines set forth could not be implemented immediately. Meanwhile, issues concerning the ARBs kept on surfacing, particularly on farms planted to banana and other high value crops. Hence, five years after its initial study, PSRS went back to seven AVA cases that they covered in 2005 to gather data that will provide inputs for policy or program adjustments. This subsequent study involved 10 organizations and 60 ARBs and an investor. PSRS assessed whether socio-economic conditions of ARBs have improved and determined whether status of the cooperatives has improved. Generally, lease agreements did not benefit the ARBs primarily because lease rentals are low (DAR 2012). Land Use Management Agreement (LUMA), which is a variation of a lease agreement, between the ARBs and Skyland, Dole Philippines,

Inc. improved their socio-economic conditions because besides lease rental, household members of the beneficiaries were given employment. Production and Purchase Agreements seem to have worked positively for the ARBs –members of the farmer cooperatives as the Banana Production and Purchase Agreement between DUSGROW MPC and DOLE Philippines Inc. - Stanfilco as well as the Production and Purchase Agreement by KARBEMPCO and MAPARBEMPCO with KIDI, enhanced the ARBs' socio-economic status. However, the Banana Sales and Marketing Agreement of HEARBCO 2 with LFC neither improved nor dampen incomes of the ARBs because the cooperative had been experiencing financial losses since 2004 and its ARB-members are still in the period of adjustment in the shift from cooperative type of farming to individual farming.

As to the conditions of the seven cooperatives which were assessed, only three (NGPI MPC, KARBEMPCO and the MAPARBEMPCO) remained financially stable and have been continuously providing services to their members. The DUSGROW MPC and the NGEI MPC have no economic activity and have been inoperative for several years. The NGEI MPC had stopped its operation since 2004 due to internal conflict. Internal conflicts also limited the growth of TCBC although it was still operating when PSRS went back to revisit it. CFC and HEARBCO were likewise operating on limited scales.

The intent of adopting AVAs is to help ARBs and their organizations increase incomes and productivity. However, with the status of majority of the ARBs and farmers' organizations in the cases that were analyzed hardly improving, the AVAs did not seem to help increase income of farmers and Agrarian Reform Beneficiaries Organizations (ARBOs). The question of who really benefits in such an arrangement came to fore.

The latest study on AVAs and the most comprehensive so far was conducted by the Food and Agriculture Organization (FAO) (2016) which focused on crops such as bananas, cacao, oil palm and pineapple in Mindanao and on predominant arrangements such as leasehold and contract growing. The study looked at: (1) the problems and issues in contractual agreement; (2) credit standing of the farmers' organizations; (3) agricultural productivity of those under AVAs; (4) competitiveness of these farms viz-a-viz export market demand; (5) investor confidence and interest in the AVAs; and (6) labor status, requirements and arrangements of the various ARBOs. It revealed that after 26 years of AVAs, the number of successful AVAs between ARBs and business investors are very limited which could be attributed to several factors. For one, the agreements entered into are one-sided provisions primarily due to insufficient legal representation and transparency issues from the part of the cooperative leaders. This is aggravated by inadequacies of the farmers' organizations to manage their farms, make collective decisions, understand financial statements and enter into intelligent negotiations. As to the objectives of the study on agricultural productivity and competitiveness of farms against export market demand, the results did not contain a thorough discussion. Furthermore, the study was not able to describe the credit standing of the farmers' organizations or investor confidence and interest in the AVAs.

Besides the DAR and DAR-funded studies, individual researchers have also assessed the AVAs, one of whom is Rosete (2016). His analysis was focused more on the contractual types, looking into the political and economic conditions that influence the terms of the contracts and determining which provisions deprive small holders of effective control over their lands. To a certain extent, the study also touched on income and well- being of the ARBs but instead of getting the average income, the author used the median reported by 62 sample respondents from six cooperatives and nine ARBs with individual contracts with investors. It is notable that the 62 respondents from the cooperatives is just 5% of the total members of the six organizations and the sampling procedure was not explained. Meanwhile,

well-being was measured in terms children who have stopped going to school due to lack of finances, presence of running water in the house, toilet access, access to electricity, ownership of motorcycle and mobile phones and having savings. He compared these indicators across cooperatives including those of the individual ARBs. However, given the very limited sample size, the findings and results of the comparative analysis may not hold water at all.

Another study on AVAs was conducted by Nozawa (2016) who conducted case studies of four AVA cooperatives operating banana farms. The intent of the study was to evaluate the role of cooperatives in promoting self-reliance among farmers, focusing on farms under AVAs. Two of the cooperative he assessed were under contract growing arrangements with the ARBs having collective CLOAs. One cooperative had a contract growing agreement with the ARB-members having individual CLOAs while the last cooperative, where members are under a collective CLOA, entered into a lease agreement. Using data obtained from the financial records of the cooperative, Nozawa (2016) compared the net farm income of ARB members per hectare and per ARB derived in 2010 and found that the cooperative which has a contract growing arrangement under a collective CLOA (called Cooperative C) had the biggest net income per hectare and per ARB. On the other hand, the lowest net income per hectare and per ARBs was earned by the cooperative that was into contract growing under a collective CLOA (called Cooperative H) which had a lower selling prices ($2.95/box) and a higher cooperative retention of $0.95/box compared to Cooperative C at $3.15/box and $0.50/box, respectively. Moreover, productivity of Cooperative was (5,194 boxes/ha.) compared to Cooperative H (4,091 boxes/ha.) which are above the 2011 average of 3,847 boxes/ha. reported by the Pilipino Banana Growers and Exporters Association. The paper further debunks common notions that poverty among small banana growers is aggravated by entering into contracts with multi-national corporations (MNCs) who offer low prices while farmers incur high input costs. While Nozawa (2016) was able to show the income and productivity of ARBS under AVAs rose, the study did not provide insights and opinions of the ARBs themselves since it was focused on the cooperatives.

In another study which focused on palm oil, Nozawa (2013) compared two types of AVAs and these are lease and growership. The lease agreement involved ARBs who were issued a collective CLOA and entered into an AVA with the investor through the cooperative that they formed. Meanwhile, the growership entailed two types of modalities. The first involved the agreement between an investor and an ARBs who were issued individual CLOAs hence these ARBs were operating their farms on their own. The second growership arrangement entailed an investor and a cooperative that operated lands which had been issued a Mother CLOA. In his comparison, Nozawa (2013) noted that ARBs under a lease agreement became contented with being farm workers, relying on their salaries/wages and lease rent for their source of income. In the growership, contracts of investors with both individual ARBs and cooperatives contained stipulations on production, processing and marketing agreement. Because of this, there was incentive for farmers with individual CLOAs to produce more thereby resulting in higher incomes. It was the same for those ARBS who were collectively operating the farms since higher production translated to higher net surplus which the cooperative members distributed among themselves. This is aside from the income they receive as workers. The study then concluded that the type of CLOA issued was immaterial but what was more critical was the type of AVA entered into and suggested further that DAR should push for the growership arrangement since it gives the ARBs the opportunity to become entrepreneurs of lands awarded to them.

C. Block Farming for Sugar Farms

Parallel to the AVAs in farms planted to commercial crops such as banana and fruit trees, Sugarcane Block Farming had been implemented starting in 2012-2013 in sugarcane farms. However, since the SBF has just been started, most literature on it merely provides descriptions and data. At this point, no study on its effect on farm income and productivity has been done yet.

III. Methodology

The case study approach was used for this study, focusing on three export crops, namely banana, pineapple and sugarcane which are contributing substantially to the Philippines' exports as well as GVA of agriculture. Coconut which is also a major contributor to Philippine exports will not be included in this study because the government has not come up with a land consolidation model for this crop. It is notable that unlike banana, pineapple and sugarcane, coconut does not require a large amount of investment. Moreover, it was distributed individually compared to pineapple and banana plantations which were mostly distributed under collective ownership, initially.

Two types of data, primary and secondary, were gathered. Primary data were collected through the conduct of Key Informant Interviews (KIIs) of key officers/staff of agencies such as the DAR Central Office and concerned Regional and Provincial Offices and FGDs and/or KIIs of AVA investors, officers of farmer groups or cooperatives and individual farmers. Meanwhile, secondary data were gathered primarily from the cooperatives and these included their 2015 and 2016 financial statements, records on the production, income and expense of their members (if available) and copy of contract with member-ARBs and with investors. Secondary data were likewise collected from the Philippine Statistics Authority (PSA) and Philippines Statistical Research and Training Institute (PSRTI).

Data were gathered in four provinces namely, Batangas (for sugarcane), Davao del Norte and Compostela Valley (for banana) and South Cotabato for pineapple. Different arrangements on banana, pineapple and sugarcane were also considered. For banana, two agreements, lease and growership arrangements, were studied. Meanwhile for pineapple, lease arrangement was looked into. For sugarcane, two SBF situations were examined: (1) the cooperative is directly managing the operations of the SBF enrollees or participants and (2) the SBF enrollees are the ones directly managing their farms while the coop provides needed support services only.

Table 4 indicates the list of respondents covered in the study.

Table 4. List of cooperative and investor-respondents by crop

Crop	Cooperative	Investor	Location of Cooperative/ARB
Banana	Wadecor Employees Agrarian Reform Beneficiaries Multi-Purpose Cooperative (WEARBEMPCO) officials & members	Tagum Agricultural Development Co., Inc. (TADECO)	Minda, Carmen, Davao del Norte
	Alberto M. Soriano Employees Fresh Fruits Producers Cooperative (AMSEFPCO) officials & members		Sampao, Kapalong, Davao Del Norte
	Tagnanan CARP Beneficiaries Cooperative (TCBC) officials & members	UNIFRUTTI, Philippines, Inc.	Tagnanan, Mabini, Compostela Valley
	Laak farmers of Compostela Valley	SUMIFRU - Philippines, Corp.	Barangay Laak, Compostela Valley
Pineapple	DOLEFIL Agrarian Reform Beneficiaries Cooperative (DARBC) officials & members	DOLE-Philippines, Inc. (DOLEFIL)	Polomolok, South Cotabato
	Farmers from various barangays of Polomolok, South Cotabato	DOLE-Philippines, Inc. (DOLEFIL)	Polomolok, South Cotabato
Sugarcane	KAMAHARI Agri-Based Multi-Purpose Cooperative officials & members	No investor but Philippine Sugar Corporation (PHILSUCOR) is the source of loan	Camp Abejar, Lumbangan, Nasugbu, Batangas
	Taludtod Multi-Purpose Cooperative officials & members	No investor but Land Bank of the Philippines (LBP) is the source of loan	Brgy. Taludtod, Balayan, Batangas
	Lucban Multi-Purpose Cooperative officials & members	No investor but PHILSUCOR is the source of loan	Brgy. Lucban, Balayan, Batangas

IV. Framework in Implementing AVAs and SBF

Export crops contribute largely to the development and growth of the agricultural sector of the country. Three of the biggest export crops include banana, pineapple and sugarcane which had all been covered under the CARP. Realizing the need to attract investors once lands had been distributed to the ARBs, DAR promulgated DAR AO 9, Series of 1998 which provided for the implementation of the AVAs in commercial farms such as banana and pineapple. Meanwhile, sugarcane was not classified as a commercial crop under CARP and was instead placed under another modality, the Stock Distribution Option. However, in 2012, DAR launched another scheme for sugarcane ARBs, the intent of which was to increase farm income and productivity. Farmers owning or operating farms that are 10 hectares or less were encouraged to bond themselves as cooperatives or organizations so that their farm operations which include land preparation, planting, fertilizer and chemical application, weeding and harvesting could be integrated or consolidated to attain economies of scale.

Both the AVAs and SBF are land consolidation modalities wherein farms may be owned individually or collectively but farm operations are done collectively through a cooperative or Agrarian Reform Beneficiaries Organization (ARBO). The AVAs and SBF have three modalities and these are: (1) Collective CLOA, collective management; (2) Individual CLOA, collective management; and (3) Individual CLOA, individual management.

This study aims to formulate a conceptual framework for analyzing AVAs implementation. The recommended framework considers the different stages in the supply chain, from production to marketing and post-production activities. With this, it is best to understand the product flows of the three commodities: banana, pineapple and sugarcane, as well as the key players involved in the supply chain.

Banana. De los Reyes and Pelupessy (2009) presented the impact of agrarian reform on the dynamics of the banana supply chain in both export and domestic market. In the export market, a contract grower scheme between banana farmer cooperatives and export firms or multinational companies (MNC) was observed. Most banana farmers preferred this type of AVA scheme because it gave them the opportunity to become independent agri-business entities. Banana farmers who were ARBs found the need to organize a CARP-assisted cooperative to be able to supply the volume needed in the export market and to comply with the strict standards of the export commodity.

The commodity channel or supply chain is shown in Figure 1, where it is indicated that farmers' produce was consolidated by the cooperative, which operated with an ex-patio type of contract growing. This was described as an arrangement where farmers are responsible from planting until packing, boxing and branding, and exporters will just collect the product and prepare it for shipping. The bananas from the exporters (MNCs and shipping companies, as indicated in Figure 1) will then be bought by importers from Japan. These bananas will either go to the wholesalers or food processors, depending on its quality where fresh ones will be sold as it is to the consumers through the retailers while the others will be processed. Processed bananas can either be sold to consumers through the retailer or can be sold to the wholesalers as represented by the dotted line. According to the authors, the dotted line can also signify possible reverse relationship where wholesalers can also sell fresh bananas to processors. The price distribution for this type of arrangement was also presented

in the paper. From the results, it was noted that a bulk of the consumer price went to the retailers with 52%, followed by wholesalers with twenty-three percent.

On the other hand, the banana value chain for the domestic market is shown in Figure 2. The commodity chain for domestic market starts with the farmers selling their produce to the traders or agents. These agents consolidate the produce to reach a given volume required by the wholesalers and consignees of supermarket chains. The study reported Dole Philippines to be a major consignee of the commodity and supplies almost the entire retailed banana in the country. However, it was emphasized that there is no existing standard for the commodity in the domestic market, unlike in the export market. Therefore, consumers decide to purchase depending on the price and their preference. From the price distribution presented in the paper, the wholesalers acquired the biggest share of consumer price.

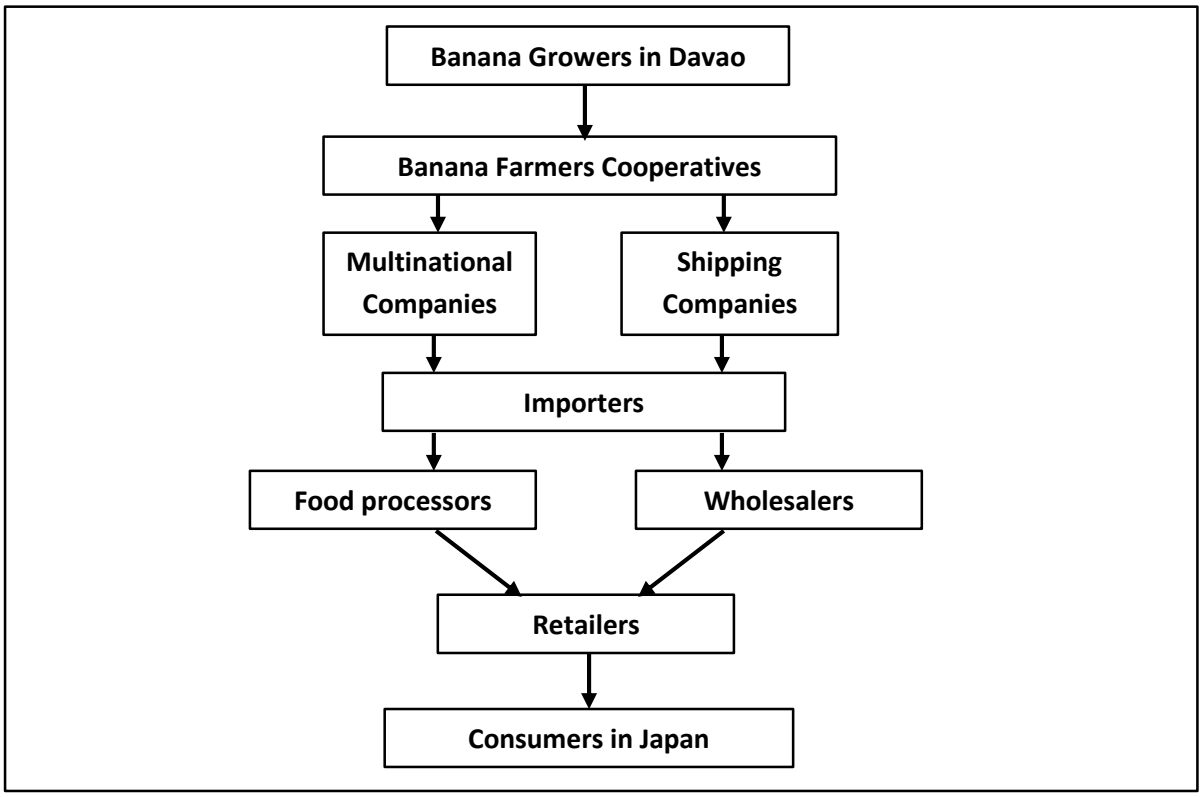

Figure 1. Banana Supply Chain in the Export Market
Source: De los Reyes and Peluppesy, 2009

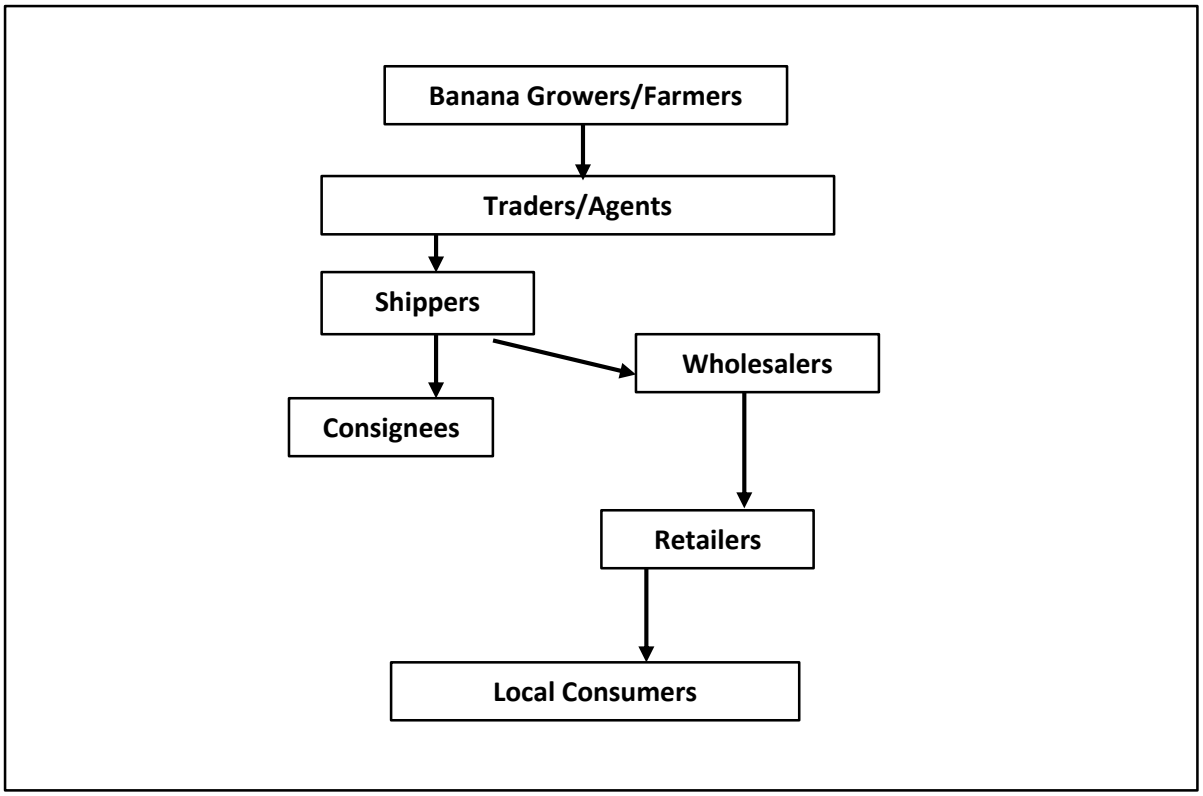

Figure 2. Banana Supply Chain in the Domestic Market
Source: De los Reyes and Peluppesy, 2009

Digal (2007) studied the nature of contract growing for banana and pineapple in Mindanao. For both output and inputs in banana growing, there are principal or the buyer and agent or the seller. The principal for outputs or the buyer of the produce pays the grower the amount of the produce meeting the specific quality requirements. Price of the produce depends on the arrangements with regards to the inputs and requires a price review or negotiation at least every two years in cases of a 5% increase in the price of imported materials such as fertilizers, herbicides, fungicides, etc. Before proceeding to the payment, all outstanding accounts and compensation due to the buyer, including loans, are deducted first from the gross sales. In addition, the principal has complete ownership of the produce and has the right to reject those that do not meet quality standards. On the contrary, the agent or the seller is only responsible in producing banana optimizing the farm's capacity.

In terms of inputs, the principal has the option to supply the seller inputs needed in the farm with a charge deducted from the proceeds of the commodity. However, the principal is expected to provide the seller technical services. The buyer shall also supply and deliver for free the packing materials such as cartons, labels, stitching wires, and processing chemicals. On the other hand, the seller is prohibited from selling, disposing, transferring, assigning, or leasing to any third party the land or any portion of it without prior consent from the buyer. The agent or the seller also handles the funds and the farm's production and operating costs.

Pineapple. In the RP-Spain, SAIS-BC Project, the commodity flow and marketing chain of pineapple was presented in Figure 3. Produce from individual farmers and farmer groups went to traders, exporters, processors, local retailers and local costumers or institutional buyers. Pineapple from traders went to either local retailers or local customers, processed pineapple only went to local retailers, and exported ones went to foreign importers. In this structure, different sales arrangements were employed depending on the marketing

level; selling was either picked-up or delivered; and mode of payment was either cash or installment. Among traders, manner of selling was on delivery basis where seller delivers to buyers in times of surplus while the reverse was observed during scarce months.

According to Digal (2007), most of the contractual arrangements in pineapple industry were leaseback agreements between MNC processors and farmers' cooperative-producers. In this kind of agreement, the buyer directly operates the land for growing and processing while the grower lease the land.

Sugarcane. According to the SRA roadmap 2020, sugarcane farm management and operations involve a series of activities such as financing, technology, land preparation, irrigation, input supply, labor, hauling and farm roads maintenance. The harvested sugarcane is transported to the sugar mills or refineries, bioethanol fuel distilleries and muscovado mills. Sugar is the major product of sugarcane and bioethanol fuel is the second major product of sugarcane where the production of the latter is encouraged by the mandate of Renewable Energy Act of 2008. Raw sugar maybe directly used by industrial users and refined sugar can be used for industrial, commercial, institutional and household use. To be able to transact business on sugar, SRA requires domestic and international sugar traders to register with them. However, wholesale and retail level sugar traders are not required. Sugar is traded in the sugar mills which conduct weekly bidding of sugar quedans. In terms of muscovado trading, all muscovado traders are required to register with SRA and all shipments of muscovado should have secured shipping permits with SRA as wells as imports and exports clearances. In terms of bioethanol trading, oil companies buy bioethanol trading directly to bioethanol producers. Current policy of the Department of Energy (DOE) states that no bioethanol traders on local production are allowed. Traders are only allowed in the trading of imported bioethanol.

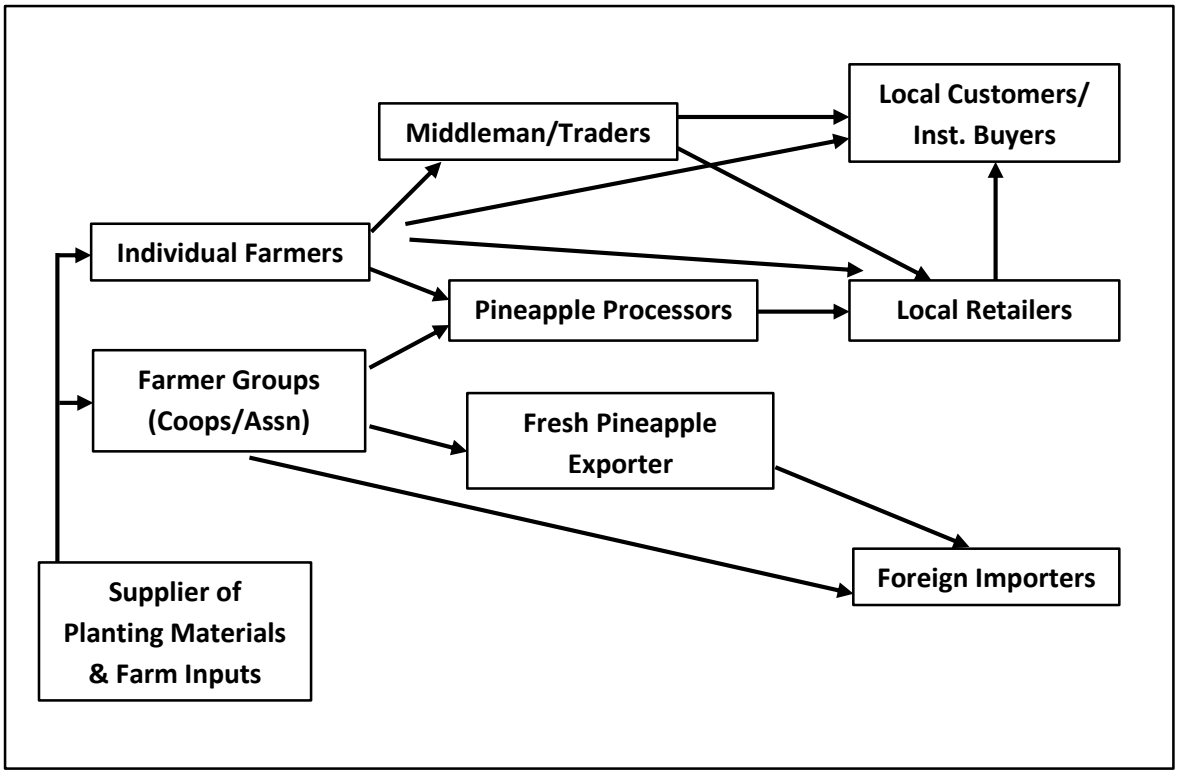

Figure 3. Commodity Flow of Fresh Pineapple
Source: RP-SPAIN, SAIS-BC Project, undated

Lizada and Tan (2015) presented a paper on the supply chain analysis of muscovado sugar industry. The marketing channel of muscovado is presented in Figure 4, where sugarcane farmers sell some sugarcane to muscovado millers and process some of it into muscovado sugar and sell it to wholesalers, and retailers. On the other hand, muscovado millers, mainly responsible for processing the sugarcane, sell their produce to the wholesalers and retailers as well. The wholesaler sells the product to retailers, institutional buyers, processors, and household consumers. Lastly, retailers sell the sugar to institutional buyers, processors, and household consumers. Also presented in the study are the trading practices of muscovado where 78% practiced open-market transactions and only 22% employed the suki system. In addition, millers and buyers of muscovado mostly met through friend referrals and SMS.

In another study on muscovado supply chain, there was a slight difference in the marketing channel presented. Sugarcane farmers either avail milling services from small millers and the produce was sold to traders and end consumers; or they sell their produce to small and big millers. Millers process the sugarcane into sugar, which were sold to traders and buyers (Figure 5).

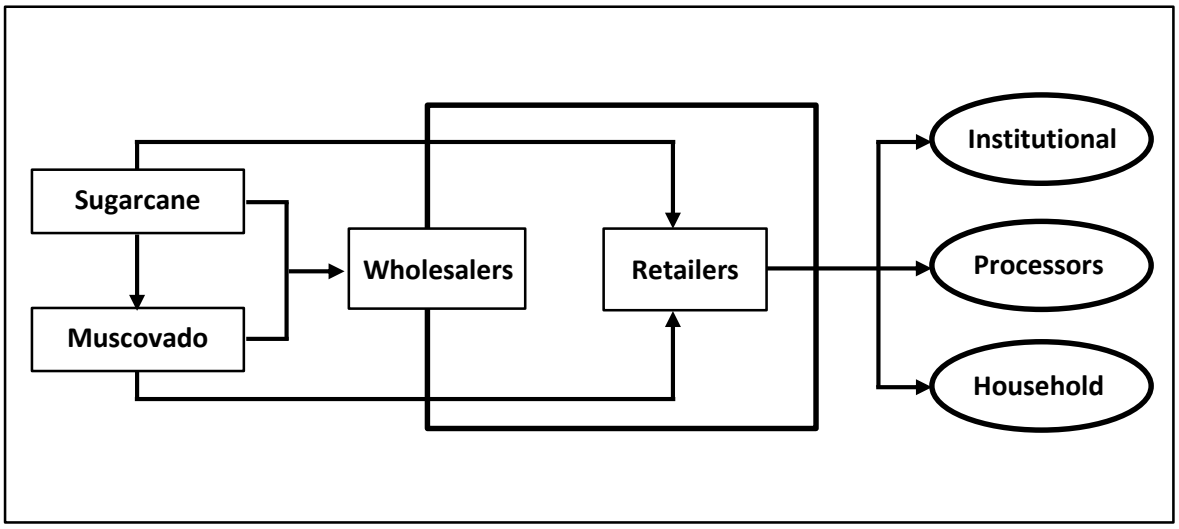

Figure 4. Marketing Channels for Muscovado
Source: Lizada and Tan, 2015

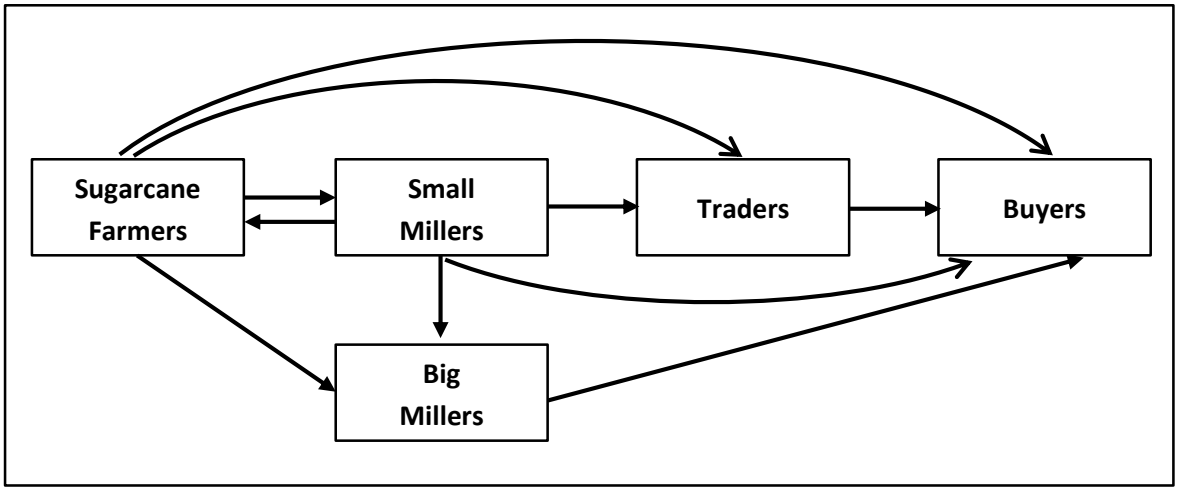

Figure 5. Marketing Channels for Muscovado
Source: PRDP, undated

Figure 6 presents the recommended framework for assessing the implementation of different AVAs models focusing on the three crops covered in this study. Farms which adopted the AVAs and SBF have prerequisites to be successful. First, it needs to have capital at the onset to support production as well as post-production and marketing activities. For production, access to land is critical and under the CARP lands are distributed to provide security of tenure. To attain high yields, farmers must have knowledge on the latest and appropriate technology and have access to recommended inputs, farm machinery and irrigation water. For the post-production activities, farmers should have facilities that they will use for harvesting, processing, storage and packaging. Another critical factor in the supply chain is market. Those under AVAs and SBF should readily have markets, agreements of which are protected by contracts that are reviewed by lawyers regularly (e.g., at least every two years), to ensure farmers receive reasonable prices, based on sound economic viability study. Farm to market roads are also essential as well as transport facilities.

Nonetheless, the world market prices or demand also affect marketing of the three crops. Other factors that are also critical to the success of the AVAs and SBF are world market demand situation, provision of government assistance and the policy environment particularly on tariffs and quotas. The interplay of the cited elements eventually affects farm productivity and income as well as decision of investors to continue with investing in said crops and arrangements.

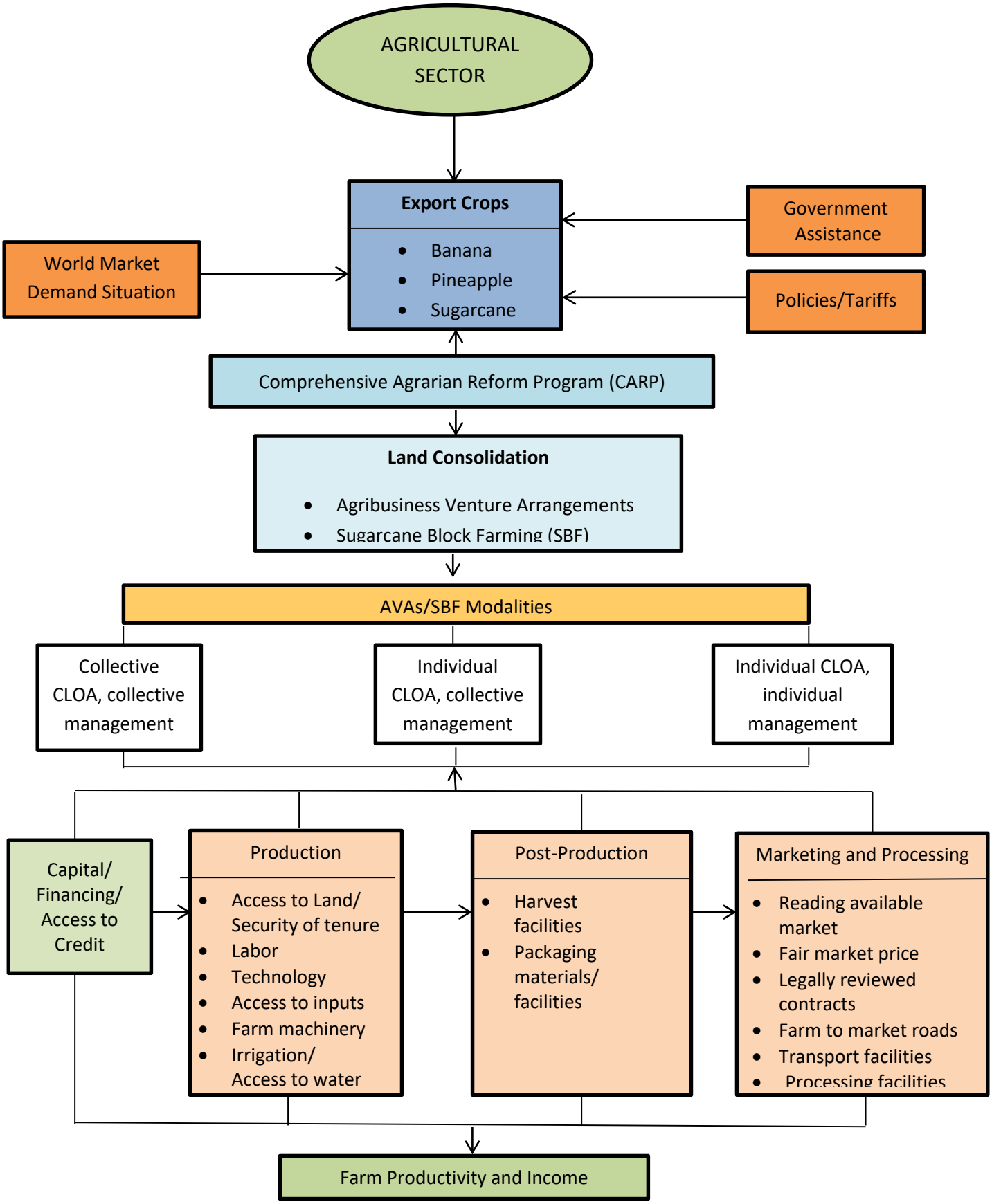

Figure 6. Conceptual framework of AVAs implementation.

V. Results and Discussion

A. Agribusiness Venture Agreement

Administrative Order No. 9. Series of 1998 provided for the adoption of the following AVAs: (1) Joint Venture Agreement; (2) Lease Agreement; (3) Contract Growing/Growership Arrangement; (4) Management Contract; (5) Production, Processing, and Marketing Agreements; and (6) Build-Operate-Transfer Scheme. This AO was reinforced further by Administrative Order No. 2, Series of 1999 which provided for the rules and regulations governing joint economic enterprises in agrarian reform areas. Meanwhile, the various AVAs are defined as:

1. Joint Venture Agreement (JVA) is an AVA scheme wherein the ARBs and investors form a joint venture corporation (JVC) to manage farm operations. The beneficiaries contribute the use of the land held individually or in common and the facilities and improvements, if any. On the other hand, the investor furnishes capital and technology for production, processing and marketing of agricultural goods, or construction, rehabilitation, upgrading and operation of agricultural capital assets, infrastructure and facilities.
2. Lease Agreement is an AVA scheme wherein the beneficiaries bind themselves to give the former landowner or any other investor general control over the use and management of the land for a certain amount and for a definite period.
3. Contract Growing/Growership/Production Arrangement is an AVA scheme wherein the ARBs commit to produce certain crops which the investor buys at pre-arranged terms (e.g., volume, quality standard, selling price). This may come in the form of production and processing agreements.
4. Management Contract is an AVA scheme wherein the ARBs hire the services of a contractor who may be an individual, partnership or corporation to assist in the management and operation of the farm for the purpose of producing high value crops or other agricultural crops in exchange for a fixed wage and/or commission.
5. Marketing Agreement is an AVA scheme wherein the investor explores possible markets/buyers for the ARB's produce and in turn receives commission for actual sales. It is distinct from the direct marketing arrangement/contracts of ARBs or their cooperative/association wherein the regional/provincial marketing assistance officer of DAR helps or assists in the sale and marketing of ARBs produce to a regular market, e, g., institutional buyers such as Cargill Philippines or San Miguel Corporation (SMC) for yellow/hybrid corn. This arrangement is under the DAR marketing assistance program (MAP) and not considered as an AVA scheme.
6. Build-Operate-Transfer (BOT) is an AVA scheme wherein the investor builds, rehabilitates or upgrades, at his own cost, capital assets, infrastructure and facilities applied to the production, processing and marketing of agricultural products and operates the same at his expense for an agreed period after which the ownership thereof is conveyed to the ARBs who own the land where such improvements and facilities are located.

As stipulated in the AO, the AVAs could be entered into by the ARBs individually or through their cooperative/association. Moreover, a greater portion of the commercial farms covered and distributed under the CARP were issued collective CLOA rather than individual ones. As such, consolidation in AVAs is two-pronged. One in terms of land title and the

other, in terms of management. Thus, some AVA schemes such as lease arrangements could be entered into by the investors with farmers with individual CLOAs or with collective CLOAs. With the investor acting as operator, management is collective and as such, there are two modalities of AVAs. One is collective management and individual ownership while the other one is collective management and collective ownership. For growership, two modalities had been observed during the conduct of the interviews. With the CLOA named after the cooperatives that is operating the farm, this becomes a modality of collective ownership with collective management. However, there are instances wherein the investor enters into a growership agreement with farmers with individual titles who operates the farms on their own and just adopts the recommended technologies of the investors who are also their markets. This is a case of individual ownership with individual management.

Table 5 shows the different AVAs entered into by the investor-corporations with the ARBs or their cooperatives/organizations. More than three-fourths have entered into three types of lease agreements, the most popular of which is the lease agreement (51%) followed by lease contract (21%). About 20% have growership agreements. In terms of areas covered, various lease agreements had the largest share (63%), particularly lease agreement (42%). Although only four farms (roughly 1%) entered into Joint Venture Agreement (JVA), these farms constitute almost 11% of total area of all farms.

Table 5. Number and area covered by type of Agribusiness Venture Arrangement (AVA), 2015

Type of Agribusiness Venture Arrangement	Number of AVAs	Percent to Total AVAs	Area Covered (Has.)	Percent to Total Area
Lease Agreements	*334*	*77.14*	*33,016.93*	*63.16*
Lease agreement	222	51.27	22,015.11	42.12
Lease contract	90	20.79	6,570.63	12.57
Leaseback agreement	22	5.08	4,431.19	8.48
Growership Agreements	*88*	*20.32*	*12,605.26*	*24.12*
Marketing contract	4	0.92	4,458.00	8.53
Growership	33	7.62	4,391.82	8.40
Growership/contract growing	37	8.55	940.12	1.80
Growership/contract growing (agro-forestry)	1	0.23	272.00	0.52
Contract growing	9	2.08	1,246.60	2.38
Banana production purchase agreement	1	0.23	27.00	0.05
Banana supply and marketing agreement	3	0.69	1,269.72	2.43
Other Agreements	*11*	*2.54*	*6,649.09*	*12.72*
Joint venture agreement	4	0.92	5,602.44	10.72
Marketing with incentives	2	0.46	846.00	1.62
Contract of development agreement	1	0.23	57.40	0.11
Management contract	2	0.46	54.25	0.10
Rice retailing	1	0.23	30.00	0.06
Not indicated	1	0.23	59.00	0.11
Total	**433**	**100.00**	**52,271.28**	**100.00**

Source: Food and Agriculture Organization of the United Nations, 2016

In terms of crops covered, banana has the largest area covered by AVAs at about 14,501 hectares followed closely by pineapple (14,185 ha.) (Table 6). The third largest is

palm oil at nearly 12,454 hectares. However, looking at the number of ARBs involved, pineapple ranked first (19,864) while banana was only second at 14,866. Third is palm oil where there are 4,019 ARBs covered. It is notable that in terms of area and number of ARBs, sugarcane ranked fifth and fourth, respectively.

Table 6. Area and number of ARBs covered under the Agribusiness Venture Agreement as of October 2015

Crop	Area (Ha)	Number of ARBs
All Banana	14,501.07	14,866
Banana	10,452.67	11,726
Banana (Cavendish)	3,993.80	3,054
Banana (Bongolan, Organic)	54.60	86
Oil Palm	12,453.57	4,019
Pineapple	14,185.15	19,864
Pomelo	92.41	552
Sugarcane	3,777.20	2,619
Cacao	1,327.71	888
Other Crops (Rubber, HVCs, Papaya, Rice, Fruit Tees, etc.)	5,934.16	2,591
Total	**52,271.28**	**45,399**

Source of data: 2015 Inventory of AVAs, DAR

B. Sugarcane Block Farming

The Sugarcane Block Farming was conceptualized as part of the National Convergence Initiative of the DA, DAR and Sugar Regulatory Authority (SRA). Its main goal is to increase productivity of sugarcane farms of members of Agrarian Reform Beneficiaries Organizations (ARBOs) such as cooperatives and farmers' associations under the Agrarian Reform Community Connectivity Economic and Support Services (ARCCESS) project that is currently being implemented by the DAR. It also aims to enhance the skills of the ARBOs in managing agribusiness enterprises. Sugarcane Block Farming have three expected result which are: (1) reduce cost of production; (2) increase farm productivity from 60 to 75 tons cane per hectare; and (3) establish at least one agribusiness activity per block farm.

The block farming scheme entails consolidation of small farms into 30-50 hectares to take advantage of plantation-scale production or economies of scale. Farmers, mostly ARBs, with landholdings of less than two hectares, are encouraged to group their production areas into integrated farm blocks with small farms being at least 2 kilometers apart. The ARBs retain ownership of the lands and depending on the arrangement entered into with the ARBOs, they may even be hired as farm hands. For at least two cropping seasons, the farmers will undergo coaching and will be provided guidance on farm management practices. The profit-sharing arrangement will depend on the agreement of the officers and members of the ARBO, block farm enrollees or farmers and financiers, if any. The financing scheme, which may be through partnership, joint venture, contract growing, foreign funding, loans, etc., will depend on the decision of ARBO officers and members.

The DAR had been tasked to identify and/or organize the ARBOs. It is supposed to provide the operating expenses in implementing the project as well as monitor its

implementation and fund utilization. It is also expected to extend at least one farm equipment or common service facility (CSF) to the ARBO which will help increase sugarcane productivity as well as provide the ARBO with opportunity of having an enterprise by renting out the CSF.

Meanwhile, the DA is expected to provide necessary irrigation systems and farm to market roads. It is also tasked to give starter inputs for the diversification of agricultural production facilities. The SRA, which is an attached agency of DA, will assist DAR in identifying and validating the block farm enrollees. It will also provide technical assistance and extension and capacity building programs. It is likewise expected to provide financing for farm operations, production facilities, processing technologies, and market linkage in the case of *muscovado*. Part of the role of the SRA is to manage the fund released by DAR for operationalizing and monitoring the block farms. Based on the agreement among the agencies, SRA should prepare the block farm operations manual/business plan and CSF operations manual. However, most often, DAR had been hiring Business Development Service Providers to handle these functions.

In the original plan, Phase I of the Sugarcane Block Farms had been identified and was supposed to be implemented in 2012 in 16 farms, eight of which are in the Visayas and seven, Luzon (Table 7). Phase II was targeted to be implemented in 2013, covering 29 farms, 18 of which are in the Visayas while eight are in Mindanao. Being sugarcane producing areas, most of the block farms are in the Visayas particularly in the provinces of Negros Occidental and Negros Oriental. Participants in the second phase of the block farming scheme had been given access to credit from the Agrarian Production Credit Program (APCP), a credit program implemented by the DA, DAR and state-owned Land Bank of the Philippines for CARP beneficiaries. However, only 29 farms were operational as of 2014.

Table 7. List of Phase I and Phase II Operational Block Farms as of 2014

Year		Location	Name of Organization
2012	1	Magalang, Pampanga	Binhi ni Abraham
	2	Balayan, Batangas	Lucban MPC
	3	Nasugbu, Batangas	Kamahari
	4	Nasugbu, Batangas	Damba
	5	Lian, Batangas	Prenza
	6	Pontevedra, Negros Occ.	Kauswagan & Gen. Malvar
2013	7	Magalang, Pampanga	PASAMA
	8	Pili, Camarines Sur	Had. Salamat
	9	Tampalon, Kabankalan City, Negros Occidental	Minaba MPC
	10	Capiz, Iloilo	Vizcaya ARB MPC and Lantagan ARB, MPC
	11	Sta. Catalina, Negros Oriental	Manggolod Farmers Mpc
	12	Canlaon City, Negros Occidental	Ramrod Agricultural Multi-Purpose Coop. (RAMPUCO)
	13	Caputatan, Medellin, Cebu	ANARBA
	14	Ormoc, Kananga, Leyte	Boroc Agricultural Producers MPC
	15	Quezon, Bukidnon	J.A. Agro Employees Farmers Beneficiaries Livelihood Association
	16	Paniqui, Moncada, Ramos, Anao, Gerona, Tarlac	Northern Cluster Producers Coop (NCPC)
	17	Lauan, Patnongon, and Bugasong,	GMJ ARB Coop and ASSMMSA

Year		Location	Name of Organization
		Antique	
	18	Passi, San Enrique, Iloilo	JAGUIMITAN-JARBEMCO and MAPILI-CATUBAY
	19	Escalante, Negros Occidental	Don Esteban ARB (DEARBA) and Had. Bongco Farmers Ass'n (HABFA)
	20	Cadiz City, Negros Occidental	PARAISO Food Workers ARB (El Sansi ARB)
	21	Cadiz City	Hacienda Bernardita
	22	Talisay City, Negros Occidental	CASA MPC
	23	La Carlota, Negros Occidental	NARC
	24	Manjuyod, Negros Occidental	SYCIP Plantation Farm Workers
	25	Tanjay, Negros Oriental	San Julio Farm Workers MPC
	26	Mabinay, Negros Oriental	SAMAC (SUFARMFUCO)
	27	Bais City, Negros Occidental	KASFARBECO
	28	Bayawan, Negros Oriental	LAPAY (LARBEMCO)

Source: DAR

Initially, the SBF was supposed to follow a collective management approach wherein the cooperative was supposed to take over the management of the operations of the farms of the enrollees or farmers who participated in the SBF. Two modalities of SBF emerged from this and they are collective landownership (if collective CLOAs were issued) with collective management and individual ownership (for individual CLOAs) with collective management. However, some farmers resisted this hence some farms that were distributed individually were managed by the farmers following a modality of individual ownership with individual management. In this case, the cooperative acts merely as a consolidator of inputs, other support services and produce.

C. Government Assistance, Policies, Taxes and Tariffs

To boost the sugarcane, banana and pineapple industries, government assistance is expected. However, among the three, sugarcane seems to be provided with more assistance compared to banana and pineapple. For one, two government agencies were established to provide assistance to the sugarcane industry, one of which is the Philippine Sugar Corporation (Philsucor) which was established in November 4, 1983 by virtue of PD No. 1890. The main function of Philsucor as reflected in PD 1890 was to extend assistance to sugar mills for the restructuring of their loans from the original creditor which is the Philippine National Bank (PNB). Eventually, it was tasked provide assistance to sugar mills/refineries for the rehabilitation of sugar mills and to provide lending/financing to farmers for sugarcane production. Hence, in the SBF scheme, Philsucor was tapped to provide financial assistance to the enrolees through its cooperative.

Another government entity supporting the sugarcane industry, the Sugar Regulatory Administration (SRA), was created on May 28, 1986 through Executive Order No. 18. As embodied in EO 18, it is tasked to "*promote the growth and development of the sugar industry of the Philippines through greater participation of the private sector and to improve the working conditions of the laborers*". Originally designed to be under the Office of the President, it is currently an attached agency of the Department of Agriculture (DA). It is worth noting that one of the tasks of SRA is to research to develop new technologies. Furthermore, it also conducts extension activities to promote newly developed technologies to farmers.

Moreover, on July 28, 2014, RA 10659, otherwise known as the Sugarcane Industry Development Act of 2015, was promulgated. It declares that government should promote the competitiveness of the sugarcane industry and maximize the utilization of sugarcane resources, and improve the incomes of farmers and farm workers, through improved productivity, product diversification, job generation, and increased efficiency of sugar mills. In conjunction with increasing sugarcane productivity, the RA supports the SBF.

While government appears to be supportive of the sugarcane industry, recent developments have also deterred this sector. For one, tariffs imposed on imported sugar had dropped to 5% from 30% this year. Moreover, small sugarcane planters, defined as those receiving a gross receipt of less than Php300,000 per annum had also been required by the Bureau of Internal Revenue (BIR). Another problem that has beset the sugar industry lately is the importation of sugar substitute, specifically corn syrup, which soft drinks manufacturers are now using instead of sugar. Unlike other sugar substitute, there is no quota for corn syrup primarily because it has not been identified as sugar substitute when quotas were set.

For banana, it was pointed out by a Key Informant that only the Pilipino Banana Growers and Exporters Association (PBGEA), a private sector organization, is looking out for the concerns of the industry but no entity from government does. Meanwhile, there is no local group, whether private or government created, that oversees the welfare of the pineapple industry.

Furthermore, investor-respondents of banana lamented that tariffs imposed on countries competitors had declined and will continue to decline until 2022 but tariffs imposed against the Philippines remain to be 30% particularly in South Korea. For Central America countries such as Guatemala, Costa Rica, Nicaragua, El Salvador, Honduras and Panama and Vietnam, tariff imposed by South Korea will be 0% beginning 2021 while the Philippine tariff is still 30%. In the case of Japan, tariffs vary depending on the season. From October to March, a higher tariff (18.2%) is imposed but it is only 8.2% from April to September, for an average of 13.2%. Pineapple tariffs in Japan and South Korea are 17% and 30%, respectively. With tariffs of competitors decreasing, it is expected that foreign markets will be reduce their importation of Philippine banana and pineapple. In fact, from 2011 to 2016, importation of Japan, South Korea, China, the Middle East and New Zealand had dropped (Table 8). In contrast, importation from Latin America countries in Asia and the Middle East had risen from 10 million boxes to 68 million boxes (580%) and its share of the market grew from 4% to 27% while that of the Philippines dropped from 96% to 73%.

Table 8. Importation of banana from the Philippines by country, 2011 and 2016.

Country	Millions of Banana Boxes Imported		% Decrease
	2011	2016	
Japan	85.7	56.5	34%
South Korea	28.1**	22.8	19
China	51.8	4.9	11
Middle East	72.6	53.6	26
New Zealand	4.4	1.3	70

**1 box = 13 kg*
***2012*
Source of data: DOLEFIL

One Key Informant pointed out the effect of the Philippine government's lack of support to the banana industry. He mentioned that banana exports are imposed a tariff of $2/box. Added to this cost are costs borne by investors such as on cold storage trucking facilities ($4.50/box) and packing materials ($1.25/box) and discharge fee/loading costs. Meanwhile, in Ecuador, storage and ports are owned by government that is why they can control price of banana they export.

Earlier this year, House Bill (HB) No. 5085, the Agribusiness Ventures Arrangements (AVAs) in Agrarian Reform Lands Act was proposed. A similar bill was filed at the Upper House, Senate Bill (SB) No. 1351 (An Act Regulating the Establishment and Implementation of AVAs in Agrarian Reform Lands). The bills aim to institutionalize the establishment and implementation of AVAs for a productive collaboration ARBs and private investors. Meanwhile, HR 919 stressed the need for the Committee on Agrarian Reform to assess the impact as of the AVAs on farmers as well as review the policies on AVAs. Public hearings and deliberations on the bills forwarded by the Congressmen are on-going.

Since the AVAs and SBF are schemes introduced by the DAR, it is expected that government will play a major role in their implementation. However, based on the interviews conducted, DAR actively partook in the SBF but not in the AVAs. In the SBF, DAR was responsible for convincing the coops and the farmers to participate in the project. DAR personnel also served as coordinators of the various activities undertaken in the SBF covered areas. The discussions and interviews revealed that DAR did not have a hand in identifying investors given that most of the investors were the previous farm operators and were responsible for convincing the farmers to enter into an arrangement on their own.

D. Adoption of AVA/SBF of Sample Respondents

Table 9 shows the type of ownership and management of the respondents. The ARBs of all three cooperatives under a growership scheme were issued collective CLOAs. In contrast, those under lease/leaseback agreements were issued either collective or individual CLOAs but opted for collective management. ARBs of KAMAHARI MPC and Lucban MPC which are covered by SBF were issued collective CLOAs and the scheme is under collective management. Meanwhile, members of Taludtod MPC were issued individual CLOAs and decided to manage their farms individually since this is what they have been used to.

Table 9. Scheme adopted by respondents, type of CLOA and type of management.

Name of Coop	Scheme	Type of CLOA	Type of Management
Tagnanan CARP Beneficiaries Cooperative (TCBC)	Growership	Collective (but started to issue individual CLOAs)	Collective Management
AMS Employees Fresh Fruits Producers Cooperative (AMSEFPCO)	Growership	Collective	Individually Managed
DOLEFIL Agrarian Reform Beneficiaries Cooperative (DARBC)	Leaseback and Growership	Collective	Collective Management
Wadecor Employees Agrarian Reform MPC (WEARBEMPCO)	Leaseback	Collective	Collective Management

Name of Coop	**Scheme**	**Type of CLOA**	**Type of Management**
ARBs/farmers of Brgy. Laak, Compostela Valley	Lease	Individual	Collective Management
ARBs/farmers from various barangays of Polomolok, South Cotabato	Lease	Individual	Collective Management
KAMAHARI Agri-Based Multi-Purpose Cooperative (KAMAHARI MPC)	Sugarcane Block Farming	Collective	Collective Management
Taludtod Multi-Purpose Cooperative	Sugarcane Block Farming	Individual	Individually Managed
Lucban Multi-Purpose Cooperative	Sugarcane Block Farming	Collective CLOA initially given; have started issuing individual CLOAs	Collective Management

Most of the respondents covered by AVAs started adopting such schemes from 1998 onwards. WEARBEMPCO started adopting said scheme on June 15, 1998, the final year of the Commercial Farms Deferment hence they were supposed to be covered and distributed under the CARP. It entered into a leaseback agreement with the former owner and operator, Tagum Agricultural Development Company, Inc. (TADECO).

Meanwhile, AMSEFPCO initially had a 10-year leaseback arrangement with the former landowner, Andres M Soriano (AMS) Group of Companies. After the stipulated period, Dole, which is the former market of AMS, took over as investor.

The land distributed to ARBs of Tagnanan CARP Beneficiaries Cooperative (TCBC) was formerly planted with coconut and intercropped with cacao. It was owned and operated by Tagnanan Estate, Inc. (TEI). Since it was having financial difficulties, TEI decided to employ collective farming in 1990, which necessitated the formation of the farm-workers into a cooperative which operated the 1,005-hectare plantation. The net income derived from the operation of the farm was shared equally among all farm workers. In 1992, TEI decided to place the property under the Voluntary Land Transfer (VLT) scheme and entered into a lease agreement with the Marsman-Drysdale Agri-Ventures Group (MDAG) at the same time. Marsman-Drysdale, meanwhile, was a key player in the banana industry, particularly Cavendish, hence the plantation was converted into a Cavendish banana plantation. The ARBs then reverted to being farm workers of the plantation that was distributed to them. In 2003, the role of Marsman as investor and market was turned over to UNIFRUTTI.

The area covered by DARBC was formerly owned by the National Development Corp. (NDC), a government entity which by virtue of the CARP had to turn over the 8, 937 hectare-property to DAR. At that time, DOLEFIL was renting and operating the NDC area which they planted to pineapple. The lands were awarded collectively to the rank and file employees of Dole who formed a cooperative, the DOLEFIL Agrarian Reform Beneficiaries Cooperative Inc. (DARBCI). DARBCI initially went into a lease agreement with DOLEFIL then later, some portions of the awarded land leased out to DOLEFIL was operated by the cooperative under a Growership arrangement where the technology is provided by the company while inputs are also extended on loan basis.

Investors also entered into AVA contracts with individual farmers whose farms are contiguous or near each other. For instance, lease agreements of SUMIFRU with farmers from Laak, Compostela Valley. According to the individual farmers interviewed, SUMIFRU conducted a general assembly in their barangay in 2008 and convinced farmers to enter into a lease agreement with the company. The farmers were identified by a canvasser coming from the barangay hired by SUMIFRU who surveyed farmers on their willingness to lease their lands. DOLEFIL also lease farms of individual farmers who due to lack of capital agreed to enter into such agreement. These farmers come from different barangays and cooperatives.

KAMAHARI and Lucban MPC were two of the four initially covered cooperatives in Batangas when the SBF was started in 2012. Meanwhile, Taludtod MPC was only covered under Phase II of the SBF in 2016.

The concept of the AVAs was introduced to the ARBs primarily by the investors who are basically the former operators of the land prior to land distribution. Nevertheless, one cooperative mentioned that DAR, particularly the Municipal Agrarian Reform Office (MARO) and the Municipal Cooperative Council as well as the investor were responsible for briefing them on the AVAs. Moreover, although AO9 came up with six AVA modalities, the interviews indicated that most often only two models were brought to the attention of the ARBs and these are the lease (or leaseback) and growership.

While investors and former landowners played a more major role in imparting the concept of AVAs to farmer beneficiaries (FBs), DAR was the key player in informing the farmers on SBF. As attested by the three cooperatives, it was DAR who explained the process involved in the implementation of SBF and also convinced the cooperatives to take part in it.

E. Financing/Capital Requirement

Financing is a major consideration in going into the production of banana, pineapple or sugarcane since all of these crops require large capital outlay. Establishment of one hectare of banana will require about PhP500,000. Meanwhile, an investor will need PhP250,000 to put up one hectare of plant crop of pineapple and PhP150,000 for the succeeding ratoon crop. Financial requirement for sugarcane is lower at PhP65,000 to PhP75,000.

The lack of capital was the main reason cited why the ARBs decided to enter into an AVA or SBF. Furthermore, in the SBF those who opted for collective management mentioned that they now do not have problems securing inputs as well as labor which seem to become scarcer given the urbanization of Batangas and its proximity to Metro Manila and other key cities which provide more lucrative non-farm jobs to the younger generation.

For banana and pineapple under AVAs, financing is provided by the investors through provision of inputs on loan basis. Meanwhile, for sugarcane, loans secured from Philsucor and the LBP through the cooperatives are extended to the farmers.

F. Production

Access to land together with security of tenure is the most important aspect of production. CARP provided ARBs access to land. Upon entering into AVAs, contracts should provide security to the ARBs.

All the farms covered in this study have accompanying contracts, the terms of which vary as shown in Table 10. The contracts of investors with cooperatives seem more favorable compared to contracts of investors with individual ARBs. Contracts of the investors take care of the land amortization payment. For contract under lease agreement, members get a share of the lease rental every year. Rental rates and other provisions in the contract had been set to be reviewed every two (for TCBC and UNIFRUTTI) to five years. Meanwhile, the growership agreement provides its growers a price based on market prices although TADECO mentioned that if prices of bananas go up, even without negotiations, the price they offer to their TCBC also rises. Meanwhile, individual ARBs who had their farms leased out to a banana investor receives between PhP15,000 to PhP30,000/year which is good for five years and is reviewed every five years. It is worth noting that whether arrangements are lease or growership, duration of the contract is a long-term one normally lasting for 25 years.

Table 10. Terms and conditions of ARBS/ARBOs and investors.

Contracting Parties/Item	Terms and Conditions in Contract
Coop: Wadecor Employees ARB MPC (WEARBEMPCO) ***Investor: Tagum Agricultural Development Co., Inc. (TADECO)***	
Amount of Lease Rental	Php 8,000/ha/yr with Php1,000/ha/yr increment every 5 years 5 years (to be reviewed after 5 years)
Terms on payment of land amortization	Amt. of Amortization: Php 3,066.67/yr. deducted on lease rental
Other terms (e.g., assured employment of another household member upon retirement, guarantee payment, hospitalization, etc.)	Economic Benefits: 1) Beneficiary Livelihood Support Program -Php8,000.00/ha/yr; 2) Retirement Relief Fund-P0.70/box for the first 2 years, P0.80/box for the second two years, and P0.90/box for the last year prior to the next review, which provides the individual retired ARB with an average P7,000/year; 3) Coop share from the sales of production waste and recyclable materials-Php 1.00/kl.; 4) Productivity Incentive Program (PIP)- average of P19,145.82/employed ARB/year; 5) Quality Incentive Program (QIP)- P14,571.48/employed ARB/year; Employment Security: 1) preference of ARBs in Manpower reduction; and 2) preference of ARBs and their dependents in employment; 3) employment of dependent as replacement of retired ARBs; Cooperative Ventures Livelihood Activities: 1. money-lending; 2) job contracting; 3) trucking services; 4) consumer store Homelots; Hospitalization(retirees); Cash Gifts
Coop: AMS Employees Fresh Fruits Producers Cooperative(AMSEFPCO) ***Investor: DOLE-STANFILCO***	

Contracting Parties/Item	Terms and Conditions in Contract
Terms of price of banana/pineapple	Assumption - 4,000 boxes/ha/yr; ARB pay for 3,000 boxes at $0.75/ARB/yr. Buying Price - $3.15/box Total cost/box Php 110.00 98% income goes to ARB and 2% share to coop
Terms on payment of land amortization	Php 5,000/ha/yr deducted by AMSEFPCO from ARB's proceeds
Other terms	DOLE (Investor) gives subsidy to ARBs: fertilizer (Php48,000/yr.); drainage rehabilitation and maintenance (Php21,000/yr); harvesting (Php10/bunch) and labor (Php12.00/box-deducted to ARB) while ARBs in charge of farm operation. ARB receives total subsidy from DOLE amounting to P135,000/year for banana production.
Coop: Tagnanan CARP Beneficiaries Cooperative (TCBC) ***Investor: UNIFRUTTI***	
Terms of price of banana/pineapple	Class A (hand pack) - $3.88/box; Cluster pack - $4.88/box; Small Hand $2.20@13.5 kilos/box; $0.35/box – deductible as development cost and this is paid thru UNIFRUTTI Reviewed every two years
Terms on payment of land amortization	None
Other terms	Conducts economic review every two years; provides PhP15,000 cash advance/ARB payable within 1 year; trucking services; inputs; hospitalization (Php200,000/yr/ARB); financial assistance and relief goods (principle 7); burial assistance; patronage refund and dividend
Coop: DOLEFIL Agrarian Reform Beneficiaries Cooperative (DARBC) ***Investor: DOLE Philippines, Inc.***	
Amount of Lease Rental (for lease arrangement)	**Before** (1998): rental started at Php 8,000/ha/yr. and a production bonus of P500/ha/yr. with 7% escalation rate per annum **Present** (2017): Php 24,250/ha/yr. (combined rent and production bonus) at 3% annual escalation paid annually in advance
Terms of price of banana/pineapple (for growership arrangement)	DOLEFIL guaranteed a net income of Php 50,000.00/ha/yr. Deductible expenses are: labor expenses and farm materials/supplies for farm activities undertaken by both parties; expenses for farm inputs incurred by the investor; rental and related expenses trucking services undertaken by the coop; rental and other related expenses for utilization of the investor's equipment and machineries in the grower area and expenses for security services as incurred by the investor.
Terms on payment of land amortization	Php 8,000/ha/yr - paid by DARBC and then deducted to ARB's land rental fee/income

Contracting Parties/Item	Terms and Conditions in Contract
Other terms	○ DOLEFIL undertakes or performs the farming activities and other related activities effectively and efficiently in accordance with the previously agreed farm plan and sound agricultural practices ○ DOLEFIL hires farmworkers to undertake farming and related activities from DARBC's partner cooperative or, at DARBC's option ○ DOLEFIL regularly utilizes DARB's spraying equipment and trucks in their other operational areas and will pay DARBC based on its prevailing contract rates
Individual farmers from brgy. Amor Cruz, Laak, Compostela Valley; Investor - SUMIFRU (PHILS.) CORP.	
Amount of Lease Rental (for lease arrangement)	Php 15,000/ha/year in lumpsum for 5 years and given upon the signing of the lease contract and submission of supporting documents. An additional PhP500/ha/for every two years of the contract until its termination (25 years).
Terms on payment of land amortization	
Other terms	The investor pays advance land rental in case of hospitalization and burial of the lessor. Employment for lessor's relative who will be hired thru the cooperative manpower services.
Individual farmers from various barangays in Polomolok, South Cotabato; Investor: DOLE Philippines, Inc.	
Amount of Lease Rental (for lease arrangement)	Php 30,000/ha/year plus 5 years advance rental and 1 year signing bonus at 10% escalation every 5 years.
Terms on payment of land amortization	Php 1,300/ha/year - deducted by DOLEFIL from ARB's lease rental
Other terms	The rental shall be adjusted and increased on the sixth year from the anniversary date at the rate of 10% of the previous rental for every 5 years, *subject to 5% withholding tax*. Escalation will take effect on the 6th, 11th, 16th and 21st year only; DOLEFIL shall pay the lessor an amount equivalent to five (5) years of the Lease Contract, as advance payment, including the remaining quarterly land rental due for 2017; DOLEFIL shall pay to the lessor a one-time goodwill signing bonus equivalent to one (1) year land rental; The rental shall be paid annually after the fifth year. The cash advances incurred by the lessor before the execution of this contract shall be deductible from the proceeds of the five-year advance payment.

However, based on the Survey of ARBs conducted by PSRTI (2016), certain issues related to security of tenure and distribution of land titles need to be addressed. Nearly two-thirds (65%) of AVAs ARBs own their farms but a bigger share (77%) of non-AVAs ARBs also own their farms (Table 11). It is worth noting that a relatively large proportion of AVAs ARBs have owner-like status (22%) and have owned lands that are mortgaged (13%). A

higher share of non-AVAs ARBs (33%) have individual CLOAs compared to AVAs ARBs (20%), more than half of whom possess collective CLOAs (52%) (Table 12). This indicates that one of the backlogs that DAR has to address among AVAs ARBs is the issuance of individual CLOAs. Moreover, the high incidence of mortgaging among AVA ARBs should also be looked into by the DAR.

Table 11. Tenure status of ARBs, AVAs and non-AVAs ARBs,2015

Tenure status	AVAs ARBs		Non-AVAs ARBs	
	Number	Percent	Number	Percent
Owner	86	64.7	4357	76.9
Owner but mortgaged	17	12.8	342	6.0
Owner-like status (stewardship agreement, untitled property, claimant)	29	21.8	641	11.3
Tenant/lessee		0.0	204	3.6
Trustee	1	0.8	85	1.5
Others		0.0	36	0.6
Total	**133**	**100.0**	**5665**	**100.0**

Source: PSRTI, 2016

Table 12. Tenure instruments of AVAs and non-AVAs ARBs, 2015

Tenure instrument	AVAs ARBs		Non-AVAs ARBs	
	Number	Percent	Number	Percent
Individual certificate of land ownership (CLOA)	24	20.0	1385	33.0
Collective certificate of land ownership (CLOA)	62	51.7	390	9.3
Emancipation patent (EP)	2	1.7	265	6.3
Certificate of land transfer (CLT)	1	0.8	763	18.2
Certificate of ancestral domain title (CADT)			16	0.4
Certificate of ancestral land title (CALT)			15	0.4
Free patent			531	12.6
Homestead patent			10	0.2
Agricultural sales patent	31	25.8	334	7.9
Community-based forest management agreement			5	0.1

Source: PSRTI, 2016

To enhance productivity, adoption of new technologies is imperative. In the growership arrangement, technologies adopted or recommended by the investors are transferred to the ARBs or coops. Moreover, to ensure that their recommended technologies are adopted by the ARBs or cooperatives, they provide the inputs through credit basis. The prices of inputs are said to be lower than those sold in the market because investors can import the inputs directly in bulk. Moreover, needed farm machinery are either rented out by the investor or acquired by the cooperatives with the investor acting as guarantor. Irrigation is also not a problem given that the farms were formerly planted to either banana or pineapple thus the system or source had already been set up. Knowledge on, access to and adoption of modern technologies, access to farm machinery and irrigation are also assured under the lease/leaseback agreement given that investors are operating the lease properties. However,

individual farmers or the cooperatives leasing out their lands do not have access to the technology except DARBC which is has two types of agreements with DOLEFIL, lease and growership.

Control of diseases such as Sigatoka and Panama also beset the banana industry. This is one reason why production costs of Philippine-produced bananas are higher compared to South America. Thus, it is imperative for banana growers to use the appropriate technology to ensure that pests and diseases are controlled particularly since world market standards are high.

For the SBF, knowhow of enrollees on the latest technology is enhanced through the Agricultural Extension Service (AEs) providers which are contracted by DAR. Trainings on the latest technologies as well as demonstration farms are conducted by the AES providers. As to farm machinery for production (e.g., tractors) and irrigation (irrigation pumps) needs, these were provided to the farmers through the Agrarian Reform Community Connectivity and Economic Support Services (ARCCESS). Inputs are provided by the cooperatives.

G. Post-Production and Marketing

Under a lease/leaseback arrangement, post-production activities such as harvesting, grading, packaging and processing, if any, are done by the investors who have the necessary equipment for such operations. Banana under growership agreement is harvested and dehanded by the cooperative, then washed, dehanded for a second time, graded then boxed. It is then delivered to the port by the coops. Storage and shipping are done by the investors. For banana areas under lease agreement, harvesting and post-harvest operations are done by the investors. It is worth noting that individual farmers will never be able to afford the equipment and facilities needed for harvesting and post-production activities. Investors under a lease/leaseback agreement market their produce abroad while those under growership arrangement go through two stages of marketing. First is on the local level where the buyer is the investor. The second is the international market primarily Japan and South Korea which are also the main markets for investors under lease agreement. Farm-to-market roads have been built by former plantation operators owners.

In the same manner, DOLEFIL does the harvesting and other post-production activities for areas that are leased out to them. Meanwhile, for those that are under growership, harvesting is done by DARBC but equipment used for harvesting are rented by the coop from the company. Washing, grading and packing are done by DARBC for the lot intended to be marketed as fresh fruits. Those for canning are further processed by DARBC in their cannery. DOLEFIL is the market of DARBC but DOLEFIL market pineapple, majority of which are canned, abroad. Being devoted to pineapple before, farm-to-market roads had already been constructed by the DOLEFIL before ownership was transferred to the ARBs.

In the SBF, harvesting is done either by KAMAHARI and Lucban cooperatives who hire farm laborers for this said task. It was mentioned that hiring harvesters in Batangas have become a problem since they are becoming scarce. This is attributed to the urbanization of Batangas and the preference of the younger generation to work in non-farm jobs. It is also notable that most of children of farmers who are expected to take over from them are better educated that some have become professionals. However, the enrollees have the option to

hire people on their own. Trucking is also shouldered by the cooperatives. However, all costs incurred are deducted from the proceeds of the sales. Although enrollees of Taludtod MPC have yet to harvest their produce in December 2017, all their operations are done individually hence it is expected that they will attend to harvesting and transporting of their produce although financial support is extended to the by Philsucor. The produce is brought to the sugar mills. Farm-to-market roads have already been built hence there is no problem bringing their produce to the sugar mills.

H. Income and Productivity

Based on the records of the cooperatives interviewed, yield per hectare of banana and sugarcane rose after AVAs and SBF (Table 13). Moreover, compared to the national average, productivity of farms covered under the study was greater compared to the national statistics.

Table 13. Comparative yield of banana, pineapple and sugarcane.

Crop	Yield Per Hectare (MT/ha)		
	Before AVAs/SBF	**During AVAs/SBF**	**PSA Data (2015)**
Banana	44.4 (3,700 boxes/ha)	60 (5,000 boxes/ha)	20.49
Pineapple	82	98	41.12
Sugarcane	43	60-70	54.41

A comparison of the income received by banana and pineapple ARBs who are affiliated with cooperatives before and during AVAs indicates that they are better off with the AVAs (Table 14). Annual income of individual farmers who leased their lands appear to have risen, too but the increment seems to be very minimal. Moreover, compared to those who are affiliated with cooperatives, the income that individual farmers receive from leasing out their farms is very low and will not even support a family of four for one year. In addition, the amount is not even sufficient to cover land amortization payments.

Table 14. Income of ARBs before and during AVAs/SBF.

Crop	Income Per ARB	
	Before AVAs	**During AVAs/SBF**
Banana	**WEARBEMPCO:**	
	a) Employee: Salary	**Salary with benefits**
	Supervisory: (can't recall)	315,348.96/yr.
	Non-Supervisory: (can't recall)	208,085.78/yr.
	b) ARB: PhP0	46,536.24/yr.
	TCBC	
	a) Employee: *P216,000/annum*	
	b) ARB: PhP0	PhP480,000/yr

Crop	Income Per ARB	
	Before AVAs	**During AVAs/SBF**
	AMSEFPCO	
	a) Employee: Salary	
	Supervisory: P 72,000/yr.	
	Non-Supervisory: P42,000/yr	
	b) ARB: PhP0	PhP720,000/yr.
Banana	**Laak Farmers (Individual Lease)**	15,000/ha/yr. with P500 increase every 2 years
Pineapple	**DARBC**	
	Leaseback	
	a) Employee: Salary	*Salary*
	b) ARB:	50,000/ha./yr.
	Individual Lease	
	1980's PhP3,000/ha/yr	PhP12,000/ha/yr. with 10% every 5 years
	1999 - PhP8,000/ha.yr +1,050 monthly allowance	
Sugarcane	Cannot remember exactly but most often incurred losses since they were unable to apply the recommended inputs due to lack of capital	PhP42,100/annum

However, data from PSRTI's (2016) 2015 Survey of ARBS indicated a very low average income for AVAs ARBs (Table 15). Moreover, their mean income was much lower compared to non-AVAs ARBs. The trend could possibly be attributed to the low lease rental rates reported by individual farmers who are renting out their farms.

Table 15. Average household income by source, AVAs and non-AVAs ARBs, 2015

Income	**AVAs ARBs**		**Non-AVAs ARBs**	
Source of income	**Amount (PhP)**	**Percent**	**Amount (PhP)**	**Percent**
Non-Farm Income	10,294.76	35.95	10,480.33	21.91
On-Farm Income	8,459.53	29.54	16,376.95	34.24
Off-Farm Income	5,550.58	19.38	9,830.83	20.55
Remittances	4,333.33	15.13	11,138.89	23.29
Total Income Plus Remittances	**28,638.20**	**100.00**	**47,827.00**	**100.00**

Source of raw data: PSRTI, 2016

VI. Issues

Several issues had been brought out during the interviews. These issues fall under various concerns such as production and capital, marketing and pricing, institutional support, contract terms and negotiations, directions of AVAs and projects of cooperatives, monitoring

the status of ARBs under AVAs, state of cooperatives and House Bills 5085, HR 919 and Senate Bills 1351.

Production and capital. Access to capital, technology, needed inputs and labor are important in increasing the productivity and income of ARBs. While growership upholds the intent of CARP, i.e., make ARBs tillers and entrepreneurs of their own lands, individual ARBs or cooperatives who do not have sufficient capital, do not have the appropriate technical knowhow and do not have access to inputs opt to lease their lands even at very low rates. This was brought out by the ARBs/coop members and by DAR officers. Through growership, all factors of production (land, labor and capital) are made available.

For the SBF, enrollees and the DAR said that these factors of production are also provided. Assurance of capital provision and availability of labor are in fact the major reasons why some farmers in Batangas agreed to become enrollees of the SBF. Given the rapid urbanization in Batangas and aging of farmers, second generation agricultural workers are hard to find and wage rates have also risen. For the SBF arrangements where the cooperative manages the farm of the ARB, the problem of hiring farm laborers are borne by the ARBO.

Production costs as mentioned by investors incurred by banana investors in the Philippines is higher compared to other banana-exporting countries due to high incidence of pests and diseases in the country.

Marketing and pricing. As revealed by the cooperative members in the FGD, sugarcane farmers are concerned about a sugar substitute, corn syrup which is from China. Since it was identified as a sugar substitute only this year, an importation quota has not yet been set. This resulted to a decrease in demand of soft drinks companies for sugar that eventually led to a decline in sugar prices. The contract of the soft drinks companies with China is until 2018 thus farmers expect the slack to continue until next year. In relation to market prices and global competition, the issue of pole vaulting in banana was also raised.

In growership, prices of produce are more or less set as stipulated in the contracts but there are instances when prices at the black market is higher than the set price that some cooperative members had been tempted to pole vault. This is an issue that was raised both by investors and the cooperatives.

Institutional support. Investors in the banana sector lamented that unlike the sugar industry; the banana and pineapple industries do not have a government agency that is protecting them. At the moment, pineapple and banana exporters are lobbying that tariffs imposed on them by countries like Japan and South Korea be dropped since some of their competitors (e.g., South America and Vietnam) had been able to bargain for lower tariffs, if any. It is also worth noting that SBF is spearheaded by a government agency, the DAR and being implemented together with other government entities such as Philsucor and SRA. The LBP at times also provide financial assistance to the SBF beneficiaries.

Negotiation and terms/conditions of contracts. DAR raised concerns on the process in which contracts are arrived at is an issue that has also been raised. DAR, if requested, is supposed to provide assistance to ARBs in reviewing the terms and conditions of the contract. However, oftentimes their assistance is not requested and they are not even informed of the negotiation until the contracts had been finalized. Unfortunately, when

conflicts arise later on, DAR's involvement as mediator is sought. DAR lamented that they have difficulties coming in since they are unfamiliar with the terms and conditions and at times, do not even have a copy of the contract.

The ARBs also discussed some issues about contract negotiation. Given that farmers, particularly those holding individual CLOAS and are not bonded together as a group or cooperative, do not have access to legal advice, it is easy for them to succumb to temptation when a lump sum amounting to five years of rental fees are offered to them. However, with the absence of legal advice, the ARBs do not realize the consequences of hastily agreeing with the offer of the investors. Moreover, the ARBs should be provided a copy of their contract by the investors. During the interviews, the research team noted that all cooperatives interviewed have a copy of their contract with the investors, but majority of the individual farmers do not.

The AVA-covered cooperatives that were interviewed are satisfied and contented with the terms and conditions in their contract with the investors. In contrast, many individual farmers felt that the terms and conditions of the contracts they entered are favorable only to the investors hence they have to be reevaluated. The negative side of the AVA contracts apparently is the reason why HBs 5085 and 919 and SB 1351 were proposed.

Another difficulty in contract negotiation, as pointed out by the investors and DAR officers as well, is that lease or leaseback agreements must go up to the level of the PARC for approval while other arrangements are approved only at the DAR provincial level. If the President does not call for a PARC meeting, the contract is left unsigned for a long period (e.g., 17 years).

Direction of AVAs and projects of cooperatives. Cases of lease or leaseback agreements covered under this study indicated that ARBS belonging to cooperatives are better off compared to what they were before when they were farm workers. However, as pointed out by some DAR officials and even an investor, growership follows the concept of CARP wherein lands are managed and controlled by the ARBs while support services such as credit, technology transfer, extension services, irrigation, farm machinery, etc. are provided to them. This brings to fore the question on what direction DAR wants the cooperatives to take in terms of the AVAs. For instance, WEARBEMPCO proved to be a successful entrepreneur that is operating several earning businesses and had generated labor in the area. However, it has veered away from the original intent of CARP, i.e., that they be entrepreneurs of agri-based businesses in their own lands. Is this situation alright with DAR?

Monitoring the status of ARBs under AVAs. For a firm conclusion on whether AVAs had benefitted the ARBs concerned, a regular monitoring not only of AVA-covered ARBs but as well as other ARBs should be done regularly. This will also enable the DAR to compare the status of the ARBs. However, the DAR admitted that due to their various tasks and concerns, they do not have enough time to monitor their beneficiaries.

State of cooperatives. The cooperatives covered in the studies had been capacitated and the officers and staff can manage the businesses undertaken by the ARBO. However, it was mentioned during the interviews of DAR and cooperative officers that not all ARBOs can run businesses which had been the cause of failures of some AVAs.

Conflicts among cooperatives had also been noted even in the cooperatives that this study covered. Starting from one cooperative, some have been divided into at least two organizations due to differences of opinion on AVAs and how the ARBOs should be managed, among others. Examples are DOLEFIL and TCBC. Although the organizations have learned to co-exist with each other, there is a possibility that the conflicts may worsen and eventually affect performance of the ARBOs. This may also affect the agreements entered with the investors.

HB 5085, HR 919 and SB 1351. Investors are worried over possible negative effects HBs 5085 and 919 and SB 1351 may have on their current agreements. Although HR 919 merely orders the Committee on Agrarian Reform to conduct an investigation on the impact of AVAs, some investors are apprehensive that the results may be biased given certain premises of the HR. For instance, the HR stated that the AVAs enchained ARBs with contracts favoring *haciendero*s, corporations through corporative schemes, contract-growing, profit-sharing agreements, block-farming, leasehold, leaseback and other arrangements. Meanwhile, the features of HB 5085 and SB 1351 except that the house bill contains an additional item which is the Resolution of Disputes. Nevertheless, one major worry of investors is the provision in both bills which state that only two thirds of the land subjected to AVA could be cultivated by investors while the remaining one third shall be exclusively controlled by ARBs. This will lessen the area covered by the investor. Moreover, the bills stipulate that all AVA contracts must contain provision allowing the ARB to rescind the AVA and that the duration of AVAs shall not exceed 10 years. The 10-year duration is much shorter than the usual 25-year duration of most current contracts. The bills also gives PARC Executive Committee (EXECOM) the right to revoke AVA contracts under the following conditions: gross violation or non-compliance of terms and conditions of the contract; AVA fails to provide benefits and incentives stipulated in the contract; AVA is no longer financially and economically viable; a portion of the farm is converted tor fragmented into non-agricultural uses; transfer of ownership to investors; cases of permanent or temporary take-over under when conditions identified in Article 8 are not met; acquisition or approval of AVA through fraud, intimidation, coercion, deceit, etc.; and other analogous or meritorious grounds. There are stipulations which may cause additional expenses or lower profits for investors. These are: (1) in case of food shortage, at least 50% of produce is staple crops will automatically be set aside for domestic market and (2) investors shall assist the ARBs in disaster relief and rehabilitation efforts. There is also a provision that the AVAs shall be subject to the approval of the PARC EXECOM which based on current experience on lease/leaseback contracts take a very long time to be approved. While these stipulations cause apprehensions on the part of the investors, it is apparent that these provisions intend to protect the interest of ARBs and make sure that they are the ones in control of the lands awarded to them.

VII. Conclusions and Recommendations

Except for one, the different cases of AVAs and SBFs studied show that land consolidation can be successful if the elements of the whole supply chain is present in the arrangement. Initially, there should be capital to ensure that appropriate production inputs are applied at the right amount and time. Land which is a factor of production is also necessary together with security of tenure. No investor will enter into an agreement if the farmer or cooperative does not have a firm hold over the rights on the land. Labor, farm machinery and irrigation should also be available and accessible. Post-production/processing

facilities should also be provided. Besides a sure market, a stable and optimal price is also essential to ensure profitability. Market facilities and infrastructure should be likewise prerequisites. Besides these, government assistance should be extended, and the policy environment should be supportive of the AVAs and SBF. To strengthen the implementation of AVAs and SBF, some issues need to be resolved. Thus, several recommendations are put forward.

Provision of credit and access to inputs. Provision of credit is another necessity that needs to be addressed by DAR particularly for the farmers who were issued individual CLOAs. Unless capital is provided, individual farmers will always be tempted to go into a lease agreement without thinking of its consequences. The financial assistance is needed by the farmer to ensure that recommended inputs are applied. If government cannot provide the needed capital, it should look into the possibility of providing subsidized inputs to farmers or cooperatives.

Markets, pricing and policy support. Being exports, government does not have control on the prices of the three crops, but it can provide the necessary policy support. Government intervention such as lobbying for lower tariff rates of banana and pineapple is needed. With the lowering of tariffs, the Philippines' share in the global market will expectedly rise which will positively redound on the AVAs.

For the SBF, DAR should ensure that the support services being given to the ARBOs are sustained. Otherwise, the SBF will fail eventually. Government should also be able to lobby for the imposition of a quota on corn syrup after 2018 to ensure that local demand for sugar will increase.

Institutional support. Creating a new government entity that would address the needs of the banana and pineapple industry is costly and tedious. It may be more practical and feasible for the Department of Agriculture or the Department of Trade and Industry to create a section within its organization that will look into the concerns of the two industries.

Direction of AVAs and projects of cooperatives. While WEARBEMPCO proved that a lease agreement may be beneficial to the cooperative and members had been capacitated to undertake successful income-generating projects, this model fails in upholding the goal of CARP, i.e., ARBs gaining access and control of the lands awarded to them and making them agri-based entrepreneurs. While there are risks and uncertainties involved in terms of the capabilities of the ARBs to run a business under growership arrangements, this agreement is consistent with the expectations of CARP. DAR should encourage more growership agreements.

Furthermore, the arrangements seem to more successful under a collective or cooperative management rather than an individual one. Terms and conditions are also more favorable toward a cooperative and investor partnership. Even the lease agreement is working better for the ARBs who are bonded as a cooperative than individual ones. Thus, DAR should push for more cooperative-investor arrangements.

Monitoring of the status of ARBs under AVAs. One of the provisions of the CARP is for the DAR to have a Performance Beneficiaries Monitoring and Evaluation (PBME) system. In its organizational set-up, DAR has a Management Information System (MIS) but its concern is mainly on the landholdings rather than the beneficiaries themselves. Until now,

a PBME has not been set-up by the DAR and this is primarily the reason why farmers are able to sell, lease, or mortgage lands that had been distributed to them. DAR may want to consider utilizing the PBME system created and recommended by the then Institute of Agrarian Studies through a project based at the University of the Philippines Los Banos Foundation, Inc. (UPLBFI) way back in 2000. The system had been given to the Planning Section of the DAR. With a monitoring and evaluation system in place, the DAR can readily find out the status, income and productivity of ARBs, regardless of whether they are under land transfer scheme, leasehold arrangement, AVAs, SBF, SDO or any other CARP scheme. DAR will also be able to monitor and assess if agreements of ARBs with investors are within the provisions allowed under the AVAs.

Contract negotiation. To fast track approval of contract for any type of AVAs, including lease and leaseback, concurrence of DAR should be only at the level of the provincial office. It should be considered that the provincial office is knowledgeable about the situation in the area.

The contract entered by ARBs and investors should have two prerequisites to ensure that both contracting parties are protected. One is the provision of legal advice particularly to the ARBs who do not have access to such. The other one is that the terms in the contract, specifically those related to lease rents and prices of commodities should be backed up by a sound economic or feasibility study. Lease rent agreements should also be able to factor in the amortization payment of ARBs which is considered usually in contracts between coops and investors but not between individual ARBs and investors.

Capacity building of cooperatives. Although the cooperatives covered are stable and generating income, it was mentioned in the interviews that some cooperatives need to be strengthened in order to manage businesses properly. Thus, DAR needs to coordinate with the Cooperative Development Authority as well as other service providers and seek their assistance in order to strengthen managerial, financial and marketing abilities of coop officers and staff. Values formation is also important to avoid incidents like pole vaulting.

The price fluctuations in sugarcane and the possible decline in global demand for banana and pineapple due to tariffs, cooperatives should be able to rely on other income generating projects that are not dependent on said products. Their capacities to identify and engage in other agri-related businesses should be strengthened. Related to this, trainings on conducting project proposals, feasibility studies and market studies can also be extended to them.

Thorough assessment of proposed bills. The provisions of HBs 5085, HR 919 and SB 1351 should be studied thoroughly. While it is true that many farmers have entered into one-sided contracts, there are also existing arrangements which have benefitted the farmers as indicated in this study. It may be worth looking into the conditions of the different successful AVAs which can also be inputted in the house and senate bills.

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