



UP School of Economics

Discussion Papers

Discussion Paper No. 2014-03

March 2014

Time to let go of CARP? Not so fast

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The following note seeks to clarify the appreciation of data pertaining to agrarian reform as used in the discussion paper “CARP: time to let go” (henceforth Fabella (2014)). Fabella (2014) has three parts: the first part argues that “the cumulative weight of evidence suggests that the hypothesis that in economic terms CARP is a government failure has not been rejected.” The second part offers possible reasons for that failure. The third part concludes, saying it is time to let go.

The whole argument hinges crucially on the empirical evidence presented in the first part. We argue, however, that much of that evidence is unfortunately either a misreading or an uncritical use of findings from the cited references. In what follows, we examine the evidence the said paper presents and point out where missteps and misinterpretations were made.

Correcting the evidence presented

Fabella (2014) organizes evidence before and after 2009 to argue that CARP has “messed up” in farm productivity and the enhancement of quality of life, where quality of life is defined in monetary terms. For the post-2009 period, Fabella relies on Adriano (2013), who cites results from the 2011 ARC Level of Development Assessment (ALDA), an internal management tool of the Department of Agrarian Reform used to monitor key interventions to Agrarian Reform Communities (ARC) and the Agrarian Reform Beneficiary (ARB) households and organizations located in them.² Fabella makes two points:

1. Productivity figures for crops that came under land reform are adverse (“chilling”) and
2. ARC-affiliated farmer beneficiaries of CARP have become poorer.

For the pre-2009 period, Fabella uses findings from an impact assessment of CARP by APPC (2007) and from 2006 IARDS data (found in Ballesteros and Bresciani 2008)³ to argue that:

3. Landownership via CARP is an “inferior type of ownership”.
4. ARC members would have been better off had the money spent on ARCs by government been directly given as cash equivalent grants to them.

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² An **ARC** is a barangay or cluster of contiguous barangays within a municipality where majority of the CARP-covered lands have been awarded to a critical mass of ARBs. The DAR adopted the ‘**ARC strategy**’ as an integrated development approach to improve the well-being of ARBs. The ARC Level of Development Assessment (**ALDA**) is an evaluation tool for the ARCs and a management tool for DAR. As an evaluation tool, it determines the outcomes of the key interventions provided by the DAR and its development partners to the ARCs, ARB organizations and ARB households. As a management tool, the ALDA results are used by DAR officials in defining and crafting plans and programs which would have direct impact on the improvement of ARBs empowerment, agricultural productivity and household income (DAR Planning Service 2012)

³ Fabella also discusses a study by Reyes (2002). But the APPC (2007) study supersedes this in both methodology and scope.

5. The difference in average net profit of ARB farms in ARCs versus non-ARB farms in ARCs is of hardly any significance given that the ARBs have, on average, 30% larger plots.

We go through each of Fabella's points in turn.

1. ***"For crops that came under land reform with CARP, the [farm productivity] figures are chilling."*** (p. 2, par 2)

To substantiate this statement, Fabella cites the 2011 ALDA on average yields (ton/hectare) of the four major crops in ARCs. Yield for *palay* was 10% higher than the national average; for corn, 50% higher; coconut, 40% lower, and sugar, 8% lower. While conceding that for the "two crops that were largely covered by the 1964 land reform, farm productivity looked better", Fabella stresses that "sugar and coconut productivity fell compared to average!" and goes on to conclude that "for crops that came under land reform with CARP, the figures are chilling".

The ALDA is not designed to support statements attributing increases or decreases in farm productivity to CARP. But if one is going to do so, an even hand should at least be applied. In this case, there is no explanation as to why figures are so chilling when two out of the four crops – rice and corn – which represent 62% of area planted in ARCs – demonstrate yields that are higher than the national averages.⁴

It is also important to note that the figures cited are for one point in time – 2011; nothing has 'fallen' or 'risen' against the national average. For a comparison over time, data for 2005 found in APPC (2007; see p.40) can be used. Table 1 presents the figures for both 2005 and 2011 and shows that average yields in ARCs *improved* relative to national averages for *all* crops: from 6% to 10% higher for *palay*; 23% to 50% higher for corn; 72% to 40% lower for coconut; 16% to 8% lower for sugar. This is **not** chilling.

Table 1: Average yields (ton/hectare) of major crops in ARCs versus national average, 2005 and 2011

	Corn		Coconut		Sugar		Rice	
	2005	2011	2005	2011	2005	2011	2005	2011*
ARC	2.7	3.89	1.3	2.71	51.9	61.69	3.8	3.92
National	2.2	2.6	4.6	4.53	62.1	66.84	3.6	3.56
Difference	23%	50%	-72%	-40%	-16%	-8%	6%	10%

Source: 2005 data from APPC (2007), 2011 data from Adriano (2013)

* Simple average of irrigated and unirrigated *palay*

⁴ Adriano (2013) makes a similar assertion – "farm productivity in ARCs based on the four major crops grown there has not displayed dramatic yield increases that will enable ARBs to earn significantly higher incomes and in the process improve their welfare" (par 28) – but does not provide supporting arguments either.

2. ***“What is worse for CARP is its outcome on beneficiaries’ quality of life... CARP, it seems, has created a new class of farmers: the landed poor!”*** (p. 2, par 3)

The paper cites the 2011 ALDA which shows that among ARBs in the ARCs “54% of households fell below the poverty line!” Fabella then cites the earlier 2009 Family Income and Expenditure Survey (FIES) which estimates poverty incidence among farmer households at 36%. He concludes: “this seems to say that ARC-affiliated farmer beneficiaries of CARP have become poorer!” (i.e. from 36% poor in 2009 to 54% poor in 2011)

But it is *erroneous* to compare estimates of poverty incidence from the 2009 FIES with poverty estimates from the household income survey employed by the 2011 ALDA. The former is a national survey using a sample of 50,000 or so households drawn from the universe of about 18.4 M households in the country. The latter is a survey of *only* ARB households residing in ARCs - a very specific universe of 1.43 M households in 9,635 barangays – from which a sample of 50,000 is drawn; DAR initially targeted economically-depressed areas in launching ARCs, so this population could be biased (downward) even further.⁵ At best, the ALDA survey will permit inferences about the ARBs residing in ARCs (about 55% of all ARBs in the country). Bottom line: the FIES cannot and should not be used to benchmark the ALDA or vice versa.⁶

It is also misleading to conclude, based on the 2011 ALDA alone, that “welfare gains from agrarian reform are far from being enjoyed by ARBs in ARCs” (see Adriano 2013). Without data on the same households at an earlier point in time, and for comparable ARBs -not-in-ARCs, there is no basis for such a claim. To illustrate, poverty incidence among the ARB-ARC households could have been, say, at 60% in 2007 - in which case 54% in 2011 would be an improvement. If poverty among comparable ARBs-not-in-ARCs dropped by less over the same period, one could go further and attribute differences to the ARC strategy.

A proper ‘with-and-without, before-and-after’ estimation was in fact undertaken for the pre-2009 period where it was found that poverty incidence in ARC barangays decreased from 40% to 25% between 1990 and 2000 and this reduction was slightly greater than the estimate for non-ARC barangays (APPC 2007, p. 10). That is, *welfare gains from agrarian reform were enjoyed in ARC barangays*:

“The end goal of all the synchronized efforts directed towards the ARCs is for at least 70% of the total number of beneficiaries to enjoy an average annual household income above the national poverty line” (DAR-BARBD 1996). Given this benchmark, it is safe to say that the ARC strategy has more than achieved its goal.” (Ibid)

The APPC analysis can be extended another 10 years once the public use files for the Census 2010 are released.

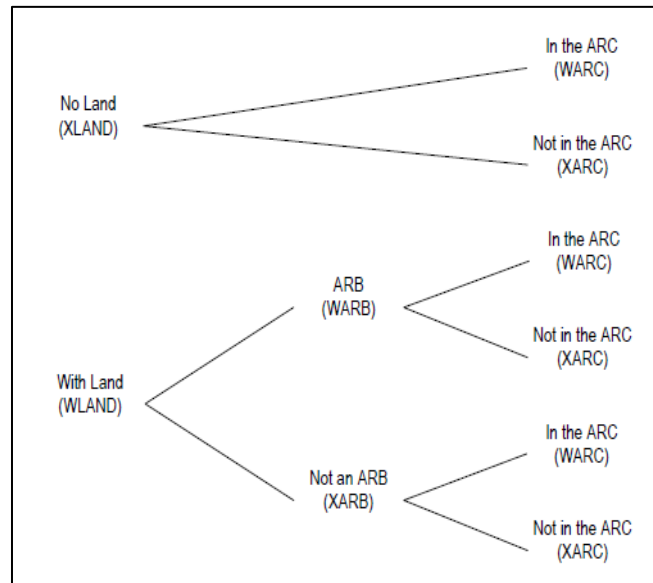
⁵ Refer to APPC (2007), p. 37.

⁶ It is important to note that the ALDA is not part of the official statistical system while the FIES is.

3. ***“Since landownership raises per capita income and being an ARB implies being with land, it should follow that being an ARB should raise income per capita. But it does not! This implies that “landownership via CARP” is an “inferior type of ownership.” (p. 3)***

APPC (2007) estimates the welfare impact of the ‘ARC strategy’ at the household level using the 2004 Annual Poverty Indicator Survey. It is assumed that the per capita income, consumption and net farm income of farmer households is determined by labor supply, access to economic infrastructure, and “landownership status”, where the latter is one of six mutually exclusive categories defined from combinations of owning land, being an ARB, and residing in an ARC (Figure 1). This categorization also highlights the premise of CARP that welfare effects are a *joint-product of landownership and support services*, as embodied in the ARC strategy. The model allows one to test whether and how belonging to one or another category has an impact on welfare.

Figure 1: Six ‘landownership’ categories (reproduced from APPC (2007))

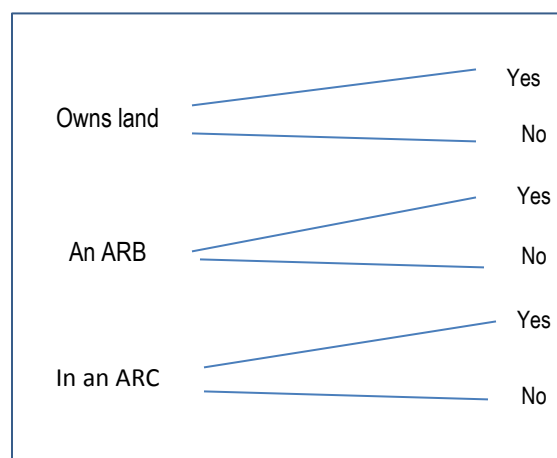


The exercise confirms that the ARC strategy has a *significant and positive effect on household welfare*. ARBs residing in an ARC barangay are better off than those residing in a non-ARC barangay; among farmers without land, being in an ARC has a slight effect in increasing farm incomes; an ARB who resides in an ARC barangay is better off than a non-ARB who does not, even if the latter owns land; and there is no significant difference in welfare between ARBs and non-ARBs that reside in an ARC barangay (an expected result since infrastructure support and other services extended to the ARC, are enjoyed by all households).

The APPC study also describes a second model - where instead of classifying households into 6 non-overlapping groups, each is characterized as ‘owning land’ or not, being an ‘ARB’ or not, and residing in an ‘ARC’ or not, separately; see Figure 2. When implemented, ‘owning land’ is found

to be significant in explaining differences in per capita income and consumption but 'ARB' and 'ARC' are not. This result simply confirms the representation in Figure 1 (i.e. that effects are joint, with owning land at the 'root')⁷ and indicates to the researcher that the first model has the superior specification for measuring the welfare effects of the ARC strategy.

Figure 2 Three characterizations per household in the second model



In other words, the results for ARB and ARC in the second model may be an artefact of the model's specification. Fabella's paper however misconstrues this, expecting to see a separate effect of "landownership via CARP" (or ARB). When none is found - and despite the significant results of the first model - he says it is "bad news for CARP".

4. ***"The incremental gain per capita for an ARC member is estimated to be P134 or for ten years P1,340 per capita. If the total spending on ARCs (P12.9 billion in ten years is divided by the total number of people in all the ARCs (1,800 x 4,460), we get P1,619! It suggests that had the money been directly given as cash equivalent grant to members, they would have been better off."*** (p. 3, last par)

APPC (2007) includes a benefit-cost analysis of the ARC strategy vis-à-vis the "mainstream" agricultural development strategy. As Table 2 presents, the change in annual per capita income between 1990 and 2000 is estimated at P2, 368 for a household in an ARC barangay and P2, 233 for a household in a non-ARC barangay. Development spending on ARCs is P12.9 billion for 4,460 barangays between 1993 and 2000; mainstream agricultural development spending is P91.7billion for 12,145 non-ARC barangays. Under specific assumptions, the result is that both have positive NPV but the NPV associated with the ARC strategy is *greater* by P3.4 million.

⁷ That is, when landownership is controlled for, ARB status may not contribute to welfare differences except in tandem with, or through, ARC status.

Table 2: APPC (2007) estimates of benefits and costs of ARC strategy versus “mainstream” agricultural development strategy (non-ARC)

	Benefits to HH: per capita expenditure (1997 MM pesos)			Costs: development spending				NPV (in M)**
	1990	2000	Change	1993-2000 (in B)*	Bgys	Individuals/ bgy	Cost per capita	
ARC bgys	12157	14525	2368	12.9	4460	1800	1607	30.32
Non-ARC bgys	12189	14422	2233	91.7	12,145	1800	4195	26.92
Difference			135				-2588	3.40

* For ARCs, costs include funds allotted for program beneficiary development under the Agrarian Reform Fund and ODA funding from the different foreign assisted projects of the DAR. For non-ARCs, costs include the annual appropriation of the Department of Agriculture and the expenditures of the provincial, city, and municipal LGUs. See APPC (2007) p. 10

** see APPC (2007), pp. 11, 68-71 for assumptions

Fabella’s paper does not cite these results however because the author disagrees with one assumption made, i.e. to exclude the cost of land acquisition on the assumption that it would be recouped through beneficiary repayments. Instead, another computation is undertaken (quoted above).

Fabella actually uses the figures in Table 2. But the results are wildly different because he erroneously compares the estimated *difference* in gains per capita between ARC barangays and non-ARC barangays (P134/year) to the *level* of spending per capita in an ARC barangay (P1,607), rather than to the corresponding *difference* in spending per capita between ARC and non-ARCs (P1,607 vs. P4,195).⁸ If the latter had been used, it would have confirmed the *cost-effectiveness* of the ARC strategy vis-à-vis the mainstream agricultural development strategy: at just 38% of the cost, the ARC strategy delivers greater welfare improvements for agricultural households than the mainstream strategy.

5. ***“The 2006 IARDS data set showed that the average net profit from the average two hectares of Agrarian Reform Beneficiaries (ARB) farms in ARC was P10,387, while that from 1.4 hectares non-ARB in ARC was, on average, P9,356, or 10% higher. This is hardly a difference of any significance, given that the ARBs have, on average, 30% larger plots. (see Ballesteros and Bresciani, 2008).” (p. 4, par 3)***

In fact, the gross and net profit data found in Table 6 of Ballesteros and Bresciani are already computed on a per-hectare basis, as is the practice for statistics on farm yields (the Table does not indicate this specifically unfortunately.) So by this measure, ARB farms in ARCs were in fact *more profitable* than non-ARB farms in ARCs in 2006, by 11% on average.⁹

⁸ Or, he could have compared P1,607 with P2,368, benefits per capita in ARC barangays over the period.

⁹ This is lower than in 2000 when ARB farms in ARCs were more productive than non-ARB farms in ARCs by 49%. See Table 6, Ballesteros and Bresciani (2008)

Concluding remarks

Based on a re-reading of the empirical evidence presented in the first part of Fabella (2014), there is no case for concluding that CARP has 'messed up' or is a failure in economic terms.

The agrarian reform program deserves a proper evaluation of its economic *and* social impacts, its consistency with and contribution to economic and social societal goals. The national government has the means - a P300M budget in 2014 - to conduct impact studies. At the very least, an update of the impact assessment undertaken in 2007, extending the period examined another 10 years, should be undertaken.

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