

Comprehensive Agrarian Reform Program (CARP): time to let go

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This paper revisits the record of the Comprehensive Agrarian Reform Program (CARP) in the Philippines over its quarter-century existence. By 2014, it shall have accomplished 99 percent of its target—an impressive success for a government program. As a program to advance the economic welfare of farmers, however, it has accomplished the opposite of its stated goals. Productivity in coconut and sugar has fallen drastically, and poverty incidence among beneficiaries in agrarian-reform communities is even higher than among farmers in general. CARP and CARPER (Comprehensive Agrarian Reform Program with Reforms) have created a new social class: the landed poor. The design and implementation flaws that brought about this result are explored, including CARP's suppression of the market for land assets and its rigid five-hectare landownership ceiling, which led to the demise of the legal rural financial market and the flight of private capital. The paper argues for a shift in the policy focus henceforth from equity to efficiency, and the revival of markets for rural output and credit by, among others, lifting landownership limits for productive farmers and publicly registered corporations.

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1. Introduction

The law known as CARPER¹ (Comprehensive Agrarian Reform Program with Reforms), which extended the original 1988 Comprehensive Agrarian Reform

¹ CARPER refers to Republic Act 9200, passed by Congress on 7 August 2009. The original Comprehensive Agrarian Reform Law was Republic Act 6657, passed on 10 June 1988.

Law (CARL), is itself due to expire in June 2014. As of the end of 2012, 4.49 million hectares had already been acquired and distributed under the program and its extension; this represents 84 percent of the 5.37 million hectares targeted for distribution. By 2014, the program will have distributed 5.05 million hectares, leaving undistributed only 321,000 hectares—an accomplishment rate of 99 percent. By then, 2.6 million farmers will have gained some form of ownership of an average of 1.2 hectares each [Adriano 2013]. The Comprehensive Agrarian Reform Program or CARP² represents the nation's one gargantuan sacrifice upon the altar of asset equity.

By June 2014, CARP will have acquired and distributed 16 percent of the total Philippine land area of 30 million hectares. For a government program in a concededly weak democratic state, this is a singular feat. Japan's vaunted land reform distributed only 1.76 million hectares, or 4.7 percent of its total 37 million hectares. Taiwan distributed 0.5 million hectares of its total of 3.62 million, or 14 percent. In relation to each country's arable land area, Japan's land reform covered 41 percent, Taiwan 60 percent, and the Philippines as much as 93 percent. Note that the Japanese land reform was carried out by the Allied occupation forces; Taiwan's was implemented by the virtual military government of the Kuomintang Party under Chiang Kai-shek. While these successes were acclaimed and peddled as templates, the record of subsequent land reforms in other countries has been far more spotty. The catch lies in the fact that these earlier successful land reforms entailed some stringent governance and design requirements that copycats neglected or conveniently forgot. Early postwar land reform episodes were over and done in no more than five years. They succeeded because they knew when and where to stop. Japan's, Taiwan's, and South Korea's land reforms largely stopped at their ricelands! In contrast, CARP has lasted 25 years and has covered all crops. Counting the years from the original rice and corn land reform in 1964, the Philippines has been under land reform for half a century. As in most weak states, form and ambition were pushed to substitute for substance and, as with all government boondoggles, failure was trafficked as a sure sign of lack of funds.

The same is true of CARL and CARPER. Their clearly stated objective is "to enhance [the beneficiaries'] dignity and improve the quality of their lives through greater productivity of agricultural lands" [RA 6657, Ch. 1, Sec. 2]. But farm productivity and the enhancement of quality of life are precisely where CARP messed up.

² Henceforth we shall use CARP to denote the entire agrarian reform program, while CARPER and CARL will be used to refer to the legislation or parts of it that implement the reform.

2. Evidence on welfare impact

The argument behind the redistribution of land assets in favor of landless farmers certainly goes beyond economic efficiency. By improving equity, land reform could in principle also improve democratic politics, as rural and national politics pry themselves loose from the grip of large feudal landowning interests. We, however, leave the political economy dimensions of the issue to more competent observers; besides there are no good metrics to guide enlightened discussions along this dimension.

It is admittedly difficult even to estimate just the net global economic welfare benefit of a government intervention, although some such attempts have been made for land reforms elsewhere.³ It is much simpler to concentrate on just the welfare improvement of the target population. The following is a review of extant evidence.

2.1. Post-2009

A 2011 study⁴ of agrarian reform beneficiaries (ARBS) located in agrarian reform communities (ARCS) showed that the average yield (ton/hectare) among ARC beneficiaries in palay was 10 percent *higher* than the national average (including all farmers in the same crop); in corn it was 50 percent *higher*, in coconut 40 percent *lower*, and 8 percent *lower* in sugar [Adriano 2013]. So in the two crops that were largely covered by the 1964 land reform, farm productivity looked better. But note: only 54 percent of ARBS are in ARCS. ARC communities are those in which most of government and nongovernment aid is dispensed. From 2010 to 2012, ARC-affiliated ARBS received, on average, ₱22,446 in credit support and ₱23,246 in irrigation support [Adriano 2013]. The figures could look worse if non-ARC ARBS (46 percent of the total) were included. But even in ARCS, sugar and coconut productivity fell compared to the average. For crops that came under land reform with CARP, the figures are chilling.

Even worse about CARP is its outcome on its beneficiaries' quality of life. Quality of life is correlated with being above or below the poverty line. The same survey shows that among ARC-affiliated ARBS, 54 percent of households fell below the poverty line. Already for 2009, Family Income and Expenditure Survey (FIES) data show that only 36 percent of farmers fell below the poverty line. There are no available data to show that the 54 percent poverty incidence is already an improvement. And this was during a period when the economy was weighed down by the world financial crisis. This seems to say that ARC-affiliated farmer

³ One attempt is by Deininger, Hoogeveen, and Kinsey [2004], who assess land reform in land-rich Zimbabwe in the 1980s, and who ultimately conclude that "it depends".

⁴ The study's full title is "ARC level of development assessment (ALDA)" [Department of Agrarian Reform 2012].

beneficiaries of CARP had become even poorer. Since the plight of non-ARC beneficiaries can only be worse, that number can only look even more indicting. CARP, it seems, has created a new class of farmers—namely, the landed poor.

2.2. Pre-2009

In the run-up to the CARPER debate, there was an attempt to provide an objective basis for evaluating CARP. Here we summarize the evidence.⁵

2.2.1. *The Asia-Pacific Policy Center study*

By far, the most painstaking and careful undertaking to evaluate the performance of CARP on beneficiary welfare is a 2007 study by the Asia Pacific Policy Center funded by the Department of Agrarian Reform. The study contrasts the welfare outcomes for agrarian reform beneficiaries with those for non-agrarian reform beneficiaries (NARBs), both within and outside agrarian reform communities. It used an estimated income-generating function to indirectly measure the incomes of ARBs and NARBs and employed the same to estimate “with and without” income differentials and the impact of CARP on poverty reduction. The effort is remarkable for its attention to detail. We look at three aspects: income comparisons, cost-benefit analyses of ARCs, and nonmonetary improvements.

The most salient observations of the income comparison analysis are as follows:

- a. The income of ARC members with land was greater than the income of ARC members without land; the incomes of non-ARC members with land are greater than those of non-ARC members without land. These straightforward and uncontrolled comparisons may suggest the importance of ownership of land, as the authors observed.
- b. The incomes of ARBs in ARCs are greater than the incomes of ARBs in non-ARCs; this may suggest the importance of the ARC approach.
- c. But when others factors are controlled for, neither being an ARB nor being an ARC member explains differences in income per capita, even as they each figure positively in net farm income.

The last observation is of interest since an attempt is made to isolate the effect of being an ARB from that of being an ARC member, controlling for other influences. That neither variable independently affects per capita income is bad news for the land acquisition and distribution program (CARP-LAD) and for the agrarian reform community program (CARP-ARC). Since landownership raises per capita income and being an ARB implies being with land, it should follow that

⁵ This section incorporates parts of a hitherto circulated but unpublished manuscript, Fabella [2009].

being an ARB should raise income per capita. But it does not. This implies that “landownership via CARP” is an “inferior type of ownership”. Our hypothesis is that this inferiority is associated with Section 27 and other strictures (such as the landownership ceiling of five hectares) of CARP-LAD that led to the drying up of credit access. Note that being an ARB correlates with poorer access to credit. This shows the property-rights frailty of CARP.

The APPC study shows that the improvements in social amenities (housing, education, durable capital accumulation, public goods, etc.) among ARCs surpass those in non-ARC communities. But this is only to be expected since ARC communities were, on average, privileged by a 38 percent higher total budget.

In a separate study by the same organization [APPC 2008], the authors conclude that:

Twenty years later, the results of the Comprehensive Agrarian Reform Law (CARL) launched in 1988 were below expectations. Productivity growth in agriculture has been low by regional standards and poverty still plagues rural areas. Total agricultural factor productivity has grown only 0.13 percent per year during 1980–1998, compared to 0.87 percent per year in Thailand and 1.49 percent in Indonesia.

2.2.2. 2006 IARDS data set

The data collected by the Institute for Agrarian and Rurban Development Studies (IARDS) for 2006 is another good place to look for clues. The 2006 IARDS data set shows that the average net profit from the average two hectares of ARB farms in ARC was ₱10,387, while that from 1.4 hectares non-ARB in ARC was ₱9,356, or 10 percent higher on average. This is hardly a significant difference, given that the ARBs have, on average, 30 percent larger plots [Ballesteros and Bresciani 2008].

2.2.3. CARP-IA Micro-Meso Component

The study most favorable to the land reform advocacy is that done by Reyes [2002] using the CARP-IA Micro-Meso Component collected in 1990 and 2000 for about 1,800 households. It showed, among others, that (a) ARBs tend, on average, to have a higher per capita income than non-ARBs (₱98,653 vs. ₱76,159); (b) ARBs have, as a group, lower poverty incidence than non-ARBs (45 percent vs. 56 percent); (c) controlling for other influences, being an ARB lowers—and statistically significantly so—the likelihood of the household being under the poverty line; (d) controlling for other influences, being an ARB significantly raises the per capita income of the household; and (e) the poverty incidence declined among ARBs from 1990 to 2000, while it rose among non-ARBs in the same period. The paper concludes that land reform has produced

significant improvements in the lives of the beneficiaries. However, there are grave reasons for doubt.

A casual examination of the data used in that study shows:

- a. Some 49 percent of the ARBs are from Central Luzon, Southern Tagalog, and Cagayan Valley, while only 21 percent of the non-ARBs come from the same regions. In contrast, only 36 percent of the ARBs come from Visayas and Mindanao, while 56 percent of the non-ARBs come from there. Since the first three regions constitute the most affluent in the Philippines and poverty incidence is highest in the last two, the average income and poverty incidence comparison may be spurious, since the ARB status difference is most likely picking up the income and poverty incidence differences across these regions. The reduction in poverty among ARBs being faster may likewise be reflecting the poverty reduction in the central Luzon region, which was so much faster.
- b. ARBs, on average, have larger farm sizes than non-ARBs (4.45 hectares vs. 2.86 hectares or 36 percent larger, on average). The differences in incomes and poverty incidence may be reflecting this asset differential rather land reform beneficiary status. Note that income sourced from farming was on average ₱67,761 for ARBs and ₱46,508 for non-ARBs, which is 31 percent larger.

The results of the latter study do not constitute convincing evidence that land reform unambiguously improved the welfare of land reform beneficiaries.

Based on the cumulative weight of evidence, the hypothesis that CARP is a government failure in economic terms cannot be rejected. But why is the evidence so unconvincing about the economic welfare impact of land reform in the Philippines? We argue that the important obstacles standing in the way of an economically successful CARP are related to, among others, CARL's eschewing the Coase theorem, the five-hectare landownership ceiling, its taking on all crops, and the one-size-fits-all land award of three hectares for all crops.

3. Possible reasons for failure

There are two overarching reasons why CARP fell short of its economic welfare mission. The first has to do with the property rights regime that comes in the wake of CARL's outlawing the Coase theorem. This resulted from the strictures in Section 27 of CARL and the landownership ceiling. The second is related to program design, which, in turn, is related to the failure of the state to recognize its capability limits relative to its commitments under CARP.

3.1. CARP and property rights

One can view CARP as an effort to put property rights over agricultural land on a socially just and thus more stable footing. Greater stability of property

rights conduces toward greater investment and productivity. But has CARP in fact achieved greater stability of property rights? The strictures on ownership imposed by CARL engender the following problems relating to property rights:

3.1.1. Unequal exchange and viability

The value of privately owned farmland depends on many characteristics. Its being almost indestructible and locationally fixed makes it a perfect collateral against loans to finance either current consumption or future consumption (through crop cultivation). If that capacity to command credit is hampered, the value of the land itself falls. Since—by the “just compensation principle” professed by CARL—the landowner is entitled to full compensation for his loss, the acquisition value of the land (which factors in that command of credit) will exceed the value of the land (without such command) received by the farmer. The farmer is effectively amortizing a value much higher than the capacity his holdings can afford to yield. The strictures on ownership imposed by CARL mean that the land conveyed to the beneficiaries is effectively inferior to that bought at market price from the landowner. To resort to an analogy, it is as if the buyer—after a test drive—had paid the agreed price for a car with a 1.6 liter engine but later unknowingly takes delivery of a car with 1.3 liter engine. If, in addition, the farmer beneficiary is awarded a piece of land that is not “economically sized”, the farm becomes a high-default risk to start with, a priori loses the capacity to command credit, and is therefore worth less than what it used to be when it was part of a larger creditworthy property. In these circumstances, the farmer beneficiary is being short-changed and condemned to fail. Economically unviable property rights are unstable. Their only shot at viability is in consolidation with other awarded lands, a fact that makes consolidation an almost inevitable outcome.

3.1.2. Underground consolidation

CARL also outlawed consolidation owing to the five-hectare retention limit. So consolidation through conveyance of property rights has to be done in the illegal underground market where contracts are less stable. The Department of Agrarian Reform [1996] reported a phenomenon that everyone already knew: “rampant selling and mortgaging of lands awarded to farmer beneficiaries”. The proportion of farmer beneficiaries in any village who have had a sale transaction in land despite this being illegal ranged from 7 percent to 100 percent [Ballesteros and de la Cruz 2006]. Economic logic will not be denied. When the size of landownership is unviable, consolidation will occur even when outlawed. It is happening, though at a much higher transaction cost, in underground markets.

If property rights are being conveyed in the illegal underground land market, property rights are unstable. They are not protected by the legal system.

Furthermore, while sale, conveyance of land, and land rental (in the form of “waiver”) are legally permitted after the proscription period and after full payment, the requirements are so voluminous and corruption-prone that the underground market—despite the high transactions cost—becomes the only way forward. Thus, CARL effectively demodernized agriculture by driving transactions to the underground market.

3.1.3. *Forced entrepreneurship*

CARL mandates that all bona fide tenants shall be awarded a parcel of land and, where the land ceiling has not been breached after distribution to tenants, landless nontenants shall be included among the beneficiaries. Because of Section 27, they must then become owner-cultivators in order to retain the land. Now as lowly as society views farming in this country, running a farm, truth be told, is a complex entrepreneurial and managerial undertaking. The farmer-owner has to arrange financing; prepare the land; procure seed and fertilizer; do the weeding; decide on the timing of planting, sowing, and harvest; contract a buyer and negotiate a price; and then hope to God the weather cooperates. Since this climatic cooperation is a random event, the farmer has to secure an insurance of some form or other. In developing countries, farm size affords a form of insurance. With average landholding of 1.2 hectares, however, the farmer must resort to the most primitive home-made insurance—namely, low-yield, low-risk (largely fertilizer-starved) cultivation. Few people are equipped to deal successfully with this plethora of decisions. To think that the only barrier to farmer entrepreneurship is ownership of land is the height of naïveté. If beneficiaries do not have the requisite entrepreneurship and managerial aptitudes, they will surely drown in debt and may fare better as wage employees. But with CARP, they cannot legally opt out if they want to hold on to the asset; they are forced to be entrepreneurs. That “voting with your feet” is an efficiency mechanism is illustrated by the kibbutz-kolkhoz paradox [Guttman and Schnytzer 1989] (Box 1).

Box 1. The kibbutz-kolkhoz paradox

The Israeli *kibbutz* was generally regarded as rather economically efficient (its oranges and fruits compete for markets in Europe) and successful while the Russian *kolkhoz* was generally regarded as a disaster. Yet both were run as egalitarian collectives wherein participants got equal shares. One big difference and the apparent key to the puzzle is the self-selection of members: kibbutz members, coming from far and wide, *choose* to be members of such egalitarian regimes; the members of the kolkhoz, on the other hand, were *forced* to be members by the mere accident of residing in that locality. This means that the heterogeneity of preference, which famously causes problems in social choice, is absent in the kibbutz but present in the kolkhoz. The same is true of the communistic Christian collectives (Amanah). People are of different types and successful regimes allow self-selection by members.

There are many other reasons why farmer-beneficiaries may want to opt out. They may be physically incapacitated and children may have left the farm; they may feel that the best use of the land asset is to sell or mortgage it for a sum that will finance an overseas job for a child or the graduation thereof. In many rural areas, people no longer associate upward mobility with farm ownership but with receiving transfers from family members employed overseas. Indeed, OFW⁶ remittances are a prominent source of financing for purchases in the rural land market [Ballesteros and de la Cruz 2006]. That OFW remittances appear (for now, anyway) to be the major source of upward mobility in the rural areas suggests a recrafting of poverty reduction programs toward enabling the rural poor to access such a prosperity pipeline, most notably through education. It has been a long time since farm ownership was the primary touchstone of rural affluence.

3.1.4. *Size economies*

CARL awards land of at most three hectares for all types of crops. In practice, land awards are much smaller. Ideology, not evidence, made “small is beautiful” the rallying cry. The empirical evidence had, for two decades before 1988, been viewed as favoring land ceiling and distribution. Study upon study (e.g., Sen [1962]; Berry and Cline [1979]; Chattopadhyay and Sengupta [1997]) appeared to show that per hectare production of rice increased with a fall in farm size (the inverse farm size-productivity relation), thus suggesting *diseconomies* of size in rice cultivation. Two regularities in rice cultivation had by then come to be empirically accepted: (a) small farms tend to be more productive than large ones, and (b) owner-cultivated plots tend to be more productive than tenant-cultivated plots, correcting for size [Shaban 1987]. These provided the twin equity-and-efficiency impetus for landownership ceilings and land redistribution. It is another thing altogether, however, to say that three hectares is viable. If a sample that ranges from 10 hectares to 500 hectares shows that larger land size delivers smaller output per hectare, it still does not say you can keep body and soul together with *three* hectares. CARL’s framers and advocates, however, may have thought this to be a minor detail.

The conventional land-size-productivity consensus, however, started to erode in the late 1980s. In what is now considered a landmark study, Bhalla and Roy [1988] showed that when a previously omitted variable—land quality—was controlled for in the earlier studies, the inverse relation between farm size and productivity reversed sign, and robustly so. The economic efficiency argument for land redistribution, even in rice, was thus called into serious question. Since then, the evidence has tended to be mixed. Reviewing the extant studies, Fan and Chan-Kang [2005] and Alvarez and Arias [2003] found both size-economies and size-

⁶ That is, overseas Filipino workers, the popular term for Filipinos employed abroad.

diseconomies. Size-economies appear to be mediated by some indivisible input, for which managerial ability was identified as the leading candidate. Ballesteros, Edillon, and Piza [2008], using a translog cost function regression, found that the average cost in rice falls at a decreasing rate and the index of scale economies (SCE) is positive, suggesting modest scale economies. The authors conjecture that the decrease may become zero (i.e., may reach an inflection point) at larger outputs (i.e., at an output of 20,000 kg). This is not necessarily the case, however, since average cost can continue falling at a decreasing rate indefinitely (i.e., may be asymptotic to the output line). This contrasts with their other result that diseconomies of size cannot be rejected in their land size-profitability regression using data that run across crops though predominantly covering rice and corn. The point, however, is that where size-economies exist but are suppressed, economic viability becomes tenuous. This is especially true in crops other than rice. The predictable result is rampant underground consolidation.

One crop on which a sufficient number of studies appear to agree is sugar. Sugar farms in Trinidad and Tobago were studied for optimal size by Palmer and Pemberton [2007] who found that 13 hectare farms achieved the minimum average cost output; they further estimated that 98 percent of the farms fell below this size. Briones [2008] found that increasing returns to scale in sugar farms occur below 58 hectares, which is 53 percent higher than the hectareage of mean output. De los Santos and Mendoza [2002] surveyed 304 ARBs growing sugarcane during crop years 1994–1997. They found that the per-hectare yield was up to 31 percent lower than that of respective non-ARB planters in the district.

3.1.5. Suppression of the Coase theorem

The size-economy problem would be less significant if the Coase theorem were only allowed to operate. Ronald Coase's (1991 winner of the Nobel Prize in economics) eponymous theorem [Coase 1960] says that the initial distribution of an asset, such as land, will not harm efficiency if the asset is tradeable and the cost of trading the asset is low. Such asset transfers can happen voluntarily if the transactions cost of exchange is low. It effectively implies that asset redistribution to favor equity need not sacrifice economic efficiency as long as assets can be subsequently traded in the market. Box 2 illustrates the common-sense nature of the Coase theorem in the case of land transfer from rich landowner Pedro to poor landless tenant Juan. That the landless Juan is more (or at worse no less) productive than landowner Pedro is the core assumption of most of land reform programs around the world, CARP included. If the assumption is correct for any reason, equity and efficiency are both served at the first instance, and proscribing land market transactions risks only economic inefficiency at the second instance. Unfortunately, this core assumption may be wrong. No matter, this assumption has prompted the illegalization of market transactions on land, which places a roadblock before the Coase theorem.

Box 2. A welfare-improving Coasian bargain

Pedro and Juan are farmers. Rich Pedro has the title to the piece of land at issue. Juan is poor and landless. Pedro can produce 100 cavans of rice per hectare, but Juan is less productive and can produce only 50 cavans per hectare. If the land is transferred from Pedro to Juan, equity is served by making Juan richer asset-wise. If the transfer program prohibits any market transactions on land (sale, lease, or other tenancy arrangement), Juan must till the land himself and produce 50 cavans of rice per hectare instead of the hundred cavans previously produced when Pedro owned the land. Society, which used to harvest 100 cavans per hectare, loses 50 cavans/ha. That is, society gets equity at the expense of 50 cavans/ha (economic inefficiency). If, however, no such strictures on land transactions are imposed so land can be traded or leased, Juan could lease the land to Pedro who then proceeds to produce 100 cavans/ha of rice. He pays Juan 60 cavans per hectare as rent and keeps 40 for himself. Juan is better off and society does not incur the loss of 50 cavans per hectare. Equity has been served without sacrificing efficiency. The culprit is not the transfer of property rights per se but the strictures prohibiting transactions in land! If landless Juan had been more productive (e.g., 100 cavans/ha) than landowner Pedro (e.g., 50 cavans/ha), then redistribution in favor of Juan would have served both equity and efficiency as society moves from 50 cavans to 100 cavans per hectare (economic efficiency at first instance). However, if for some reason Juan is incapacitated or decides to quit farming, and he is forbidden to sell or lease the land to another, the land will produce zero cavans (economic inefficiency at second instance). In contrast, no loss of efficiency is incurred when sale or lease is allowed. This is the Coase theorem.

3.1.6. Capital flight from agriculture

The strictures on ownership and the additional uncertainty of property rights lead to the exodus of private capital from agriculture (Carter and Olinto [2003]; see also De Soto [2000]). Private capital allows the potential for economic surplus to be realized. If the economic potential does not exist or is inferior, private capital will go elsewhere. CARL's legal bias in favor of smallness in agriculture limits the scale-up potential of investment in agriculture. The San Miguel Food Inc. investment in a pig farm (requiring a land area in excess of the retention limit) in Sumilao would have been mothballed had the strict interpretation of Section 23 of CARL prevailed. It took some fancy footwork and the direct involvement of many notables, including Malacañang tenants, to save the project. Even then, the message is: stay clear. Fixed capital investments, which require volume to make economic sense, are notoriously shy toward smallness and notoriously averse to legal uncertainty associated with land. This capital flight is helped along by the form of compensation under CARP. Compensation to former landowners under CARP is partly in cash and partly in the form of government financial instruments (in practice, Land Bank bonds, representing landowners' investment in state-owned corporations). Private capital is, therefore, effectively being transferred from agriculture to industry. Although we do not have a handy measure of capital flight from agriculture, it is generally believed that this is the main cause of the

perennial underutilization of the “agri-agra” program, which earmarks part of the loanable portfolio of all banks for agriculture. Rural stagnation has been the result, which is partly evident in the declining shares of agriculture in both value-added and employment. Data from the Bangko Sentral ng Pilipinas show that the share of agriculture in total bank lending fell from 5.88 percent to 2.49 percent between 2001 and 2010. The share of loans to agricultural production in total bank loans fell from 1.77 percent to 0.96 percent in the same period.

3.1.7. Underground Coasian bargains to the rescue

Land rental (lease) is important because it is one of the ways (land sale is another) for farmers to adjust their farm sizes to optimal levels. It allows the separation of ownership from operation and allows ability and efficiency to be harnessed. It is thus one of the institutions of rural efficiency. Using the IARDS data set cited above, Ballesteros and Bresciani [2008] show that landownership, ownership of land in excess of five hectares, and access to credit are the prime determinants of participation in the land rental market and especially in the demand for land-for-rent. Since formal sale or conveyance of awarded land is prohibited, the more buoyant rural rental market operates underground where the borrowing cost is so much higher and contract enforcement is by private muscle. These so-called illegal transactions are, however, serving rural efficiency. Stupid rules get their just desserts—namely, noncompliance. There is anecdotal evidence that DAR has time and again turned a blind eye on these underground consolidations.

3.1.8. Credit markets and the rural land market

The twinning of markets for rural credit and for land is a fact of life in the universe of asset-poor rural areas. The markets for land consist of land rental and land sale. The rural land markets allow Coasian bargains over the use of land and are thus very important efficiency mechanisms. The rural economy (indeed any economy, as shown by the 2008 Global Financial Crisis) will die without credit flow. The formal rural credit market, like its counterpart in more developed financial markets, must solve the moral hazard and adverse selection problems [Stiglitz and Weiss 1981] and cannot prosper without the rural land markets that facilitate the use of land as collateral. A legal creditor who, in case of foreclosure, can neither possess the land nor sell it (remember that owning more than five hectares is illegal and there are no buyers) would rather not lend. Ballesteros, Edillon, and Piza [2008] show that access to formal credit rises with ownership of titled land, cooperative membership, and household affluence, as might be expected in a credit-constrained setting. But neither being an ARB nor being an ARC member improves access. Worse, being an ARB with titled land is associated with reduced access to formal credit, implying that this category automatically increases credit

risk. If the land reform beneficiaries cannot access production credit, they are condemned to destitution even while in possession of a potentially valuable asset. The whole gamut of restrictions strips land assets of their inherent value.

Fortunately, the market is resilient. The underground credit market has filled the vacuum left by the formal credit market. A farm sector without a functioning credit market is a dead sector, so the underground credit market has been a savior even when based on contracts that are illegal. It has two very pronounced tolls, however, the first being a very high financing cost. For example, 60 percent is the interest rate charged per crop season in Maragol and Gabaldon in Nueva Ecija in one survey in 1998, against 9.5 percent every 6 months from the local bank. Ballesteros, Edillon, and Piza [2008] show that, on average, the cost of informal credit is double that in the formal sector. Indeed, the interest rate is close to the imputed interest rate in the share-tenancy contracts (about 70 percent). That makes for poverty-stricken farmers, ARB or not.

Second, it also erodes the sense of rule of law in the area. When law breaking is the only way to survive, it becomes a way of life, making corruption endemic to the system of enforcement. This spills over into other laws. Third, it effectively enfranchises those lenders who have the clout to privately enforce the observance of contracts—in other words, Mafia-style enforcers thrive. Effectively, therefore, Sections 23, 25, and 27 of CARL imposed a permanent legal credit crunch in the rural sector by driving the credit market underground.

3.1.9. Land conversion and rent seeking

One aspect of CARP wherein rent seeking has been enabled by discretion is land conversion. Conversion of awarded agricultural lands to urban use is allowed by CARL Section 37 after five years have elapsed, provided the beneficiary has fully paid and with the permission of DAR. Section 37 is an upshot of Section 27. It is inevitable that some awarded lands will become encroached upon by urbanization and the opportunity cost associated with continued farming of such lands will rise. It is the imperative of economic efficiency that the country's assets be used to generate the highest possible return. Thus, allowing conversion makes economic sense. Since few beneficiaries ever get to fully pay after five years of farm cultivation, subverting this restriction has become very lucrative for rent-seeking brokers/politicians. The land reform beneficiary who is restrained by CARL from conversion can hasten conversion nonetheless by idling the land (a common ploy among landowners, in general), which is why "idle lands" abound. Furthermore, existing irrigation systems have been reported destroyed to avoid being subject to or avoid the legal restriction on irrigated land conversion. This is a very wasteful—nay, indecent, but normal—outcome of dubious strictures. Thus, illegal land transactions and conversion will continue to happen but outside the law and brokered by powerful enforcers who are above the law. If Section 27 is not there, Section 37 would be unnecessary.

4. Design and implementation flaws

There are a number of factors contributing to the poor performance of CARP and related to the capacity of the state to deliver. One is the protracted implementation of CARP; the other is the incompleteness of the awards in the form of collective certificate of land ownership awards (CLOAs).

4.1. Underprovision and comprehensiveness

CARP has dragged on for over two decades now. This means that the Philippine agricultural economy has suffered two decades of ill-defined and contested property rights leading to a highly uncertain investment climate in agriculture. Unsettled property rights have historically been a reliable predictor of economic stagnation (see, e.g., North [1990]; Acemoglu and Robinson [2001]), and the Philippine farm sector may now be chalked up as just another instance of this rule.

CARP's meager harvest is sometimes rationalized as being due to its "incompleteness"—that is, the extension services required to make the farmers economically viable were "underprovided". The common prescription among advocates is therefore to throw more money at the failure. Some would now advocate extending the extension; hence "CARPERER".

We do not share this view. First, "underprovision" or "incompleteness"—a common excuse for failure of land reform all over the world [De Janvry and Sadoulet 2002]—does not have a simple objective definition and therefore cannot be falsified. "Underprovision" often appears to be defined by the failure itself: if a program fails, it is underprovided. But in reality, if a program fails, it is more likely because of bad design, and no amount of money can save it. More money is just a prescription for permanent failure. Why, indeed, succeed when failure brings the money? Second, there is better use for the money. Would not the ₱160 billion already spent for LAD by 2009 have been better spent to subsidize the education of the children of the target landless tenant households? Converted into cash grants given to two million households, this money would have afforded ₱80,000 per household, or ₱4,000 per year per family for 20 years. Has CARP accorded its beneficiary households as much? According to the IARDS data, the difference between the net profit of ARBs-not-in-ARC and Non-ARBs-not-in-ARC in 2006 is ₱3,155, which falls below ₱4,000. Third, flawed design will make a program a resource black hole. CARL was—and CARPER is—fundamentally flawed in its design: It seeks to empower the beneficiary with landownership and then undermines this ownership, first, by imposing size limits across all crops, thus negating possible scale-economies, and, second, by suspending the tradability of land and or the rights to its use, thus subverting its optimal use and assignment. The resulting demise of the formal land market effectively eviscerated the formal rural credit market, making credit accessible only through underground- or trader-

mediated credit markets. Exorbitant interest rates in the latter means that the farmer is no better than under a share-tenancy contract. When the design is flawed to start with, throwing more money at the problem is like casting seed on barren soil.

4.2. Forced collective ownership

Long after land has been acquired under CARP, the property rights of beneficiaries remain unsettled, since about 70 percent of the CLOAs awarded to beneficiaries remain collective (“collective CLOAs”). Collective CLOAs involve one million farmers and two million hectares. These property rights in legal limbo represent an even more complete denial of the Coase theorem. The Philippine experience of collective property rights mirrors that of Latin America (namely, Mexico, Chile, Peru, Honduras, Nicaragua, and El Salvador) wherein the most common arrangements in the first phase of land reform were “collectives” and *ejidos* [De Janvry and Sadoulet 2002; De Janvry, Sadoulet, and Wolford 1998]. Only in the second phase—starting around the 1970s—was individual parcelization introduced. In Mexico, the *ejidos* started to be parcelized only in 1992 after decades of collective ownership and poverty. Even then, the parcelization has been slow and painstaking. A beneficiary cannot plan long term on a collective CLOA. No investment is likely in long-gestating irrigation or fruit trees. It has no value as a credit come-on. The seemingly counterintuitive result from Ballesteros, Edillon, and Piza [2008] showing how being an agrarian reform title holder significantly reduces access to formal credit is due partly to collective CLOAs and partly to ownership size restrictions. There is a need to transform collective to individual CLOAs, but even this may only be a partial solution. Even with parcelization, awarded lands remain saddled with restrictions (CARL, Section 27) that may render them economically unviable.

5. Where do we go from here?

There are many reasons CARP has failed its most crucial test. With its five-hectare ownership limit, the program has effectively chased away private capital from agriculture. Although private capital, by its own logic, is not primarily interested in owning the land, it cannot be expected to deal with a thousand farmers to rent two thousand hectares to cultivate. Where private capital has dared to test the waters, it has become caught up in a circus (e.g., the San Miguel Food Corporation swine project at Sumilao). CARP has effectively driven the agricultural credit market underground. It has presumed that farmers can automatically morph into entrepreneur-businessmen with access to land. CARP has suppressed the Coase theorem by proscribing the selling or renting of land in the open market until the beneficiaries have fully paid up, which under the CARP restrictions is an elusive goal. With 1.2 hectares allotted landholding and half a

hectare under cultivation on average, beneficiaries cannot be expected to breach the poverty ceiling. The land market has also been driven underground. CARP has only created a new class of people—the landed poor.

For everything there is a season and now is the time to let go. We now need to redirect our agricultural policy focus from land equity to farm efficiency. More productive farmers should now be allowed to legally own and cultivate ten or more hectares as market efficiency dictates. Publicly registered and traded corporations owned by thousands of shareholders should not be subject to agricultural landownership ceiling when engaged in farm production. The transition to individual from collective CLOAs must still be effected for efficiency. Poverty reduction and empowerment programs for farmers should now take more direct forms such as via the conditional cash transfer.

Private capital must be lured back into agriculture. Banks operating in the rural areas and lending to farmers should be allowed considerable latitude in ownership of agricultural land. Development requires the shift of manpower and resources from the informal to the formal sector. CARP has effected a *massive deformalization* of Philippine agriculture. It is now time to allow agriculture to march out of the informal into the formal sector.

It is time, in other words, to stop redistributing poverty.

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