Property, Possession, Incorporation: Another Look at Agribusiness Venture Agreements in the Philippines

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Abstract

Of late, incorporating smallholder land, through partnerships with agribusiness firms that cultivate export crops has received some attention among scholars, policymakers and non-government organizations (NGOs). Some see such partnerships as a means of raising smallholder incomes, and achieving rural development. However, several case studies have shown that such partnerships can result in low incomes, and effective dispossession of smallholders. This essay examines how this dynamic occurs by comparing the experiences of smallholders in the Davao Region of the Philippines. I argue that despite the smallholders observable and enforceable property rights, the costs and risks of cultivation, coupled with an unfavorable political environment generate conditions under which smallholders cede control over their holdings in a partnership. This results in both lower incomes, and exclusion from the use of their land.

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Santo Tomas Individual Farmers Agrarian Reform Beneficiaries Cooperative (SIFARBCO), and the ARBs of Nuere and Sons and Piansai plantation in Pantukan, Compostela Valley.
1 Introduction

Of late, incorporating smallholder land through partnerships with agribusiness firms that cultivate export crops has received some attention among scholars, policy-makers and non-government organizations (NGOs). Some see such partnerships as a means of raising smallholder incomes, and achieving rural development (see, e.g. Mondiale, 2008; Robertson and Pinstrup-Andersen, 2010; Cramb and Curry, 2012). This is because agribusiness firms can introduce new technologies, provide capital inputs, and link smallholders to markets for their crops. Others have not shown the same enthusiasm. The literature reports cases of smallholders losing the ability to use their holdings and receiving poverty level remuneration (Hall, 2011; Colchester et al., 2011).

Many observers attribute the adverse outcomes of smallholder incorporation to governance institutions that are complicit to coercive activity (see, e.g. Borras Jr et al., 2010). Few have discussed how even consensual transactions can deprive smallholders the ability to determine how and who can use their lands. This paper examines factors that influence smallholders’ decisions in choosing the structure of their partnerships with agribusiness firms. I argue that the very economic problems which agribusiness partnerships are meant to alleviate may themselves force smallholders to accept contracts where they lose rights to their land. I do this by first showing how one can disentangle property rights and control over an asset and how the choice of a structure of incorporation (or business model) is an exchange of abilities over an asset. This, in turn, allows one party to have control over land. I will then illustrate this dynamic using a field investigation among agrarian reform beneficiaries (ARB’s) in the Davao region of the Philippines.

This paper aims to make two contributions to the literature on agribusiness incorporation. First, I introduce a framework to understand how one can disentangle possession and property rights. This can be used as a way of analyzing agribusiness contracts beyond income improvements by understanding what provisions in a contract deprive smallholders of effective control over their lands. Second, I conduct a comparative study of agribusiness
projects with ARBs in the Philippines to arrive at political and economic conditions that give rise to different contractual types. To my knowledge, studies of agribusiness partnerships among this population have often drawn conclusions from singular cases, or, have used several cases to illustrate resulting political-economic transformations. This paper uses multiple case studies to illustrate how debts, risks of losing land, and lack of information on alternative contract types inform a smallholder’s decisions in choosing a contract. These factors are similar to those which influence smallholders’ choices in various international contexts (see e.g. Cramb and Curry, 2012; Jiwan, 2013).

The essay is arranged as follows. Section 2 discusses current issues that arise from smallholder incorporation, drawing from economic theory and the literature on agrarian political economy. Section 3 discusses the issue of property rights and contracting in economic theory. I outline a framework for disentangling possession or control from property rights using insights from legal theory and institutional economics. I then apply it to a typical taxonomy of business models or structures of Incorporation. Section 4 introduces smallholder incorporation in the specific context of post-land-reform policies in the Philippines, and discusses the field work. Section 5 discusses the results of the field investigation. I begin by giving a summary of the historical experiences of different ARB groups which I interviewed focusing on economic and socio-political challenges they faced in making their contract choices. I then discuss what these conditions mean for the resulting degree of control over their holdings specified in their contracts and present what these contracts meant for their income and well-being. The final section discusses what these results mean for the ARBs and highlights some policy thrusts.

2 Smallholder Incorporation

Economic literature provides two broad channels through which agribusiness incorporation can yield benefits for smallholders. The first of these are macroeconomic channels directed
toward rural development (Cook and Chaddad, 2000). Agribusiness incorporation can establish linkages between farm and non-farm sectors through the cultivation of non-traditional crops. In a setting where subsistence crops are widely cultivated, links to other sectors may be absent. Often, agribusiness firms cultivate crops for export rather than food or subsistence. To ensure that these crops are marketable, it is necessary to coordinate transport, refrigeration, processing mills and other upstream market links. These links can also come through input markets such as fertilizers, machinery, and construction for building necessary infrastructure on land. In this way, agribusiness investment can generate agglomeration advantages with complimentary industries, especially where agribusiness clusters form. Finally, Agribusiness investment can also allow a country to benefit from inflows of foreign direct investment (FDI) (Reardon and Barrett, 2000).

The second channel that agribusiness incorporation brings improvements for smallholders is in improving opportunities for smallholders to use their lands as a viable source of income. Smallholders face challenges in both access to inputs, and access to markets for their crops. Both of these can introduce difficulties for smallholders in cultivating their holdings, and restricting their income generating opportunities. Monopolistic creditors who can charge high interest rates often dominate rural credit markets. If such creditors are the only source of credit to purchase inputs for cultivation, smallholders face higher costs of investing in their holdings (see e.g. Hoff and Stiglitz, 1990; Besley, 1994; Ghosh and Ray, 2016). The lack of infrastructure such as roads (Shami, 2012), high transport costs, and necessary technologies such as refrigeration (Barrett et al., 2012) create difficulties for smallholders in accessing markets, where spoilage and crop damage present difficulties for smallholders. Thus, smallholders may have to depend on monopsonistic buyers who have the means to bring their crops to market. Agribusiness investment can relieve these constraints through providing capital for inputs, and/ or buying smallholder produce. Agribusiness partnerships which provide smallholders with capital relieve investment constraints for smallholders. Further, partnerships guaranteeing access to transport, or buying crops can reduce the risks
associated with marketing crops (Wang et al., 2014).

Considering the possibilities of agribusiness partnerships for rural development and poverty, policy-makers and state actors in the global south have taken measures to attract and legitimize agribusiness partnerships. Policy-makers have sought to provide a rationale for agribusiness partnerships through development plans and guidelines (German et al., 2016). Besides the development agenda, these also often invoke the ability of agribusiness investment to provide public goods and community benefits through social entrepreneurship. In some cases, governments have facilitated the process of agribusiness incorporation by identifying appropriate sites for agribusiness investors and negotiating with smallholders (Colchester et al., 2011). Identifying appropriate sites and smallholders that have the ability to cultivate crops can alleviate some uncertainty by enhancing the quality of information that investors have regarding the potential profitability of their partnerships. However, some scholars point out that actions of states may result adverse outcomes of smallholder incorporation. Some case studies suggest that states sometimes adjust environmental and labor standards in order to make the prospect of locating in their country more lucrative (Jiwan, 2013). Agribusiness investment may also appeal to local government actors that have influence over smallholder communities through historic and kinship ties. These actors may use their influence over communities to convince or coerce them into incorporation (Lavers, 2012). Trends in land acquisitions further corroborate case studies of agribusiness firms taking advantage of weak protections for smallholders (Borras Jr and Franco, 2013). Empirical studies by Deininger (2011), Deininger (2013), and Arezki et al. (2015) yield evidence that agribusiness investors are attracted to countries that have weak protections for local land rights.

While the actions of states may play a significant role in determining the outcomes of agribusiness incorporation, these are not sufficient to explain the adverse outcomes of incorporation. Social and economic circumstances may force smallholders into contracts where they are completely dispossessed of their lands even without the actions of the state. To understand how this occurs, one needs to consider two configurations of property rights.
The first are property rights ex ante that form the foundations for contracting by providing a secure basis for the exchange of assets. The second is the configuration of property rights ex post- the resulting configuration of rights and privileges which determine each partners control over land.

3 Property, Possession and Structures of Incorporation

In contracting, well-defined property rights are among the bases for partners to contract. Secure property rights can minimize the risks of losing an asset that is used in production, or, the risks of losing crops (Ghatak and Besley, 2010; Auerbach and Azariadis, 2015). This same insecurity can also create frictions through the credit channel. Insecure property rights can reduce the collateral value of an asset. The asset holder, therefore, is prevented from being able to gain access to credit (Besley et al., 2012). When property rights are secure, partners to a contract can ensure that their investments are safe, and thus, allow them to make optimal investments in cultivation. Secure, well-defined property rights in contracting, however, do not mean that an asset holder will have control once the contract is in force. Contracts also reassign certain abilities to each partner which can determine who effectively controls land.

In economic literature, partners to a contract choose a structure of incorporation or business model, to overcome information asymmetries in the allocation of inputs such as labor and capital (Das, 1999), asymmetric bargaining power (Schmitz, 2013) and other uncertainties introduced by laws, culture and norms (see, e.g. Che and Facchini, 2009). The firm structure is sometimes modelled as a structure of compensation where the investor decides to offer either a share of profits, a purchasing price for the product, or a fixed payment. Others model an ownership structure as the ability of one partner to take control of the firm and its assets through the ability to exclude the other partner from its use(Grossman
and Hart, 1986; Antràs, 2014). In the context of agribusiness incorporation, some have pointed out how structures of incorporation can displace decision making rights from farmer/smallholder to processors or investors (Key and Runsten, 1999; Reardon et al., 2000). Among possible rights exchanged in a contract are the ability to exclude others from the use of land, and the ability to determine how the land is used. Such an allocation of abilities constitutes a level of control that is different from the property rights that allowed contracting to take place. For example, a smallholder may have been able to decide what crops are cultivated on her holding before entering a partnership. However, a contract may stipulate that she can only cultivate one type, thus, reassigning the ability to decide how the land is used. These decision-making rights in turn may affect the income and benefits that smallholders can obtain from a partnership (Cotula and Leonard, 2010).

One can disentangle control and property rights by recognizing that property rights are a set of abilities that someone has over an object or an asset (Cole, 2002; Glackin, 2014). A typical list would involve the following: the right to use the asset, appropriate the gains from use of the asset, manage the use of the asset, and alienate it as collateral and sale. The right to use land would involve planting crops, working on the land, and inhabiting it. The right to appropriate gains from land may include determining the shares of profits from crops. The right to manage land use may include changing what is cultivated and by who. Finally, the right to alienate means being able to use land as collateral for loans or putting it up for sale.

By definition, having property rights over land means being granted a subset or all of these “sticks in a bundle” by law (Hodgson, 2015). Being granted some of these rights, however, does not necessarily mean that one has full possession or control over an asset. For example, a landlord may give a tenant use rights to land and even allow him to change the crops planted. Through a sharecropping contract, the tenant may even have some right to appropriate its gains. However, if the landlord maintains the right to alienate his land, he may sell it to a developer and dispossess the tenant. Some sticks in the bundle, then, can
be regarded as more decisive in determining possession. I propose the following criteria for defining a decisive right:

> A right secures possession whenever the absence of that right from the bundle of the property holder can cause the property owner to lose all other rights.

In the sharecropping contract, for example, the right of the landlord to alienate overrode the tenants rights to use, profit and manage land use. Consider now a communal tenure system in which each member in the community holds rights to use a portion of a plot of land. Within that portion, each family can plant whatever they need, and sell it if they wish, conditional on them not impeding on the activities of other farmers. No one can sell their plots, but they may also assign their use rights to anyone else in the community. However, the village head, who himself can only farm a similarly small parcel of land, can decide to exclude any person in the village from using land; at the same time, no one can exclude him. In this case, the right to alienate is available to no one, but the village head has the ability to determine who uses land. The village head, then, can override the rights of others. Thus, the right to decide land users is decisive in securing possession.

Consider next a situation where a landowner’s bundle of rights consists solely in the right to determine the user of the land, and to veto any sale of the land done by any party other than himself. The user he names can decide on the use of the land, and how the gains from cultivation are split. This case would be very similar to the village head. This landowner can grant use rights, and take them away. He can effectively deprive anyone’s ability to exercise any rights over land. If, for example, the user he chooses decides to appropriate 90% of the proceeds, the landowner who finds this division unsatisfactory, he may veto the user.

As the example illustrates, the rights of an owner to alienate and decide the land user are often decisive in possession. The right to use, appropriate gains, and change use can be taken away whenever the two other rights are not in a person’s bundle. Different structures of incorporation engender different levels of control for the smallholder and the investor. Table 1 gives a possible taxonomy of contracts in terms of Remuneration, and Control (De la Cruz,
2012). Remuneration refers to the income or sources of income that each partner gets from the transaction. Control refers to the ability that each partner gets from the contract. These abilities are given as follows:

- **Determine User**- The ability to determine who can work on the land, or who is able to till and harvest. This may extend to who can be employed under the partnership.

- **Withdraw**- Determine the duration of the partnership, or having the option to withdraw land.

- **Determine Use**- Determine what is planted, or being able to determine whether crops will be changed.

- **Determine Methods**- Determine how crops are cultivated including types of fertilizer and materials used.

In Table 1, I present three broad contract types which are widely used in smallholder incorporation (Majid Cooke et al., 2011; Cramb and Curry, 2012). We can think of lease and growership contracts as two extremes. Under a lease contract, the smallholder forfeits all control over her land, and most production decisions. In the growership contract, the investor acts as a buyer of the smallholders crops. The smallholder makes most of the decisions on how to cultivate, what methods to use, and who to employ. However, the investor can use monitoring mechanisms such as checking the state of crops, restricting the types of fertilizers used, and consulting with smallholders to ensure crop delivery. In between these two extremes are what I broadly call intermediary contracts such as joint ventures, and various management and building contracts. The decision rights that are traded in such contracts differ considerably. Some joint ventures, for example, are framed as management contracts where the investor advises and monitors cultivation. Others are arranged so that the investor builds necessary infrastructure, and then transfers these to smallholders for a share of the profits. In this case, the division of control is temporal. During the building
period, the investor may have all the decision-making power. After that, he may act as a consultant to a growership.

The distribution of rights in a partnership affects the benefits that smallholders get from the partnership. For example, an agribusiness firm, can control what fertilizers are used which may introduce additional expenses for smallholders. This can occur in both a growership arrangement, or in a joint venture as part of a quality control mechanism. In some cases, Smallholders may retain the ability to work on their lands, giving them another source of income. Smallholder communities may also delineate certain parcels of land to raise food crops, or build housing.

What factors contribute to how partners bargain for an allocation of rights and a firm structure? The first of these would be economic factors- fertilizers, infrastructure, processing facilities, and sources of investment capital. The second set are socio-political forces such as the laws governing contract regulations, organizations of smallholders, and the degree to which smallholders can get free, prior, and informed consent (FPIC) regarding the differences and advantages of investment contracts (German et al., 2013). The ability of smallholders to obtain proper information regarding contracts, and even have the ability to refuse these contracts depends on the actions of state actors, and even historical power-relations between smallholders, governments, and investors. An investor who has developed connections with state actors, for example, can influence how governing bodies weigh their interests against the interests of smallholders (Nolte and Voget-Kleschin, 2014). The experience of agrarian reform beneficiaries (ARBs) in the Philippines show how these various factors influence how contracts are formed to generate incomes and the distribution of control rights over land.
4 Land Reform and Agribusiness Incorporation in the Philippines

The Comprehensive Agrarian Reform Program (CARP) of the Philippines was passed in 1987 after a protest where 13 peasant farmers were killed in a mobilization for land reform now known as the Mendiola Massacre. The stated objectives of land reform have not changed since its beginnings: To achieve "a more equitable distribution of land" founded on "the right of farmers and regular farmworkers, to own directly or collectively the lands they till, or, in the case of other farmworkers, to receive a just share of the fruits thereof" (Republic of The Philippines, 2009, Chapter 1, Section 2).

Under CARP, once a person becomes an ARB and receives a Certificate of Landownership Award (CLOA), he/she has to pay an annual amortization for the land within a given time window. There is not a precise formula for payments, but the price takes into account its real estate value (proximity to roads, water, etc), and the value of standing crops, as well as the avowed valuation of the former landowner. An ARB is entitled to use the holdings, change its use, and appropriate the gains from its use. However, in keeping with the intent of the law, the ARB cannot sell her awarded holding for a period of ten years after receiving the CLOA.

The implementation of CARP began in 1988, and expired in 2012 after several renewals. Today there is a debate in the Philippine Congress of whether land reform should continue, or whether CARP can be left as it is with over 80% of its intended area of redistribution accomplished (IBON, 2013).

Soon after the implementation of CARP, it was observed that smallholders were entering leasing and growership contracts with agribusiness investors. Recognizing the benefits of these, the Philippine government sought to encourage these arrangements, attempting to put in place regulations that would ensure ARB welfare under such arrangements (Department of Agrarian Reform, 2006). These arrangements were named Agribusiness Venture Agree-

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2This can be found in the law, Republic of The Philippines (2009, Chapter 6, Section 17)
ments (AVAs). The official definition of an AVA is an "entrepreneurial collaboration between ARBs and private investors to implement an agribusiness venture on lands distributed under CARP" (Department of Agrarian Reform, 1996). Through these agreements, ARBs can access upstream markets, gain access to capital, and use farming technology\(^3\). The Department of Agrarian Reforms (DAR) can also monitor AVAs since local government units keep files of CLOAs, and, at least in principle, the contracts that ARBs and agribusiness entities sign.

In a 2010 report released by the Philippines Inter Agency Committee (a collection of government agencies that also includes the National Economic Development Authority, NEDA) AVAs cover around 1.2 million hectares (cited by IBON, 2013). The disparity between this figure, and DARs official list of 50,103.1 hectares was acknowledged when I spoke to the DAR authorities. When I had quoted the figure, one of them quipped: "Parang dito lang yata, ganyan na kadami"\(^4\). They said they were still catching up with listing all AVAs. If the quoted figure of 1.2 million hectares is true, then, AVAs cover about 29.64% of all CARP accomplishments as of 2009 and 12.41% of total agricultural land.\(^5\)

The optimism of agrarian reform officials regarding AVAs, however, was not widely shared by land reform advocates. In recent years, scholars have compiled cases of AVAs resulting in adverse outcomes. Some examples of these are the work of Borras (2007), Menguita-Feranil (2013), and Adam (2013) who show how ARBs in certain areas of the country are compelled to accept contracts which leave them with neither control over land or income from its use. These reports point to the dangers inherent in AVAs. CARP redistributes land but does not address the existing social conditions that render owner cultivatorship difficult for ARBs. Conditions such as poverty and lack of farm to market roads leave ARBs vulnerable to rural creditors, fertilizer merchants, and produce buyers. Agribusiness investors are able to take advantage of such situations to lock ARBs into highly unfavorable contracts that can last

\(^3\)The full set of justifications can be found in the Administrative Order 09-06 from the Department of Agrarian Reform

\(^4\)"Maybe in this Province alone, there’s already that many”.

\(^5\)CARP accomplishments at 2009 were at 4,049,016.71 has. and the countrys total agricultural land is at 9.671 million has.
for decades.

This is not to say that AVAs do not have their share of success. The DAR has compiled several cases where AVAs have resulted in ARBs being able to escape poverty, buy homes, and even diversify into businesses outside of agriculture. The factors that contribute to accepting favorable contracts are numerous. These include organizing among ARBs, and being able to access credit and other sources of funding (Department of Agrarian Reform, 2006). How these factors influence the process of contracting, and which of these had greater weight in the decision-making processes of ARBs will be clear in my field work.

Though the case of ARBs do not constitute all smallholders in the Philippines, in general, they have several advantages as beneficiaries of the agrarian reform program. First, their Certificates of Land Ownership Award (CLOA) are filed with the department of agrarian reform. Second, the department of agrarian reform, in theory, is supposed to monitor their well-being, and how they use the holdings they have been awarded. Finally, there are municipal and provincial agrarian reform offices in which they can ask for assistance in their contract disputes. In effect, I have deliberately chosen a population that is supposed to have the advantage of some institutional backing which other smallholders do not. And yet, despite these institutional advantages, ARBs have had divergent experiences regarding their agribusiness deals. If so, the disadvantages they face may also reflect the difficulties of agribusiness incorporation throughout the country.

4.1 The Field Work

Between March and June, 2015, I conducted field work in the Davao Region of the Philippines, covering seven groups of ARBs located in three different locales, and two different provinces\(^6\). I targeted ARBs who have entered into AVAs involved in the cultivation of Cavendish Bananas. Cavendish bananas are one of the chief export crops of the Philippines worth $884 million annually, or 14% of the country's total agricultural export. The Philip-

\(^6\)See Figure 1 for a map.
pine is 3rd largest exporter of Cavendish Banana after India and China. The total land area devoted to Cavendish banana cultivation in the country is 82,202.37 has. The Davao region cultivates 46,681 of these (56.78%). In the DARs official tally, AVAs that are devoted to the cultivation of Cavendish bananas account for 8,717.738 has. Thus, the listed AVAs account for 18.7% of land area devoted to Cavendish banana cultivation in the region, and 10.6% of land area devoted to Cavendish banana cultivation in the Philippines.

By choosing one crop, I control for differences in prices, farming techniques, and necessary technologies. Comparing Cavendish banana farms to another crop such as maize (for ethanol) would be difficult since the fixed costs to cultivating Cavendish bananas are different. Before a farmer cultivates Cavendish bananas, she must first dig a system of hills and canals. Each hill needs several propping poles which can be made from metal or bamboo. These propping poles ensure that the trees do not fall once they bear fruit. Planting is done so that each tree yields fruit every 13 weeks. After 10 months, the first of the trees bear fruit, and farmers can harvest these. If done properly, a hectare may have up to 1,000 trees. A farmer can harvest the equivalent of 143 boxes of class A Cavendish bananas every week, fetching a bi-weekly gross income of as high as 27,000 pesos.

Growers, however, have several expenses. First, cavendish bananas are chemical and fertilizer-intensive, and fertilizers can cost up to 990 pesos per 50 kg sack. Under typical growing methods, a hectare of banana uses up to 3 sacks of fertilizer every 20 days. The farmer must also treat the trees by injecting chemicals to guard against fungi and other pests that may prevent the crop from meeting export standards. A typical grower pays for chemicals delivered through aerial-spraying on a bi-weekly basis. The farmer must also buy twine for propping up banana plants, and plastic bags to wrap new bunches and protect them against insects. Finally, the farmer must also pay for labor. Typically, the total bi-weekly

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7 These figures were taken from estimates of the Philippines' Bureau of Agricultural Statistics, www.bas.gov.ph

8 Class A Cavendish Bananas have a length of between 7.5-12 inches (19.05cm-30.48cm), with a girth of around 2 inches (5.08cm). The calculation of the 27,000 pesos is based on the price that an independent grower can obtain had she not entered an exclusive growership contract.
cost of cultivating bananas is 9,646 pesos per hectare\textsuperscript{9}.

I asked each ARB group for a list of their members with addresses, went house to house, and also travelled to places which were frequented by ARBs\textsuperscript{10}. Three of the ARB groups decided to host me in their offices to conduct interviews there. I interviewed 71 individual ARBs and held focus groups with 4 of the seven groups I interviewed. Focus group sizes varied. In the municipality of Santo Tomas, Davao Del Norte I interviewed members of 5 ARB groups in total. All of them were workers for the Marsman-Drysdale Enterprises Plantation Incorporated (MEPI), a company founded by a Dutch venture capitalist (Marsman), sold to an American (Drysdale), and is now co-owned by Filipino backers. In 1998, the MEPI plantation in Santo Tomas was distributed to its 1,109 workers. Two of these groups currently have growership contracts with Sumitomo Fruit Company (SUMIFRU). These were the Marsman Agrarian Reform Beneficiaries Cooperative (MARBCO) and the Marsman Individual Farmers Agrarian Reform Beneficiaries Cooperative (MIFARBCO). The landholdings of the remaining three groups are leased to MEPI. These groups are Davao Marsman Agrarian Reform Beneficiaries Multi Purpose Cooperative (DAMARB-MPC), the Santo Tomas Individual Farmers Agrarian Reform Beneficiaries Cooperative (SIFARBCO), and the Santo Tomas Agrarian Reform Beneficiaries Cooperative (STARBENCO).

In Tagum City, I interviewed ARBs from the Hijo Employees Agrarian Reform Beneficiaries Cooperative (HEARBCO 2). The ARBs were employees of a banana plantation which was owned by the Hijo group of companies. Before their current AVA, HEARBCO 2 had an exclusive growership arrangement with Lapanday Foods. After Typhoon Pablo in 2012, the cooperative could not sustain the growership contract. In 2014, they finalized an agreement with the Tagum Resources Agri Industries Incorporated (TRAIN), a subsidiary of the Hijo

\textsuperscript{9}I gathered these cost figures by going to the three agricultural supply stores for prices of twine, fertilizer, chemicals, and plastic bags. I checked my figures with farm managers from three of the seven groups I interviewed. I then interviewed independent aerial spray providers, and noted how much each group I interviewed payed for this item. Finally, I also checked my figures with pay receipts provided by one of the growers I interviewed.

\textsuperscript{10}By ARB groups, I mean a collection of Agrarian Reform Beneficiaries who have some organizational identity or common experience. Six out of the seven I interviewed are actually legally recognized organizations.
resources corporation owned by the Ayala family.

In the Pantukan district of Compostela Valley, I interviewed ARBs who were hacienda workers under the Nuere family who owned more than 32 ha.s of coconut trees. These ARBs received between 0.6 and 2.5 hectares each from the farm. They were not organized. In 2002, a local company called Pantukan Agribusiness Development Corporation (PADCOR) leased the lands from the ARBs. The venture failed, and in 2009, the investor sold the lease to Musahammat farms, a Middle Eastern company.

The AVAs I chose are on the two ends of the spectrum of contracts: lease, and growership arrangements. I chose to focus on these because of their prevalence among the officially listed AVAs which cultivate cavendish bananas. Of these 61 AVAs, 29 out of 61 (45.9%) are under a lease contract, while 28 out of 61 (48%) are under a growership arrangement. In all, 57 out of 61 or 93.4% are under these two contracts\textsuperscript{11}.

Table 2 gives a summary of the individual interviewees in my sample from each group. The ARBs in the sample are a largely old, male population, with the average age for each group being more than 56 years old except for HEARBCO 2 in Tagum city. The average household size for each group is over four members. Most of those interviewed in each group own their house with an average experience of more than 26 years in cultivating Cavendish bananas. The exception to this is the ARBs in the Pantukan district of Compostela Valley, only one of whom owns their dwelling and lot, while none have experience with cultivating Cavendish bananas.

From the table, one can see no immediate relationship between the level of education that most members of each group obtained, and the types of contracts that they enter. Intuitively, one may think that having a higher level of education will allow ARB members to deliberate in a more informed manner about the types of contracts available, and the consequences these may have for their well-being. While there is no doubt a possible bias in my small sample, a clear relationship between contractual type and education is absent.

\textsuperscript{11}The figures here are based on a list of AVAs which I obtained from the DAR.
Many of the eight interviewees from MARBCO have not finished High School, and many of those from MIFARBCO have only graduated High School. By contrast, most of the ARBs from, HEARBCO 2 have finished college. One may attribute this result to the fact that the sample is not completely random within groups. The respondents may have self-selected to interview. However, as I shall show, group level characteristics played a significant role in the types of contracts that the ARBs obtained.

5 Findings

Table 3 gives a historical summary of the AVAs. Three of the seven ARB groups have had only one AVA partner. These are the Lessor groups in Santo Tomas, Davao Del Norte: DAMARB-MPC, SIFARBCO, and STARBENCO. These ARBs have had their lands leased to the Marsman-Drysdale Estate Plantations Incorporated (MEPI) since they have been ARBs. By contrast, the other ARB groups have had two AVA partners. The grower cooperatives transitioned from selling to MEPI to selling to Sumitomo Fruit (SUMIFRU). HEARBCO 2 transitioned from a growership contract with Lapanday fruits to a lease agreement with TRAIN. Finally, the ARBs from pantukan, Compostela Valley used to have a lease arrangement with PADCOR, and now lease their holdings to Musahamat farms. It is worth noting that, currently, three out of the five lessor ARB groups currently have a contractual dispute with their AVA partners. These disputes are in various stages of the legal process, but all are efforts by the ARBs to withdraw or renegotiate lease agreements.

Finally, of the seven ARB groups, four are currently leased to the pre-agrarian reform land owners.

Factors of Contracting - To obtain information about the historical and political factors that contributed to the formation of the AVAs among the different groups, I conducted focus group discussions with four out of five lessor groups, and key informant interviews with the chairs and board members of each grower cooperative, and one other lessor group.
A summary of these historical and political conditions is given by Table 4.

The first column states whether or not the ARBs were organized into some union, cooperative, or association at the time of bargaining. Presumably, groups that bargain have more power vis-a-vis an investor since groups can pool resources to hire lawyers, appeal to authorities in city centers, and mobilize for interventions in municipal agrarian reform offices. However, this may also result in unfavorable outcomes if influential persons in the groups side with the investor. The next three columns state whether the groups had access to advocacy from non-government organizations, or from the DAR itself, and whether the groups had genuinely democratic processes. Advocacy includes education on AVAs and legal assistance. Being able to access pro-land reform civic organizations can help the ARBs ensure that the resulting contracts are in line with the stated objectives of CARP: improving the lives of the ARBs, and ensuring they maintain control over their holdings. Membership consultation is important to ensure that a handful of influential persons did not drive the contracting process. The last column states whether members of the group were allowed to make a decision on their current AVA at all. The absence of this ability would imply that the current AVAs were arrived at without Free, Prior, and Informed Consent of individual ARBs.

The final column is organizational debt. Though debt could be designated as an economic circumstance, it may be the case that the ARB groups faced tensions between the interests of the organization, or, the interests of individual members. A cooperative of growers, for example, might have members that have earned, saved, and prospered, while others may not. Often, cooperatives take out loans to ensure that their members have access to inputs, and to maintain the infrastructure for cultivating bananas. If the cooperative goes bankrupt, members who have done well may not need the cooperatives help, but those who did not may want to enter lease arrangements for a steady income. I shall now discuss the historical specificity of each group.
Santo Tomas - Santo Tomas calls itself a banana town. Among the large fruit exporters that have plantations in Santo Tomas are Lapanday Foods, DOLE, and MEPI. When CARP began its implementation in 1988, the Marsman Estates more than 1,400 hectares in Santo Tomas, Davao Del Norte were given a ten-year grace period. The plantation had been in place since 1969, when the Marsman group of companies decided to set their sights on banana cultivation. In 1998, the plantation was set for redistribution. According to focus groups and key-informant interviews, MEPI pushed for lease contracts using forms of bribery, coercion, and deception. How the ARBs responded to Marsmans tactics, and the resources available to them affected the types of contracts currently governing their holdings.

Santo Tomas- The Growers - MARBCO and MIFARBCO were once one organization called the Marsman Estate Agrarian Reform Beneficiaries Association Incorporated (MEARBAI). They had split before each began to contract with SUMIFRU over the management of the cooperatives over 136 hectares of land. Key informant interviews point to three reasons why the split occurred. The first is that MIFARBCOs members wanted to individually manage their plots, while the cooperative can manage a packing plant, sales, quality checks, legal assistance and obtaining inputs. They claim that this model was better since the area that each ARB would monitor would be limited to a hectare, and they can make individual improvements on their holdings. The second is that, initially, MEARBAI chose a business model where its members shared profits equally. MIFARBCOs members cited that this resulted in a classic free-rider problem: some ARBs did not handle their tasks properly, while those who worked hard felt that they did not get the appropriate remuneration for their labor. Finally, some members of MIFARBCO cited corruption in MEARBAIs leadership. However, I have not been able to obtain any evidence for this accusation.

Regardless, MIFARBCOs split from MEARBAI, and MEARBAIs metamorphosis into MARBCO did not seem to make a difference in the types of contracts they agreed upon with SUMIFRU. They receive the same income per box of class A bananas, and they have almost
identical provisions on their obligations and rights. The only difference is that MARBCO is able to sell its class B bananas to independent buyers, while MIFARBCO sells solely to SUMIFRU\textsuperscript{12}.

In 1998, MEARBAI members already had contacts with pro-agrarian reform NGOs. These provided them legal assistance and education on different types of AVAs. The education they received included seminars on management, marketing, and best practices in cultivation. They also partook in a lakbay-aral or educational field visits where they learned about the experiences of growers and other types of agribusiness arrangements. Through updating and sending a variety of members to other farms, MEARBAI was able to convince its members to insist on a growership.

Both groups approached SUMIFRU independently. At this time, they already had three years of experience as growers and legal contacts from asserting their claims as ARBs. They felt that MEPI was deliberately paying them low prices for their bananas, but they had to find an alternative buyer who would offer better prices, and who was willing to pay MEPI for the total of 293,733 pesos per hectare. SUMIFRU was such a buyer, and in 2007, they began a growership agreement after deliberating with their members. The consensus was that if they could get better prices, they should switch partners. Today, officials of both coops say that their debts are almost paid off, and they are ready to become sellers to the highest bidder by 2017 when their contracts with SUMIFRU end.

**Santo Tomas-The Lessors** - The members of the three lessor groups from Santo Tomas Davao Del Norte all belonged to an organization called the Davao Marsman Agrarian Reform Beneficiary Association Incorporated (DAMARBAI). When the Marsman estate was redistributed in 1998, DAMARBAI was seen as an association controlled by MEPI management, as opposed to MEARBAI, which was organized by outside NGOs. There were different accounts about DAMARBAIs actions in 1998. My focus group discussion with current mem-

\textsuperscript{12}Class B bananas fall short of the measurements of class A bananas, but were whole, had no bruises or scales (cork-like aberrations on the skin), and were generally deemed to be fit for consumption. These are often sold in local supermarkets. One of MARBCO’s buyers is 7-11.
bers of DAMARB-MPC suggest that the lease contract was a product of assessing the risks and costs of a growership, and their estimation of the strength of the existing union of MEPI farm workers. The rationale was that cultivating bananas was far too costly. The costs of fertilizers, maintaining the infrastructure, paying for labor, and building and maintaining a packing house were too costly. They did not have any capital, and they would already have to pay for the amortization of the land. On top of this, MEPI would have been their buyer. If they crossed MEPI by taking full ownership of their awarded holdings, then, MEPI would take measures to ensure that they were not successful. On the other hand, under a leasing arrangement, they would not have to pay for amortization and inputs, and MEPI would have to honor the collective bargaining agreements they had from the farm workers union named the Davao Marsman labor Union (DAMLU). This cost-benefit calculation is encapsulated in their name for the contract: "Walang personalan. Trabaho lang.”

In contrast to their fellow farmworkers in MEARBAI, I was told by focus groups with SIFARBCO and key informant interviews with STARBENCO that the members of DAMAR-BAI had not gone to see other farms under different agribusiness arrangements. Instead, much of the education they received towed the line that growership was risky, and that they would be saddled with high-levels of debt. Further, the lawyers that they consulted were MEPI contacts. Eventually, the ARBs got their certificates in 2002, and a debt-free leasing arrangement where they were secure in their livelihoods. Unfortunately, it would not last.

In 2004 some of DAMARBAIs members decided to break ranks. MEPI had kept their lease payments at the lowest level for about two years, citing bad harvests. Some 100 ARBs decided that they wanted to opt for a growership option. They occupied their lots and picketed the municipal agrarian reform office. This was the birth of the Santo Tomas Agrarian Reform Beneficiary Association Incorporated (STARBAI). STARBAIs members were temporarily retrenched and reinstated in 2008. In 2010, another land occupation broke

13“Nothing personal. Its just work”. This is equivalent to the American: “Nothing personal. Its just business.” The phrase is a variation on a line uttered in an action movie.

14See Table 9. The lease payments to members of DAMARBAI follows a step function, that rises with the number of boxes
out and MEPI decided to retrench all 241 workers belonging to STARBAI. MEPI was able to do this since the lease arrangement gives them the right to hire and fire workers. Thus, while the ARBs legally own the land, the lease arrangement makes them employees of MEPI. Further, MEPI can hire and fire at will, which de facto excluded the offspring of STARBAIs members from working on their parents holdings. The municipality of Santo Tomas deployed the police against the members of STARBAI. At least one person was killed during the dispersal.

It is not clear from focus group discussions why STARBAI split into SIFARBCO and STARBENCO. Accusations of capitulating to MEPI and closeness to DAMARB-MPC go both ways\(^\text{15}\). What is clear however is that both groups would like to withdraw their holdings from the leasing arrangement, and cultivate these as growers. They have already taken their case to the authorities with the help of several land reform advocates. As of this writing, SIFARBCO and STARBENCO are waiting on the Presidential Agrarian Reform Council (PARC) to adjudicate their case. Reports from their lawyers indicate that the PARC has adjudicated in their favor. The only signature they need as of the time of this writing is that of the sitting president’s, Benigno S. Aquino III.

**Tagum City-HEARBCO 2** - HEARBCO 2 contracted with TRAIN in 2014, after a typhoon hit their plantations, destroying much of their crops. While typhoon Pablo was certainly a necessary cause for HEARBCO 2s switch from a grower to lessor, it is certainly not sufficient. Prior to the typhoon hitting Mindanao, Lapanday Foods and HEARBCO 2 already had a contentious partnership.

HEARBCO 2 did not contract directly with Lapanday. Lapanday became HEARBCO 2s buyer when Hijo sold their growership agreement. According to a focus group discussion with members of HEARBCO 2, Lapanday made several demands that forced HEARBCO 2 to go into debt. One example of this was building infrastructure such as irrigation pipes on the

\(^{15}\)After the events of 2004, DAMARBAI had changed its name to Davao Marsman Agrarian Reform Beneficiaries Development Cooperative (DAMARB-MPC), and eventually changed to their current name.
farm which the members of HEARBCO 2 had not agreed upon, but Lapanday insisted was necessary. Lapanday then counted this as part of the ARBs debt and deducted these from the payments to the ARBs. Another example is imposing the use of certain fertilizers that only Lapanday sold as a form of quality control. These actions by Lapanday brought HEARBCO 2, along with other cooperatives that sprung from Hijo employees, to the attention of land reform advocates. Thus, by the time they had broken with Lapanday, HEARBCO 2 had legal assistance and contacts with numerous NGOs.

When typhoon Pablo hit, HEARBCO 2 was already 52 million pesos in debt. The typhoon destroyed many of the trees in HEARBCO 2’s farm. In a focus group discussion, I asked for an estimate of how many trees were destroyed. They laughed and responded *Naku, dili na namin gi-isip, kay nagtu-aw kami diha!*\(^{16}\) This destruction was sure to increase their debts with Lapanday.

Instead of allowing Lapanday to step in, HEARBCO 2’s board approached TRAIN. HEARBCO 2 saw a lease arrangement with a familiar partner as a way of overcoming their debts and difficulties. One of the officials even narrated the dialogue she had with one of the Ayala family members managing TRAIN. She told them “*Ser, lupa niyo ito. Dati niyo kaming trabahante. Naghihirap na kami.*”\(^{17}\) TRAIN decided to pay Lapanday for HEARBCO 2’s debts conditional on a lease agreement that would span 60 years. According to one of the board members, they were hesitant to take the lease agreement for such a long time, and many of their members did not trust the new partnership. However, once they presented the reality of the debt figures, the members acquiesced. The lease agreement was drafted by HEARBCO 2’s legal counsel, and went into effect in 2014.

While the lease agreement with TRAIN stands for the next 60 years, HEARBCO 2 maintains some level of control over the AVA. HEARBCO 2 is responsible for hiring and firing workers on the field and the packing houses, which gives them the ability to determine the users of land. They are also responsible for operations, having themselves been growers

\(^{16}\)“Come on, we couldn’t count because we were crying!”

\(^{17}\)“Sir, this was your land, and we were your workers. We are already having a hard time”
in the past. Thus, HEARBCO 2’s deal with TRAIN is a Lease arrangement where they maintain some sticks in the bundle, giving them some degree of control. It should be noted, however, that these abilities are not spelled out in their contract with TRAIN.

**Pantukan** - The Pantukan ARBs were the only ARB group in my sample that was neither organized when they first entered an AVA, nor officially listed by the DAR. They were once tenants and farmworkers for a coconut farm. After the land was distributed, the ARBs became individual coconut growers. From their experience, coconut was a highly lucrative crop. They would be able to sell a kilo of copra, the dried meat or kernel used to make coconut oil, for twenty pesos. However, they found that this was not the case. All the ARBs were selling to one buyer, who now exercised monopsony power over the ARBs. The ARBs were now selling a kilo of copra for 10 pesos a kilo.

Philippine Coconut authority estimates that, per hectare, a farmer can get a yield of 1230 kgs of copra per hectare. At this price, the gross revenue from their holdings would have been 12,300 pesos per hectare or 30,750 in total. Taking out the average cost of cultivation for 2.5 has. at 9, 703.5, estimated by the coconut authority, the net revenue from cultivating coconuts would have been 21,046.5. The total payments to the Land Bank for amortization and land taxes would have been about 8,946.19. (Figure taken from ARB receipts) This leaves the ARB with a total annual income of 12,100.31, or a bi-weekly income of 456 pesos\textsuperscript{18}. This low level of income did not allow the ARBs to meet their basic consumption needs, and many of them were in danger of getting evicted from their holdings.

In around 2002, the Pantukan Agricultural Development Corporation (PADCOR) approached the ARBs individually with an offer to develop their lands into a banana plantation in exchange for a leasing arrangement. Each of the ARBs saw this as an opportunity to pay off their amortization. Further, the promise of a steady lease payment, and the framing of the employment provisions made the lease contract seem like a lucrative proposition. In a focus group discussion, they said that “Pwede kami mag -rekomenda og isang anak, o

\textsuperscript{18}This is about 5 pesos less than the daily minimum wage of a worker in Metro Manila
kami mismo mag trabaho”\textsuperscript{19}. PADCOR eventually sold the lease to Musahamat in 2009. Musahamat approached the ARBs with a very similar contract to PADCOR. They signed the contracts because of a five-year advance on the lease payments. However, the promise of work did not materialize. Numerous reasons were given to me by during the focus group discussions, but one was remembered by all of the participants. Some of the ARBs children work in nearby plantations which have unions organized by the \textit{Kilusang Mayo Uno (KMU)}. They were told that Musahamat did not want KMU to influence other workers since it may disrupt production\textsuperscript{20}.

Today, the ARBs have formed an association, and would like to gain legal status so that they can withdraw their holdings from the lease. They have formed connections with both (KMU) and the \textit{Kilusang Magbubukid ng Pilipinas (KMP)} in the hope of gaining support in advocacy\textsuperscript{21}.

**Comparing Histories** - All ARB groups, apart from those in Pantukan were organized into some sort of ARB association prior to the formation of their AVA. The ARBs of Pantukan only made connections to pro land reform organizations after their lease contract was already in place. However, being organized or having connections with pro reform forces by itself does not guarantee an AVA that allows ARBs to control their holdings. In the case of the Santo Tomas Lessors, their organization at the inception of the lease agreement with MEPI did not seem to conduct education regarding AVAs in any serious manner. They merely reinforced the merits of a lease contract. NGO and legal connections helped MIFARBCO, MARBCO and HEARBCO \textsuperscript{2}. While the lessor groups of MEPI had legal consultation, they did not have communication with pro land reform forces. Finally, the Pantukan ARBs did not have legal consultation.

Group and individual debts, especially the amortization payment for the land, were a factor in considering lease contracts as opposed to growership contracts. The ARBs per-

\textsuperscript{19}“We can recommend 1 child or we ourselves can work”
\textsuperscript{20}Kilusang Mayo Uno- May 1st Movement
\textsuperscript{21}Kilusang Magbubukid ng Pilipinas- Peasant Movement of the Philippines
ception of the level of debt that they may incur under alternative arrangements made the lease agreement look lucrative. In the case of the Santo Tomas lessors, their possible debt payments were magnified by the DAMARBAI leadership. The prospects of incurring greater debt made HEARBCO 2's ARBs enter a leasing arrangement so that they could continue to make amortization payments and keep their lands. The Pantukan ARBs, individually had debts, but this mattered less than the financial gains to be made under a lease arrangement with employment.

The category of membership consultation is quite ambiguous. DAMARBAIs consultation, according to focus groups, were more of an exercise in convincing members of the merits of a lease contract. The Pantukan ARBs did not have an organization, but discussed lease prices among their neighbors. However, they had not bargained collectively. Finally, HEARBCO 2, MIFARBCO, and MARBCO had clear channels of communication with their board members. At least in the formation of their contracts, they were able to provide education, present their case to their respective groups, and deliberate. Finally, MIFARBCO, MARBCO, and HEARBCO 2 had the opportunity to bargain with prospective partners regarding the AVA contracts. The lessor ARBs from Santo Tomas have different accounts of the bargaining process. The members of the current DAMARB-MPC say they remember their board members bargaining with MEPI. The members of SIFARBCO and STARBENCO say they did not. The likely answer is that some negotiation happened, but the negotiators did not represent the interests of the ARBs because of the trivial education and membership consultation.

Table 5 summarizes the contracts of the different ARB groups along with some costs, benefits, and obligations. The lessor ARBs in Santo Tomas receive what is called a Beneficiary Trust Fund (BTF) instead of a lease. This is computed as a step function giving an amount of pesos depending on how many boxes are produced by the AVA\textsuperscript{22}. The lease payments to HEARBCO 2 and Pantukan ARBs is a fixed yearly amount with deductions for

\textsuperscript{22}This computation is summarized in Table 9
their amortization payments. The Pantukan ARBs receive a lease of about 22,000 pesos a year. This amount increases by 5% every five years. HEARBCO 2’s lease amounts to around 17,000 pesos a year after they have paid for debts and amortization payments. Under the lease contracts, the ARBs do not share in the costs of production. By contrast, the grower ARBs share in the costs of production, risk of their bananas being rejected, and possible natural calamities, as with HEARBCO 2’s experience. Investors in growership also often have the ability to take over the farms should there be crop failure.

5.1 Control

Table 6 gives the sticks in the bundle available to each ARB group. The columns in the table are the same as the “sticks-in-the-bundle” from Table 1. None of the contracts stipulate any room for ARBs to change the use of their holdings away from Banana production. Under growership contracts, the ARBs can negotiate their per box prices, and determine who can use and work on the land. Being able to negotiate the per box price has actually served both groups well in the past. In the beginning of contracting with SUMIFRU, the per box price for Class A bananas (at least 7.5 inches in length) used to be $2.90. The coops eventually bargained up the price of class A boxes to $4.10 by presenting information from farms growing for DOLE. In addition, the coop, MIFARBCO was able to gain the right to look for other buyers of Class B bananas.

In contrast to the growership contracts, the lease contracts do not give ARBs the formal right to bargain for better lease payments, or determine who gets to work on their holdings. However, avenues exist for these groups to negotiate better leases, or greater remuneration. In the case of the DAMARB-MPC members, they have been able to negotiate wage increases and other benefits. Their contracts formally stipulate that MEPI will respect any collective bargaining agreements made through the farm workers union of which, as employees of the plantation, the DAMARB-MPC ARBs are members. However, this ability is conditional. Until 2010, the members of SIFARBCO and STARBENCDO were also members of DAMARB-
MPC. They wanted to withdraw their holdings from the Lease contract. To do this, they occupied their lands and refused to let the company harvest the standing crop. Since MEPI determines who can work on the ARBs holdings, all the participants of the mass action were terminated. These were 241 ARBs in total or 31% of DAMARB-MPCs original membership.

The ARBs from the Pantukan district also do not have the right to determine who works on the plantation that leases their holdings. Of my sample, all of the ARBs reported having at least one child who worked as casual laborers on other banana plantations in the district. While these ARBs have no experience in banana farming, they were hoping that their children would be able to get jobs in the plantation leasing their lands. I received numerous accounts of why Musahammatt farms did not want to hire from the ARB families. One reason is under qualification, despite the fact that many of the families had members who were working in other banana plantations. The other reason is that the countrys largest trade federation has organized in the surrounding areas. Thus, hiring those that have worked in other banana plantations would be allowing the trade union in the farm. Regardless of the reason, the inability of the ARBs to determine who uses land has deprived them of the ability to appropriate the gains of cultivation, and use their holdings.

The ARBs under growership arrangements have maintained a modicum of possession over their holdings. They can determine who can work on their holdings, and thus, are entitled to the gains from cultivation. They are also given a chance to withdraw from contracts and renegotiate the price of their output. However, these abilities are limited. Withdrawing is conditional upon whether they can pay SUMIFRU for its initial investments for the land amortization owed to MEPI totalling 293,733 pesos per hectare. These costs were initially paid by SUMIFRU to MEPI when the ARBs of MARBCO and MIFARBCO withdrew their growership contract from MEPI. Regardless, the ARBs under growership contracts can look for another buyer and withdraw, as long as they have the funds to do so. When I interviewed the current Coop chairs of both MARBCO and MIFARBCO, they said that the ARBs would like to leave the contract with SUMIFRU since other banana buyers are now locating in
Santo Tomas. However, they are willing to continue the remaining two years of their current contract since it is only a short time before the contract expires and their debts are paid.

In contrast, ARBs in lease contracts have not preserved possession over their holdings. First, they have no control over who gets to work on their land, the use of the land, and the methods of farming. While they may be able to change the level of remuneration they receive, this can only be done insofar as they remain workers in the plantations on their land. The experience of SIFARBCO, STARBENCO, and the ARBs of Pantukan show that these ARBs remain vulnerable to the threat of exclusion from the use of their holdings.

5.2 Income

What effect does the allocation of control have on the income of the ARBs? Table 7 gives information on ARB incomes. Total Income aggregates all income sources for each individual ARB except for remittance income. This includes income from the AVAs, other plots of land, pension payments, income from having a store, from driving motorcycles, carpentry, and other activities. I excluded remittance income since the individual ARBs were reluctant to give figures for remittances. Some gave the reason that they dont want to make a mistake in their computation. Others simply found the question intrusive. Instead, I noted whether or not they received some form of remittance from relatives overseas. AVA income is the income that they get from the AVA alone, such as profits from selling bananas grown on holdings they received from CARP, lease payments, and wages from their AVAs.

One of the justifications for AVAs is so that ARBs can use their holdings to generate a viable agricultural livelihood (Department of Agrarian Reform, 1996). To indicate how important the AVA income is to an individual in each group, I show here AVA income as a percentage of overall income. I also note non agricultural income as a percentage of total income to show the extent to which ARBs within different contractual arrangements are able to depend on agriculture for livelihood. Finally, I note how many interviewees depend on other family members for some support such as buying them food and other daily expenses.
The median bi-weekly income of MARBCO members is 9,300 pesos ($202.17) while it is 11,800 pesos ($256.52) for MIFARBCO members \(^{23}\). On the other hand, the best-off lessor ARBs, in terms of total income, are those of HEARBCO 2 and DAMARB-MPC. The median income of the DAMARB-MPC ARBs is 4934.16 pesos ($107.26) while it is 4608.69 pesos ($100.19) for HEARBCO 2. However, the median interviewee from DAMARB-MPC draws only 17% of total income from the AVA. Much of the income is drawn from other activities. This is because many of the interviewees from DAMARB-MPC are retirees who own small stores or have pensions. In contrast, the ARBs of the groups who are not able to gain employment from the AVAs on their holdings are worse off. The median interviewee from SIFARBCO earns a bi-weekly income of 3304.16 pesos ($71.83), while that of STARBENCO earns 2807.38 pesos ($61.03). The median interviewee from the group of Pantukan ARBs earns 3249.90 pesos ($70.65). The gap between the total income of the median HEARBCO 2 interviewee end that of SIFARBCO then is 1304.53 pesos ($28.36). It is also notable that SIFARBCO, STARBENCO and the Pantukan ARBs get most of their income from non agricultural sources. Further, a greater proportion of the interviewees from these groups depend on other family members for income. Many of the able-bodied ARBs from these three groups have taken jobs in the farms of other growers or have found non agricultural employment such as carpentry, smithing, and driving tricycles\(^{24}\).

### 5.3 Other Measures of Well-Being

Income, however, is only one dimension of welfare. Table 8 presents data collected on indicators of family welfare, conditions of the household, savings, and ownership of key assets. Of the key assets, I chose the ownership of a Motorcycle and a mobile. The motorcycle is a common vehicle in these areas where the roads are often unpaved. It allows people to travel across narrow roads and bridges. Owning a mobile phone has become essential in communication whether for deliveries, town meetings, and making appointments at government

\(^{23}\)The peso-dollar exchange rate at the time of the survey was about 46 pesos to one dollar.

\(^{24}\)Tricycles are passenger vehicles which consist of a motorcycle harnessed with a very colorful sidecar.
Ownership or access to a mobile phone, in-house electricity, and toilets are available to all the ARBs. Those who have growership contracts, however, have less of an incidence of children who discontinued schooling due to financial reasons. The incidence of children discontinuing schooling due to financial reasons is particularly high for the Lessor ARBs who cannot work on their lands, and the ARBs of HEARBCO 2 which suffered losses due to typhoon Pablo. It should be noted, however, that in HEARBCO 2’s case, this was not due to their contract with TRAIN but because of their growership with Lapanday.

Running water in-house is not available to the ARBs in Pantukan, but this is mostly because of the infrastructure development in the municipality. All of them, however, have access to water wells on their lots. The incidence of motorcycle ownership is also higher among members of grower coops, except for HEARBCO 2s members where all who were surveyed had motor cycles. Finally, Growers also have a higher incidence of respondents who reported savings.

6 Discussion and Policy Implications

The histories of the different ARB groups resulted in different contracts. The contracts in turn affect their well-being today in terms of their income, and their ability to obtain valuable assets and education for their children. In this section, I will discuss criteria under which we can assess the effects of these contracts on the ARBs livelihood. I shall then outline some possible policy implications.

6.1 Normative Analysis

There are two ways we can conduct a normative analysis on AVAs. The first is to take into account possible counterfactual scenarios for each ARB grouping. For the Santo Tomas ARBs, we can directly compare the lease and growership contracts since these were the
alternatives that were available to the ARBs at the time of contracting. The HEARBCO 2 ARBs were facing a choice between continuing as growers, perhaps with another company, or, with taking the lease option from TRAIN. Finally, the Pantukan ARBs faced the choice of entering an AVA or not.

With respect to the Santo Tomas ARBs, the lease AVAs have certainly been detrimental to the ARBs of DAMARB-MPC, SIFARBCO and STARBENCO. If the ARBs chose to only accept growership contracts, their fortunes would be different today. Some may still have contracted with MEPI, but competition from SUMIFRU and other buyers would have made it difficult for MEPI to exploit monopsony power over the ARBs. Certainly, the absence of NGO advising, legal counsel, and strong ARB organizing had a role to play in the divergent outcomes between the leasing and grower ARBs. Further, DAMARBAIs push to convince the ARBs that they had a better chance as lessors created uncertainty about the growership contracts. As one SIFARBCO member puts it: “Walang hiya yang DAMARBAI, nanloko lang. Naku kung alam lang namin sana.”

Some lease contracts, however, are an improvement. Assuming that the Pantukan ARBs prices remain as they were when they harvested the last of their coconut crop, then the ARBs fared better taking the AVA. The lease contract of the HEARCO 2 members allowed them to avoid further debt, and they have been able to make a living with the lease payments and wages. One counterfactual scenario for the ARBs of HEARBCO 2 would have been a similar growership contract to that of MIFARBCO and MARBCO under SUMIFRU. In my focus group discussions with coop members, SUMIFRU had offered the same deal, with the same conditions, but, perhaps for a longer period since the debts of HEARBCO 2 were larger. Had they gotten this deal under SUMIFRU, they may have had to take out more debts to cover the damage done to their farms, provide fertilizer and other inputs, and would have had to pay SUMIFRU for their aerial spraying. It is difficult to say whether a SUMIFRU-HEARBCO 2 partnership would have resulted in better outcomes, or, outcomes equivalent

25Damn that DAMARBAI, all they did was lie. If we only knew.
to that of MARBCO and MIFARBCO.

The other way to conduct a normative analysis is to ask whether these AVAs meet certain ends. These can be taken from the official justifications of the state for encouraging such arrangements. The first is to make smallholder farming economically viable for the farmer. The second is to ensure beneficiary possession and control of the land. Last is to introduce facilities and technological improvements that could increase ARB incomes\(^\text{26}\). Under these criteria, the contracts of MARBCO and MIFARBCO have certainly succeeded. The one issue that they have is that there is no visible way to observe outside options so they can bargain for better prices.

Under this criteria, AVAs have failed the Pantukan ARBs, the members of SIFARBCO and the members of STARBENCO. While the median income of the sample exceeds poverty incomes, the ARBs in my sample obtained income largely from activities outside their holdings\(^\text{27}\). Thus, the improvements that were introduced on the ARBs holdings do not facilitate their livelihood. Moreover, these ARBs cannot utilize their land, let alone gain any control of it. One of the questions that I had asked all interviewees was why they thought it was important to own land. One of the pantukan ARBs answered this question as follows: *Wala mamatay na kami*\(^\text{28}\).

While the Lease AVAs have been kinder to ARBs in HEARBCO 2 and DAMARB-MPC, it has only been kind insofar as these ARBs have continued their employment in the AVA. The stipulations of the contracts, however, do not give ARBs the right to be employed on their landholdings. These decisions are made by MEPI and TRAIN. However, stipulations that help ARBs gain some control over employment exist in each of these situations. DAMARB-MPC, and HEARBCO, under the current management structure are responsible for personnel issues including hiring and termination. Again, however, it is questionable

\(^{26}\)These objectives are stated in the Administrative Order 09-06 under the Department of Agrarian Reform. In the time I was in the Philippines, this administrative order was translated into a law to regulate AVAs called House Bill 5161. It has not yet passed.

\(^{27}\)By poverty income, I am using the World Bank standard of $1.90/day, which, in bi-weekly terms would come to 1,223.6 pesos(World Bank and IMF, 2015).

\(^{28}\)"None well be dead before then."
whether these rights are secure since these are not written in their contracts.

6.2 Policy implications

Steps have to be taken to avoid contractual arrangements that deprive ARBs of control over their lands. The DAR explicitly discourages the formation of lease arrangements, calling it a “last resort” (Presidential Agrarian Reform Committee, 1997). Such policies, without addressing the underlying economic considerations that motivate lease arrangements, are insufficient. As in the case of HEARBCO 2, even growership arrangements can be written to pass costs to ARBs, preventing their success and driving them to financial hardship.

Based on my findings, ARBs enter lease contracts to avoid further indebtedness, and to insulate themselves from risk. In the context of the Philippines, sources of indebtedness include amortization payments, and payments for infrastructure and fertilizers. Some land reform advocates have already called for making land distribution free\textsuperscript{29}. Ensuring that ARB organizations receive subsidized credit, conditional upon certain productive purposes may complement the proposal to eliminate amortization payments. In this way, ARBs can bear some risks in owner cultivatorship, allowing them to establish coops that can effectively provide some assistance in production along the lines of MARBCO and MIFARBCO. Microeconomic interventions that enable smallholder organizations to organize and bargain for better contracts, reduce costs of marketing crops for smallholders, and measures that ease access to technologies are more effective (Reardon et al., 2009). Thus, the problems that AVAs were supposed to address would be exactly those that need to be addressed for these arrangements to be viable for ARBs.

Another possible intervention is to reduce the costs of renegotiating contracts for ARB organizations. Costs come from legal assistance, and the institutional procedures for renegotiating. In the case of SIFARBCO and STARBENCO, they are still waiting for the PARC to adjudicate their case. Such a case should not have to sit in the office of the president.\textsuperscript{29}

\textsuperscript{29}The new proposal by a coalition of progressive parties called the Makabayan (Pro-people) bloc is called the Genuine Agrarian Reform Bill. This has not yet passed, but proposes free land distribution.
Streamlining contract negotiations at the municipal agrarian reform office should be enough. As landowners, they should be given the power to evict lessees when they deem their actions inimical to their interests. This would be a minor change in the contracting procedure, but it is a way of ensuring that ARBs have a credible threat vis-a-vis an agribusiness corporation. It should also go without saying that affordable legal assistance should be made readily available for such groups.

Both these proposals tackle the economic and institutional factors that result in AVAs which are unfavorable to the ARBs at the micro level. This paper however does not address whether or not AVAs meet larger development goals such as enhancing agricultural productivity, linking agriculture to other sectors, and generating more foreign exchange. Such a study cannot be done within the limits of the information I provide in this paper.

7 Tables and Maps
Figure 1: The Field Site
<table>
<thead>
<tr>
<th>Structure of Incorporation</th>
<th>Remuneration</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Smallholder</td>
<td>Investor</td>
</tr>
<tr>
<td>Lease</td>
<td>Wage</td>
<td>Profits</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joint Venture</td>
<td>Profit-share</td>
<td>Profit Share</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use</td>
</tr>
<tr>
<td>Growership</td>
<td>Profits</td>
<td>Export Profits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use</td>
</tr>
</tbody>
</table>

Table 1: Different contract types and the allocation of abilities. Arrows are meant to show that Joint ventures are an intermediary form of contract. Italics are meant to indicate an ability shared by each partner.
<table>
<thead>
<tr>
<th>Location</th>
<th>Group</th>
<th>Total in Sample (71 Total)</th>
<th>Number Female in Sample</th>
<th>Average Age</th>
<th>Education (Mode)</th>
<th>Household Size</th>
<th>Owns Dwelling and Lot</th>
<th>Yrs of Exp With Cavendish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growers</td>
<td>Santo Tomas</td>
<td>MARB</td>
<td>45</td>
<td>8</td>
<td>1</td>
<td>57.5</td>
<td>HSU</td>
<td>6.87</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MIFARB</td>
<td>88</td>
<td>6</td>
<td>2</td>
<td>56.33</td>
<td>HSG</td>
<td>6.7</td>
</tr>
<tr>
<td>Lease (Group)</td>
<td></td>
<td>DAMARB</td>
<td>520</td>
<td>7</td>
<td>1</td>
<td>57.71</td>
<td>CLU</td>
<td>4.29</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SIFARB</td>
<td>137</td>
<td>15</td>
<td>3</td>
<td>57.27</td>
<td>HSU</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STARB</td>
<td>104</td>
<td>6</td>
<td>1</td>
<td>61.67</td>
<td>ELMU</td>
<td>5.33</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HEARB</td>
<td>368</td>
<td>20</td>
<td>3</td>
<td>53.85</td>
<td>CGR</td>
<td>4.45</td>
</tr>
<tr>
<td>Lease (Ind)</td>
<td>Pantukan</td>
<td>Individual</td>
<td>13 up</td>
<td>9</td>
<td>3</td>
<td>64</td>
<td>ELMU</td>
<td>5.22</td>
</tr>
</tbody>
</table>

Table 2: **The Sample Description** - Education in terms of Mode and noted as follows: ELMU-Elementary Undergraduate, ELG-Elementary Graduate, HSU-High School Undergraduate, HSG-High School Graduate, CLU-College Undergraduate, CGR-College Graduate.
<table>
<thead>
<tr>
<th>Location</th>
<th>Group</th>
<th>Total Land Area (ha)</th>
<th>Individual Plots (ha)</th>
<th>Year of Current CLOA</th>
<th>Former Owners</th>
<th>YEAR of Curr AVA</th>
<th>AVA Partner</th>
<th>Tenure Transition</th>
<th>Previous AVA</th>
<th>AVA Dispute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santo Tomas</td>
<td>MARB</td>
<td>47.52</td>
<td>1.02</td>
<td>2004</td>
<td>MEPI</td>
<td>2007</td>
<td>SUMIFRU</td>
<td>Gr to Gr</td>
<td>MEPI</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>MIFARB</td>
<td>89.76</td>
<td>1.02</td>
<td>2004</td>
<td>MEPI</td>
<td>2007</td>
<td>SUMIFRU</td>
<td>Gr to Gr</td>
<td>MEPI</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>DAMARB</td>
<td>799.564</td>
<td>1.04</td>
<td>2002</td>
<td>MEPI</td>
<td>2002</td>
<td>MEPI</td>
<td>FW to FW+Lr</td>
<td>None</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>SIFARB</td>
<td>1.04</td>
<td>2002</td>
<td>MEPI</td>
<td>2002</td>
<td>MEPI</td>
<td>FW to Lr</td>
<td>None</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STARB</td>
<td>1.04</td>
<td>2002</td>
<td>MEPI</td>
<td>2002</td>
<td>MEPI</td>
<td>FW to Lr</td>
<td>None</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Tagum</td>
<td>HEARB</td>
<td>294.325</td>
<td>0.8</td>
<td>1997</td>
<td>HIJO</td>
<td>2014</td>
<td>TRAIN</td>
<td>Gr to FW+Lr</td>
<td>Lapanday</td>
<td>N</td>
</tr>
<tr>
<td>PAN</td>
<td>Indiv ARBs</td>
<td>32.5(6)</td>
<td>2.5(6)</td>
<td>1992</td>
<td>Nuere &amp; Sons</td>
<td>2009</td>
<td>Musahamat</td>
<td>Lr to Lr</td>
<td>PADCOR</td>
<td>Y</td>
</tr>
</tbody>
</table>

Table 3: Description of AVAs
Table 4: Organizational Characteristics at the time of AVA Bargaining. Y = This was available to the ARB group, N = This was not available.
<table>
<thead>
<tr>
<th>Location</th>
<th>Group</th>
<th>Contract Type</th>
<th>Length (Years)</th>
<th>Remuneration</th>
<th>ARB Cost Share</th>
<th>Production Risks</th>
<th>Investor Responsibilities</th>
<th>ARB sells Class B, Pre-Rejects</th>
<th>Pre-Termination Allowed</th>
<th>Other Plants Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santo Tomas</td>
<td>MARB Grower</td>
<td>Grower</td>
<td>10</td>
<td>Per box</td>
<td>Infra, Inputs, Labor, Improvements</td>
<td>Rejected Bxs, Full take over clauses</td>
<td>Quality Control Packing Materials</td>
<td>Y</td>
<td>Investor</td>
<td>N</td>
</tr>
<tr>
<td>MIFARB Grower</td>
<td>10</td>
<td>Per box</td>
<td>Infra, Inputs, Labor, Improvements</td>
<td>Rejected Bxs, Full take over clauses</td>
<td>Quality Control Packing Materials</td>
<td>N</td>
<td>Investor</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lease (Group)</td>
<td>DAMARB Lease</td>
<td>30</td>
<td>BTF+Emp</td>
<td>None</td>
<td>None</td>
<td>All Production</td>
<td>N</td>
<td>Investor</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>SIFARB Lease</td>
<td>30</td>
<td>BTF</td>
<td>None</td>
<td>None</td>
<td>All Production</td>
<td>N</td>
<td>Investor</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STARB Lease</td>
<td>30</td>
<td>BTF</td>
<td>None</td>
<td>None</td>
<td>All Production</td>
<td>N</td>
<td>Investor</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tagum</td>
<td>HEARB Lease</td>
<td>60</td>
<td>Lease+Emp</td>
<td>None</td>
<td>None</td>
<td>All Production</td>
<td>N</td>
<td>Investor</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Lease (Ind.)</td>
<td>Pantukan Indiv ARBs</td>
<td>Lease</td>
<td>25</td>
<td>Lease</td>
<td>None</td>
<td>None</td>
<td>All Production</td>
<td>N</td>
<td>Investor</td>
<td>N</td>
</tr>
</tbody>
</table>

Table 5: Contracts offered to groups of ARBs
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Growership</td>
<td>MARB</td>
<td>N</td>
<td>Y</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>MIFARB</td>
<td>N</td>
<td>Y</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Lease</td>
<td>DAMARB</td>
<td>N</td>
<td>C</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>(Group)</td>
<td>SIFARB</td>
<td>N</td>
<td>C</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>STARB</td>
<td>N</td>
<td>C</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>HEARBR</td>
<td>N</td>
<td>C</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Lease (Ind.)</td>
<td>PAN</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

Table 6: **The-Sticks-In-the-Bundle** under each group’s contract. Y=The group has this ability, N=The group does not have this ability, C= The group has this ability conditionally.

<table>
<thead>
<tr>
<th>Location</th>
<th>Group</th>
<th>Total Income (Median Reported)</th>
<th>AVA Income (Median)</th>
<th>AVA (% of Total)</th>
<th>Non-Ag (% of Total)</th>
<th>Remittance (% of Sample)</th>
<th>Other Income Earner (% of Sample)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santo Tomas</td>
<td>MARBCO</td>
<td>9300</td>
<td>8050</td>
<td>71.00%</td>
<td>5.00%</td>
<td>0%</td>
<td>37.5%</td>
</tr>
<tr>
<td></td>
<td>MIFARBCO</td>
<td>11800</td>
<td>10250</td>
<td>100.00%</td>
<td>0%</td>
<td>0%</td>
<td>16%</td>
</tr>
<tr>
<td>Lease (Group)</td>
<td>DAMARB-MPC</td>
<td>4934.16</td>
<td>645.83</td>
<td>17.00%</td>
<td>39.00%</td>
<td>0</td>
<td>14.29%</td>
</tr>
<tr>
<td></td>
<td>SIFARBCO</td>
<td>3304.6</td>
<td>554.6</td>
<td>14.58%</td>
<td>82.60%</td>
<td>0</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>STARBENCO</td>
<td>2807.38</td>
<td>554.6</td>
<td>24.14%</td>
<td>62.00%</td>
<td>16.7%</td>
<td>100%</td>
</tr>
<tr>
<td>Tagum</td>
<td>HEARBCO 2</td>
<td>4608.69</td>
<td>4608.69</td>
<td>100.00%</td>
<td>0%</td>
<td>10%</td>
<td>25%</td>
</tr>
<tr>
<td>Lease (Ind.)</td>
<td>Pantukan</td>
<td>Indiv ARBs</td>
<td>3249.90</td>
<td>1399.9</td>
<td>25.86%</td>
<td>68.76%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Table 7: **Income Information**: The numbers given are bi-weekly figures in *Philippine Pesos*. AVA Income as a % of Total Income is reported for the *median* interviewee. ”Remittance” and ”Other” sources not reported in pesos, but as a percentage of the sample who reported that these are part of their income.
<table>
<thead>
<tr>
<th>Location</th>
<th>Group</th>
<th>Child Stop School due to Finance</th>
<th>Running Water in House</th>
<th>Toilet Access</th>
<th>Electricity</th>
<th>Motorcycle</th>
<th>Mobile</th>
<th>Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santo Tomas</td>
<td>MARB</td>
<td>0%</td>
<td>87.5%</td>
<td>100%</td>
<td>100%</td>
<td>75%</td>
<td>100%</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>MIFARB</td>
<td>17%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>66.7%</td>
</tr>
<tr>
<td>Lease (Group)</td>
<td>DAMARB</td>
<td>14.29%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>43%</td>
<td>100%</td>
<td>14.29%</td>
</tr>
<tr>
<td></td>
<td>SIFARB</td>
<td>73.33%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>27%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>STARB</td>
<td>67%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>67%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Lease (Ind.)</td>
<td>Pantukan Indiv ARBs</td>
<td>55%</td>
<td>0%</td>
<td>100%</td>
<td>100%</td>
<td>56%</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 8: Selected Assets, Childhood Education, and Facilities in dwelling possessed or achieved by ARBs

<table>
<thead>
<tr>
<th>Annual Yield (Boxes)</th>
<th>Incentive/ Box ($)</th>
<th>Incentive/ Box (Pesos)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 4200</td>
<td>.071</td>
<td>2.8</td>
</tr>
<tr>
<td>4201-4300</td>
<td>.076</td>
<td>3.04</td>
</tr>
<tr>
<td>4301-4400</td>
<td>.081</td>
<td>3.24</td>
</tr>
<tr>
<td>4401-4500</td>
<td>.086</td>
<td>3.44</td>
</tr>
<tr>
<td>4501-4600</td>
<td>.091</td>
<td>3.64</td>
</tr>
<tr>
<td>4601-4700</td>
<td>.096</td>
<td>3.84</td>
</tr>
<tr>
<td>4701-4800</td>
<td>.101</td>
<td>4.04</td>
</tr>
<tr>
<td>4801-4900</td>
<td>.106</td>
<td>4.24</td>
</tr>
<tr>
<td>4901-5000 (or greater)</td>
<td>.111</td>
<td>4.44</td>
</tr>
</tbody>
</table>

Table 9: based on 40 pesos/dollar
References


Department of Agrarian Reform (1996). Administrative order 09-06.

Department of Agrarian Reform (2006). Case studies on agribusiness venture agreements (AVA’s) between investors and agrarian reform beneficiaries (arb’s).


