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After Five Years of Pantawid, What Next?

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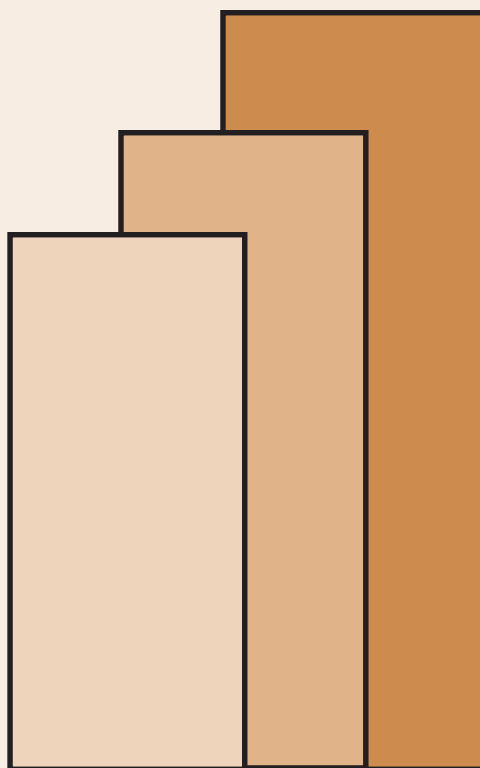
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After Five Years of Pantawid, What Next?

Vicente Paqueo, Aniceto Orbeta, Tarsicio Castaneda, and Chris Spohr¹
July 2013

Abstract

When the Pantawid Pamilya Pilipino Program was designed the government publicly promised to limit to five years the giving of the education and health grants. This five year limit is almost over for the first set of beneficiaries by 2013. The natural policy question then is would it be wise to keep the promise or would an extension be better? This paper presents five arguments and evidence why the extension of the program is better than keeping the promise to limit it to five years. The five arguments include: (a) the problems that the Pantawid had been designed to address continue to be high priority issues; (b) Pantawid remains credible as an effective and valuable instrument for poverty alleviation in the short run and for reducing the transmission of intergenerational poverty in the long run; (c) the extension could provide great opportunities to produce a much greater positive impact on the welfare of the poor; (d) the extension could buy much needed time for developing and implementing an adequate and workable transition promotion strategy to help beneficiaries outgrow their need for CCT assistance and, therefore, facilitate its termination; and (e) secondary education enrolment and completion produces high returns in terms of increased earning and is achievable with a moderate amount of subsidy. The paper ends with cautionary notes including articulating that Pantawid remains a bridging program; the need for a careful study to ensure affordability and maximize its cost-effectiveness; the need to continue to generate better estimates of key parameters such as income elasticities; and possible phasing for affordability and in recognition of possible supply side constraints.

Keywords: Pantawid Pamilya Pilipino Program; CCT; poverty alleviation; Philippines
JEL: I15, I25, I38

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Japan
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Poverty
Reduction



After Five Years of Pantawid, What Next?

**Policy Brief for Presentation and Discussion at the
Philippines Department of Social Welfare and Development (DSWD)**

1 July 2013

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The Brief

At the beginning of the Pantawid Pamilya Pilipino Program, the Philippines' conditional cash transfer (CCT) program, the Government publicly promised to limit the Pantawid beneficiaries' enjoyment of their education and health grants to five years. For the initial batch (Set 1) of CCT beneficiaries, the five years are almost over. Would it be wise to keep the promise, or would an extension² be better? Moreover, what should the Government do with the Pantawid program in Set 1 and in the other Sets after their beneficiaries reach their limit of five years? Would it be desirable to extend the CCT health and education grants beyond five years and align Pantawid with the international practice of the CCT pioneers (Mexico, Brazil and Colombia)? This note examines those questions and, in their context, looks at the desirability of providing CCT grants for high school (HS) education to 12-18 year old Pantawid children.

General Conclusions. The Pantawid extension would be economically and socially beneficial. It would buy time, political capital and stability for the Government to:

- develop and implement an adequate and workable transition promotion strategy
- pursue great opportunities for strengthening Pantawid's impact
- undertake policy reforms needed for the massive expansion of job opportunities that the poor need to sustainably outgrow the Pantawid assistance

Giving conditional cash grants to 12-18 year olds for secondary education as part of the Pantawid extension and transition promotion strategy could yield high returns in terms of future income gains and poverty reduction. At the margin, the returns at this stage would be far greater for secondary than elementary education graduates.

Introducing this new grant for secondary education students would greatly help CCT families to eventually outgrow "pantawid" assistance. However, the cost of including this new benefit would likely require a significant amount of financing. The adaptation of the original program might be necessary, particularly in regard to the coverage and design of the conditional cash benefits. Finally, having recognized the value of extension, it is critical to emphasize in the same breath that CCT program should remain a bridging (pantawid) program to avoid any hint that Pantawid extensions will be limitless. Such signal, even if inadvertent, could provoke the development of a culture of welfare dependency. The above conclusions have been arrived at on the basis of arguments and data discussed in the Arguments and Evidence section of the main report below.

Specific Recommendations. While the Government is deliberating on crucial policy reform issues and looking for ways to accelerate the execution of much delayed complementary programs (e.g. infrastructure development), Pantawid should continue to help ensure that the poor do not go hungry and that they are able and motivated to keep investing in the human capital of their children. Consequently, in designing and implementing the extension of Pantawid, the following specific actions are recommended.

² The term "extension" is used here interchangeably to refer to the question of termination or continuation of the Pantawid cash transfers (as currently design) for beneficiaries reaching the five-year limit; and additionally, the inclusion of a new grant for high school education covering eligible 12-18 year olds of the current Pantawid households.

First, the CCT benefits and its beneficiaries' obligations should be adjusted to the changing context of Pantawid. Likewise, their duration should be aligned with the lessons learned from the experience and practice of the CCT pioneers. Specifically, it should modify the structure of benefits to include the provision of conditional grants for secondary school age children to help them complete secondary education. Informed by the ex-ante analysis of the potential benefits of different levels of cash grants for HS education (see below), such modification can be beneficial and affordable. These grants would be timely, could be high yielding investment in human capital, and be a powerful instrument for facilitating the diminution of intergenerational transmission of poverty.

Second, the extension should be accompanied by an updating of the poverty status of current Pantawid beneficiaries or a re-certification process to minimize inclusion errors- noting that many of the beneficiaries may no longer be eligible poor. It is well known in the economics literature that a significant proportion of today's poor might no longer be so several years later.³

Third, one of the key objectives of the Pantawid extension should be the development and implementation of an adequate and workable transition promotion strategy. One that would more intensively advance policies, reforms and programs needed to accelerate sustainable and massive expansion of gainful jobs. In this regard, the inclusion of grants for secondary education completion would be helpful.

Fourth, in view of the mixed findings⁴ regarding the effectiveness of the FDS, an in-depth and rigorous evaluation of its impact should be immediately undertaken. Timely changes should be made as needed to ensure that the extended Pantawid does not perpetuate ineffective FDS activities.

Fifth, Pantawid should continue to be primarily a "pantawid" assistance. In communicating its extension decision, the Government should effectively manage the risks of a potential political backlash and unintended consequences arising from extending Pantawid, contrary to the previously announced policy limit of five years. These risks could lead to potential loss of Government credibility regarding its political will to keep Pantawid a temporary assistance program. Lost credibility could trigger changes in perceptions that would encourage populist dependency on public welfare. This dependency could arise, even though there is no evidence so far showing that Pantawid has led to welfare dependency and irresponsible behaviors. This perhaps, is due to the five-year benefit limit and other precautionary measures built into the current design of the program. The political backlash can be minimized by a credible explanation of the basis and wisdom of the Government extension decision, and support of its development partners.

³ See Reyes, Celia (2002), "*Movements in and Out of Poverty in the Philippines*," Micro Impacts of Macroeconomic Adjustment Policies (MIMAP Project Philippines, MIMAP Research Paper No. 53.

⁴ These findings are from reports of field visits and preliminary unpublished the randomized control trial (RCT) data analysis.

The Main Report

Purpose and Background. As originally planned, the design of Pantawid Pamilya limits the duration of beneficiary households' participation in the CCT program to only five years. For Set 1 Pantawid Pamilya household beneficiaries, this plan would mean that monetary assistance would no longer be provided by the program later this year (2013). CCT, as it is now well known, is a demand-side intervention to enable and motivate poor households to enroll their 6-14 year olds in elementary schools, get their 0-5 year olds and mothers to health centers for basic care; and obligate beneficiary parents to attend regularly the Family Development Sessions (FDS).

At this juncture, the policy question arises on what to do with the Pantawid program in Set 1, and other areas after the five-year limit would have been reached. Central to this question is the determination of the need for and desirability of extending the conditional cash grants being provided under the Pantawid program. But beyond the extension of the health and education grants, there is also the concomitant question on what to do with its other components, particularly the FDS and the PhilHealth insurance, that Pantawid beneficiaries are currently entitled to. Moreover, there is the issue of how to help CCT beneficiaries outgrow the need for Pantawid financial assistance. Or, putting the question differently, how can Pantawid effectively facilitate the beneficiaries' movement onto a sustainable trajectory out of poverty (referred to as the transition promotion issue)?

This note examines the Pantawid extension issue and lays out the arguments and empirical evidence for making a well-reasoned policy decision that takes into account the above-mentioned concerns.

Methodology. The general approach taken to arrive at reasonable conclusions about the extension issue is to break it down into five sets of bite-size questions, analyze them separately, and then synthesize the findings into a coherent set of arguments. These are the questions that guide our discussion of the extension issue:

- In light of the evolving challenges facing the country, does Pantawid continue to be relevant?
- Has Pantawid Pamilya lived up to its promise?
- Would a Pantawid extension produce more positive impacts on the welfare of the poor?
- What's the assurance that this extension would not become a habit, undermining the development of self-reliant citizens?
- In extending Pantawid, would it be beneficial to provide conditional cash transfers for secondary education? If so, what would be a reasonable amount, what would be the total additional Pantawid budget, would it be affordable, and how can it be made more affordable?

The above questions are likely to be asked by Filipino citizens and politicians who are committed to good governance and fiscal responsibility, and are serious about making a real difference in the lives of poor people. The first two questions are obviously necessary to ask, because it would be unwise to extend Pantawid if it has become irrelevant; or if it has been shown to be ineffective in achieving its objectives. But even assuming that Pantawid has remained relevant and has lived up to its promise, fiscal responsibility would further demand an analysis of the potential benefit, cost and affordability of extension - including the identification of promising opportunities that could be opened up, or opportunities that could be lost by prematurely terminating CCT. With regard to the last set of questions, this note limits itself largely on the specific proposal to include a conditional grant for secondary education in the CCT benefit package.

Arguments and Evidence. The specific arguments for the extension and the evidence for them are as follows.

First argument: *The problems that the Pantawid had been designed to address continue to be high priority issues; therefore, the program is clearly still highly relevant to the country's development efforts.* Undoubtedly, the country continues to face the difficult challenges of high and stable poverty incidence, huge income inequality, and the marginalization of the poor and their powerlessness to move public policies in their favor. All of these challenges have devastating consequences on human welfare and social welfare in the form of hunger, malnutrition, lack of education, ill-health and lack of protection against economic shocks

The latest 2012 FIES data, according to NSCB⁵, shows that the incidence rate of poverty based on the food poverty threshold for the country as a whole stood at 22.3 percent in the first semester of 2013. This is statistically the same as the 22.9 percent figure in 2009. These numbers are disappointing even when compared with the 23.4 percent incidence rate in 2006. In absolute terms, given rapid population growth, these figures mean that the number of families below the food poverty threshold has risen from 6,703 million in 2006 to 8,448 million in 2009 and to 9,385 million in the first semester of 2012.

This finding should not be interpreted to mean that Pantawid had no impact because various evaluation studies shows it did positively impact consumption- particularly of basic services, and investment in human capital (discussed below). Rather, what the observed persistence of poverty incidence could mean is that there are other trends in the general environment that are so overwhelming that the positive effects of Pantawid cannot reveal themselves without an proper statistical analysis. Besides, it usually takes years to see the returns to investments in education and health in the form of enhanced earnings of beneficiary children.

The First Quarter 2013 Social Weather Survey (SWS) data also show that "19.2% or an estimated 3.9 million families experiencing involuntary hunger at least once in the past three months."⁶ As pointed out by the SWS report, "this is almost 3 points above the 16.3% (est. 3.3 million families) in December 2012, but below the near-record high 23.8% in March 2012."⁷ In looking at this hunger data, one has to be cautious about over-interpreting reported annual, let alone biannually or quarterly, changes due to the high volatility of the indicator.

Moreover, the APIS 2011 survey shows that while the achievement of the MDG goal of universal enrollment in elementary education remains a challenge, it is arguably less of a problem now than improving the learning achievement of poor students and their access to and ability to complete secondary education (discussed further below). Poor students learn less than half of what they are supposed to learn in elementary school. Only 36.2 percent of the children of the poorest income

⁵ www.nscb.gov.ph

⁶ www.sws.org.ph/med-indx.htm

⁷ www.sws.org.ph/med-indx.htm

decile complete secondary education as compared to 96.8 percent of children of the top income decile. Pantawid assistance can be of great help, if suitably modified (see below).

Second argument: *Pantawid remains credible as an effective and valuable instrument for poverty alleviation in the short run, and for reducing the transmission of intergenerational poverty in the long run.* The program does alleviate current poverty (defined include both income and non-income components), while building human capital needed by the children of the poor to move out of poverty.

This argument is supported by findings of recent evaluation studies of Pantawid⁸, analysis of APIS 2008 and 2011 data, and the experience of CCT programs of Latin America and other countries.⁹ Just like the above-mentioned countries, the predominant proportion of the Pantawid benefits does go to the poor and support human capital formation needed to reduce intergenerational transmission of poverty. This result, which stands out in comparison with other subsidies, can arguably be attributed to the essential characteristics of Pantawid's program design and good execution. The program is clearly rule-driven, transparent and accountable (a leading example of *Matuwid na Daan*). Not surprisingly, leakage from corruption and patronage politics is therefore relatively small.

The concerns about creating a culture of dependency and irresponsible use of CCT cash assistance have been shown to be overblown and unfounded. In fact, household spending on health and education increased remarkably both in absolute amount and as a share of total consumption spending. In contrast, the impact of Pantawid on alcohol spending is significantly negative. These are some of the findings reported by the first wave of the quantitative impact evaluation series on Pantawid, using the Randomized Control Trial (RCT) methodology.

The RCT data analysis did not find significant impacts on the total household income of the poor. The Regression Discontinuity Design (RDD), however, did. The reason for the difference is due to improvements in income data measurement undertaken for RDD.

In regard to health throughput and outcome indicators, RCT study indicates that in Set 1 the program has had significantly positive impacts on a wide range of health and nutrition related indicators. These include *inter alia* reduction in stunting of young children, increased de-worming and more frequent and regular health clinic visits. Clearly, CCT in general was successful in getting the poor to the clinics. Interestingly, the impact on people who reported being hungry at least once in last three months appears significantly negative (roughly 5 percentage points reduction). Despite these achievements, Pantawid did not appear to have significant impacts on some health indicators. Children's immunization did not significantly improve and birth delivery by health professionals in modern facilities was unaffected.

On education, enrollment rates increased significantly for children age 6-11 year olds. The findings by RCT, RDD and Propensity Score Matching (PSM) impact evaluation studies were convergent.¹⁰

⁸ For the Randomized Control Trial impact evaluation, see World Bank, "Philippines: Conditional Cash Transfers, Impact Evaluation 2012," March 2013. Preliminary results from the World Bank RDD study were presented to the DSWD, but the formal report is still a work in progress.

⁹ Fiszbein et al., **Conditional Cash Transfers: Reducing Present and Future Poverty**, The World Bank, 2009.

¹⁰ Celia Reyes, "Promoting Inclusive Growth Through Pantawid Pamilya Pilipino Program (4Ps)," power point presentation at the 14th Global Development Network (GDN) Conference, June 19-21, 2013, Asian Development Bank. Tarsicio Castaneda and Luisa Fernandez, "The Impacts of Pantawid Pamilya Pilipino Program on School Enrollment, and Child and Mothers' Labor Force Participation," June 2012, processed.

It is possible that there is a positive impact of CCT on the enrollment of 12-14 year olds, but there is substantial uncertainty in the RCT estimate of the CCT impact on enrollment rate for this age group. Consequently, it is important to get corroborating evidence from other sources. In this regard, the studies based on the APIS 2011 data found the effect of CCT to be positive, using PSM. Moreover, the detailed enrolment profile analysis using APIS 2011 (see Supplementary Annex) indicates that CCT has had a particularly large impact at “both ends” of the 3-14 age spectrum:

- (i) At the “**front end**”, among younger children, CCT appears to have had an immediate impact on entry into preschool as well as on-time entry into elementary school—the latter is a “hidden benefit” that is not captured in estimated impacts on enrolment alone, but the combination of dramatically increased preschool enrolment and on-time enrolment (and increased attendance rates) in elementary school may have important follow-on impacts in terms of enrolment and completion rates as these children work their way through subsequent grades; and
- (ii) At the “**tail-end**”, APIS analysis in the Supplementary Annex suggests that CCT is also preventing dropout among highly at-risk 11-15 year-old boys who are overage (due to late entry to elementary schooling and/or grade repetition) but are being encouraged to remain in and complete their elementary studies.

Drawing together facts from multiple sources (spot checks, field reports, Set 1 IE surveys, and APIS data) and triangulating them, we conclude that overall Pantawid is on track in its implementation of the CCT intervention; and, has proven itself to be a reasonably effective instrument in alleviating poverty in the short-run and in building children’s human capital for reducing intergenerational poverty in the long run. Further studies, however, are needed to confirm unexpected and mixed findings to get more definitive conclusions on some health and education issues.

Third argument: *The program extension could provide Pantawid great opportunities to produce a much greater positive impact on the welfare of the poor.* With this extension, Pantawid can take advantage of these opportunities to further build the human capital of CCT children needed to break the intergenerational transmission of poverty.

Implementing the five-year limit, as originally planned, would likely mean that some opportunities for helping the poor would be foregone. It is arguable that the five-year limit was a prudent policy decision, when it was taken. It would be unwise, however, to inflexibly implement it regardless of the evolving context, the emerging opportunities, the new information from impact evaluation studies, and the lessons learned from Pantawid experience and the CCT pioneers. *The five-year limit was not intended to be an ax to be applied deus ex machina.* It was adopted because prudence demands a cautious approach to the introduction of an innovative program such as CCT.

There were several concerns that needed to be addressed, which have now been shown to be unfounded by the Pantawid evaluation of Set 1. The issues are as follows. First, there was the concern that providing cash assistance to poor families might create a culture of dependency and mendicancy. Second, there was the fear of possible leakages due to corruption and targeting failures due to technical difficulties. Third, there was the charge that the poor would use the cash transfers for non-essential expenditures and vices like alcohol and entertainment instead on children’s education and health.

By imposing a five-year limit upfront, the Government hoped to avoid creating false expectations about the duration of CCT assistance and to minimize the risk of developing welfare dependency. Strictly, there was neither analytical nor empirical justification for the choice of the five-year limit. However, it was arguably a prudent choice: five years is long enough to learn about the

actual effects of Pantawid Pamilya, but not too long for the poor to develop an entrenched culture of dependency or a sense of entitlement that would prevent the abolition of the program, should it turn out to be a failure.

As noted, a decision to extend Pantawid would be consistent with what the CCT pioneers like Brazil, Mexico and Colombia did, after realizing that the time frame of five years originally designed for their CCT programs was inadequate for building up the human capital needed to break the intergenerational poverty cycle. These countries have now discarded the idea of putting a rigid time frame for receiving CCTs and prefer a more flexible and realistic approach.

The lessons from these pioneer countries suggest that ending the conditional cash grants of Pantawid beneficiaries after five years of assistance could mean lost opportunities for further strengthening the country's efforts to achieve sustainable long term poverty reduction. Those opportunities could be lost because the Pantawid's organizational infrastructure could become too marginalized to be able to provide a credible platform for pursuing interventions that are best focused on the demand side. With premature termination of CCT, Pantawid would lose the opportunity to pursue some promising ideas in this regard.

One of these ideas is modifying the structure of CCT benefits and conditionalities so that Pantawid could provide cash grants for completion of high school education. The potential costs and benefits of this policy idea are discussed below in the **Fifth Argument**. Annex 1 also presents certain perspectives on this policy proposal. Other key opportunities that could be lost or undermined with non-extension include:

- Strengthening the power of the poor over the issue of health insurance and access to good quality health care
- Improving the effectiveness of the FDS, making adjustments as needed, based on a systematic and in-depth evaluation
- Use of FDS as a home-based vehicle for developing
 - parents' valuation and children's interest in school, lack of which is a leading cause of dropout and non-enrollment rates; and
 - support for improved student learning achievement and character strengthening, which are critical for the success of children as future adults.

In regard to the proposed conditional grant for high school education, it is imperative to adapt the design of Pantawid to the changing needs of its people and the challenges of a highly competitive globalized environment (see Annex 1). Developing countries face many challenges in their quest to compete in the global economy. One of the main challenges is the low levels of formal education and skills of large segments of the population, especially the poor, which represent significant shares of their total population. In addition, the skills requirements are ever increasing as the economies get more interconnected, and produce more sophisticated and higher value added products. Thus, while completing primary education, a target of the MDGs, is a major achievement for the poorest countries, it is clearly not sufficient for countries that want to be poised for rapid growth taking advantage of global opportunities.

The Philippines has advanced in overall school enrollment in primary education (in accordance with the MDGs) in the last few years, but it is lagging behind similar countries in enrollment in secondary (and higher) education levels. As seen in Annex 1, the Philippines' net enrollment rates in secondary

education are much lower than those of East Asian and Pacific neighbors such as Thailand, Indonesia, and more developed countries such as South Korea and Hong Kong. Only much poorer countries such as Myanmar and Bangladesh present lower enrolment rates in secondary education than those of the Philippines.

Completing secondary education has been shown to be a key milestone for reducing the chances of being poor and transmitting it from parents to their children. Studies find that the probability of a household head to be below the poverty line is much lower than that of a household head with only primary education, and, thus, less likely to transmit poverty to their children. Also, as shown in Annex 1, there is a strong association between net enrolment rates in secondary education and economic development.

Incidentally, if the Pantawid extension is re-designed to provide conditional grants for high school education, a critical gap in the K-12 education reform would be opportunely filled in. The weak point of the current reform is that it does not have a strong program to enable and motivate poor families to get their children to complete secondary education. The sharp dropout rate among children in poor households starting after around age 11 (combined with the fact that many poor children start school late and/or repeat grades) means that in the absence of interventions, the addition of 2 years of high school will mean that even fewer children from poor households will complete secondary education further exacerbating the gap between the rich and the poor.¹¹ It is thus important that DepEd's concentration on supply-side reform be balanced by the Pantawid program to ensure that poor children do not lag further behind their better-off counterparts due to the additional cost of a longer basic education cycle.

The potential impact of conditional cash assistance on high school enrollment and completion rates among the poor is expected to be strong. This hypothesis is suggested by the dramatic bivariate relationship between household income and the high school completion rate of 19-25 year olds. As illustrated in Figure 1 below, the completion rate of the poorest decile is only 36.2 percent. It jumps to almost 50 percent in the next decile and reaches almost 100 percent in the top decile. The income effect on secondary enrollment rate appears to be moderate relative to the impact of income on high school completion rate. The two findings suggest that the dropout rate could also be greatly reduced by cash transfers. The observed relationship between income and the aforementioned education outcome indicators remains, even after a variety of control variables have been factored in using multivariate probit analysis presented in Annex 2.

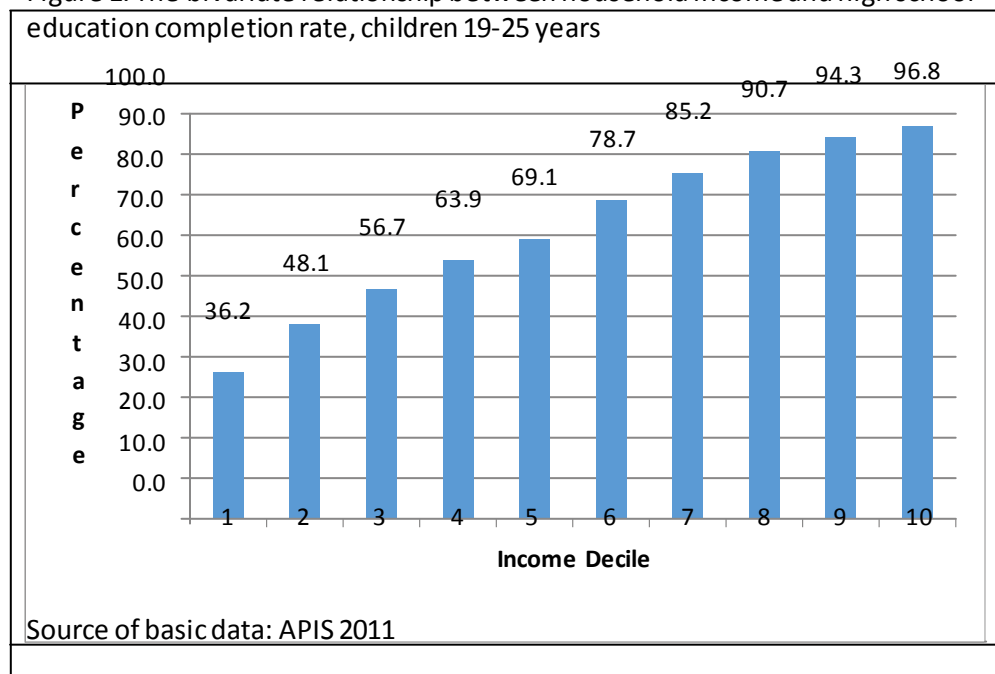
Another promising opportunity (noted above) that could be lost with non-extension is the idea of strengthening the power of the poor over the issue of health insurance and other health services. Without the Pantawid extension, the country would miss a good opportunity to bring about more forcefully better and greater protection of the poor against impoverishment due to catastrophic illnesses. As is well known in the poverty literature,¹² the cost of catastrophic illnesses is a key reason for families falling into poverty, from which they often are unable to get out. Currently, there is no assurance that once participation in Pantawid is terminated, PhilHealth coverage will continue and that

¹¹ ADB, Country Partnership Strategy: Philippines, 2012-2016, Manila, 2011. See especially Sector Assessment (Summary): Education (Linked Document 8).

¹² Narayan, Deepa, Lant Pritchett, and Soumya Kapoor (2009), **Moving out of Poverty, Success from the Bottom**, Volume 2, The World Bank and Palgrave MacMillan, Washington, DC.

the current level of advocacy and government focus will be maintained to improve the financial protection of the CCT beneficiaries against catastrophic illnesses and access to quality health services. This issue of protecting the poor against ill health and its consequences is discussed in a recent Philippine study.¹³ It shows the importance of health shocks: forty percent of Filipinos experience health shocks in the past three years and that, of all adverse events households experienced, 16 percent rated health shocks as the most severe. The study in brief points to the scant financial risk protection from PhilHealth on average and the need for automatic coverage for the poor. According to the study, PhilHealth effectively reimburses only 10% of total expenditures on outpatient and inpatient care.

Figure 1. The bivariate relationship between household income and high school education completion rate, children 19-25 years



The idea has been proposed to migrate the health and education assistance of Pantawid to the DOH and DepED, respectively, after the five-year limit has been reached. While on the face of it, the idea sounds good, it is a weaker alternative with a downside that is concerning. These sectorial agencies are largely focused on supply-side development and operations. It is arguable that given their DNA, the termination of CCT benefits could lead to lower attention to the needs of the poor, and the weakening of their bargaining position to get better financial protection against catastrophic illnesses and access to improved quality education and health care services. In this regard, there is a need to continue the development of mechanisms like CCT for re-balancing government efforts between supply-side and demand-side interventions in favor of empowering poor families.

Yet another important example of an opportunity that could be lost, when the cash benefits are prematurely stopped, is the deepening of the FDS to make its impact more reliable -- and become a valued platform for family development that would empower the poor towards a better life. It is likely that attendance in FDS would decline, not to mention crumble, without the conditional cash transfers.

¹³ Quimbo, S., A. Kraft, J. Capuno, and C. Tan, "How much protection does PhilHealth provide Filipinos," ISIP Policy Note, February 2013.

With its marginalization, the FDS would likely depreciate as a platform for strengthening family formation, building good citizenship, knowledge sharing and facilitating informed collective actions to advance the interest of the poor and the public good. It is true that there is no published evidence yet about the impact of FDS¹⁴, nevertheless it remains a potentially important instrument for promoting those activities that many believe is crucial for poverty reduction. The decision for Set I should, therefore, not just be a straightforward extension of the Pantawid cash grants; rather, it should also be an occasion for deciding what to do with the FDS.

A couple of concrete ideas are worth mentioning at this junction. One idea is to use the FDS as a vehicle for developing both parents' valuation and children's interest in school, which has been shown to be the leading cause of dropout and non-enrollment rates.¹⁵ Another idea is the development of home-based interventions facilitated by FDS to support improvement of student learning achievement and character strengthening. These outcome variables are important for the future success of children. The focus of schools to date has been mainly the development of children's cognitive learning, while character development has not received enough attention in school. There is little doubt that it is important to improve learning achievement to raise economic returns to education. But the development of children's character traits such as resilience, curiosity, diligence, discipline and grit is equally important, if not more so,¹⁶ as determinants of their prospects later in life as adults.

The fourth argument: *A Pantawid extension would buy much needed time for developing and implementing an adequate and workable transition promotion strategy to help beneficiaries outgrow their need for CCT assistance and, therefore, facilitate its termination. Such an extension would be helpful in maintaining social stability and support for the government to successfully undertake difficult but necessary reform measures for inclusive, rapid and sustained growth.*¹⁷

On this score, it is widely agreed that to outgrow government assistance such as CCT, the poor must have gainful jobs. The central challenge is how to promote the rapid expansion of such jobs in an environment where increased aggregate production does not appear to automatically lead to employment generation, as can be seen from Figure 2 below.¹⁸ There are several explanations for this apparent lack of correlation. Besides statistical noise due to measurement errors, one explanation is that labor-saving technological progress, labor regulations, foreign exchange rate, and other policies and

¹⁴ There is some unpublished evidence based on RCT data that Pantawid did not significantly affect FDS-related knowledge and practices. It is time for the FDS to be rigorously evaluated as to its impact and for it to be adapted, as needed.

¹⁵ See Paqueo, Vicente, Aniceto Orbeta, and Jose Ramon Albert (2011), "A Critical Look at the Education Sector: Achievements, Challenges and Reform Ideas," in Jose Ramon G. Albert et al., **PIDS 2011 Economic Policy Monitor, Education for Development**; and (ii) ADB. 2011. *op cit*. According to APIS responses, "lack of interest" is the lead reason reported for poor children in most age groups being out of school, and likely also reflects parents' lack of understanding of the value of education. The next leading cause is direct and/or opportunity costs of schooling. CCT is well situated to address both of these demand-side factors.

¹⁶ See Tough, Paul (2012), **How Children Succeed: Grit, Curiosity and the Hidden Power of Character**, Houghton Mifflin Harcourt Publishing, New York. He quotes the Nobel Laureate Economist James Heckman that the above-mentioned and other similar character, personality, or non-cognitive traits account for about two-thirds of the future success of children as adults.

¹⁷ To appreciate what it takes for a country to achieve development and get out of poverty, see Acemoglu, Daron and James A. Robinson (2012), **Why Nations Fail, The Origins of Power, Prosperity, and Poverty**, Crown Publishing Group, New York (Amazon Kindle). Read also Balisacan, Arsenio and Hal Hill, eds. (2003), **The Philippine Economy: Development, Policies and Challenges**, Quezon City, Ateneo de Manila University Press.

¹⁸ Using regression analysis and various specifications, the employment elasticity of GDP growth was found to be not significantly different from zero.

practices have conspired over time to push employers to use more capital and less labor intensive sectors and technology.

Looking forward, a more optimistic view of the diagram is that for the same historical rate of growth of GDP (about 5.0 %), faster employment expansion can be achieved. Noting that at around that rate, employment expansion growth ranges from roughly -3.0 to 8.0 percent. So, while it is disconcerting that higher GDP growth does not lead automatically to more rapid job expansion, the “good” news is that even at 5.0 percent GDP growth, it is possible to achieve much higher employment expansion rates.

The usual response to the jobs challenge is to invest more public funds in increased livelihood and jobs training activities. Often, these are not accompanied by needed policy and institutional reforms that would make Philippine labor highly competitive.¹⁹ Training programs could be helpful, but the evidence in the economics literature is not very encouraging. Their impact on employment and income is mixed and, at best, limited. Sadly, most other Active Labor Market Programs (ALMPs) also have mixed and limited effects. In short, training and other ALMPs cannot be relied upon to significantly and singlehandedly reduce massive unemployment and underemployment of the magnitude experienced in the Philippines today.²⁰

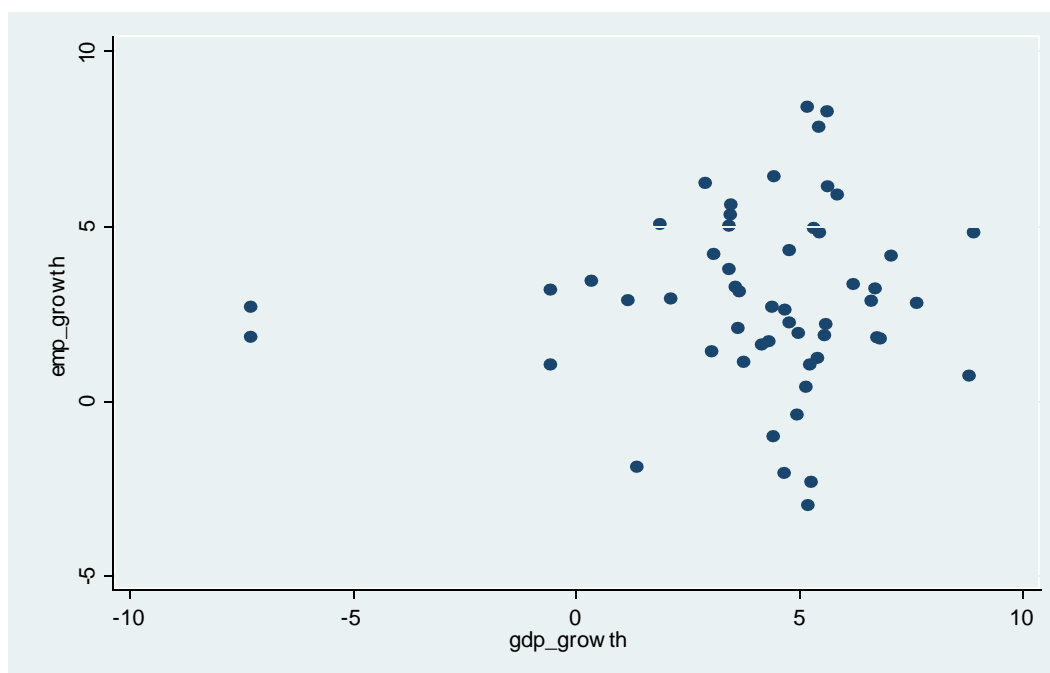
Recognizing these challenging issues, a Pantawid program with an extended and more realistic time limit could support longer term policy measures, which could be developed and implemented as part of a broad-based transition promotion strategy. On this score, it would be important to explicitly recognize this strategic objective in formulating and communicating the Government’s extension decision.

While pursuing those long term measures, Pantawid can meanwhile do other medium-term “bridging” measures. These measures would aim to help beneficiaries to improve their livelihood and employment prospects in the short run. Examples are temporary employment programs and training, networking and information sharing for livelihood/entrepreneurship and other active labor market policies/programs (ALMPs) – but keeping in mind that while helpful, these are known to have limited and mixed impacts as mentioned. More importantly, Pantawid could further intensify its efforts to help its beneficiaries, especially their young, prepare for a better future.

¹⁹ For recent studies on the challenging structural, institutional and policy reforms that the Philippines must undertake, see Norio Usui, **Taking the Right Road to Inclusive Growth: Industrial Upgrading and Diversification in the Philippines**, Asian Development Bank, 2012. See also, Desierto, Desiree and Geoffrey Ducanes (2011), “*Stimulating Investment and Growth in the Philippines: the Need for First-Order Market Reforms*,” UP School of Economics Discussion Papers No 2011-08, October; and Nye, John (2011), “Taking Institutions Seriously: Re-thinking the Political Economy in the Philippines,” **Asian Development Review**, Vol. 28, No. 1.

²⁰ World Bank (2012), **World Development Report 2013: Jobs**, Washington, DC

Figure 2. Scatter Plot: Employment vs. GDP* Growth



Source: Labor Force Surveys and National Income Accounts

At this point, the Pantawid could work with its partner agencies to improve the cognitive and non-cognitive competencies of the poor -- improvements that would prepare the CCT beneficiaries to effectively take advantage of the job opportunities that hopefully would be generated by the Administration's reform efforts (if successful). Examples of what can be done in this regard is to make public spending on education and training more efficient and effective in building the competencies of the poor.²¹ Specifically, the Government should push TESDA to improve the targeting of its training programs and its governance structure so that conflict of interest detrimental to efficiency and equity is minimized.²² More importantly, as discussed below, Pantawid can help the children of the poor to complete not only elementary but also secondary education, making the Philippines more globally competitive and the poor workers more employable in good (albeit, demanding) jobs.

The fifth argument: *It is likely that a significant improvement in secondary education enrollment and completion can be achieved with a moderate amount of subsidy in the form of conditional grants for secondary education; moreover, data indicate that completion of secondary education produces high returns in terms of increased earnings.* On this point, data further reveal that investing more in high school education could generate a much higher rate of return than elementary education. In terms of

²¹ The extended Pantawid could also provide a platform for the Government to pursue a more robust program to promote adult literacy and numeracy among CCT households for their illiterate parents so that they can participate more fully in the learning experience provided by the FDS and the potential expansion of FDS Plus activities.

²² Paqueo, Vicente, Aniceto Orbeta, and Jose Ramon Albert (2011), *op. cit.* The conflict of interest mentioned above refers to TESDA being simultaneously a provider, a regulator and a financier of training activities.

equity, completion of high school education now appears to be a much more powerful poverty reduction instrument than elementary education.

The economic yield from high school graduation, measured in terms of internal rate of return (IRR)²³, is shown in Table 1 below. Using APIS 2008 data, it indicates that for completed secondary education, the IRR estimates range from 17.5 - 22.5 percent in 2008, up from 16.6 - 19.9 percent in 1999. These compare with 12.0-13.4 percent for elementary education level. These data suggest that completing secondary education is worth the investment, considering that the prevailing real rate of interest on time deposits has been much lower than the estimated IRR.

The average earnings difference between elementary and secondary graduates is about PhP 13,000 in 2008 expressed in 2012 prices. Completion of secondary education apparently raises average earnings from roughly PhP 10,339 for elementary graduates to PhP 23,212, a more than 100 percent increase. It is remarkable that with completed secondary education, an individual can earn on average wages and salaries in excess of the official 2012 per capita food poverty threshold (PhP 18,770 per year).

Not surprisingly, in 2011 the incidence rate of poverty among households headed by elementary school graduates stands at 30.6%, the corresponding figure for secondary graduates is only 15.95%. The 2011 APIS survey also shows that while a hefty 65.2% of poor households are headed by persons with incomplete secondary education or less, only 15.7% of them have heads with completed HS education, excluding those with tertiary education (Table 2).

Table 1. Rates of return\1 to schooling by level of education

	Average earnings\2		Unadjusted		Adjusted\3	
	1999	2008	1999	2008	1999	2008
Elementary	7,371	10,339	5.5	7.1	12.0	13.4
Secondary	16,133	23,212	16.6	17.5	19.9	22.5
Post-secondary	27,039	41,202	13.9	18.4	20.8	24.4
Tertiary (4 years)	65,688	99,076	19.1	20.0	22.7	22.2

1/ IRR estimates are relative to level immediately below indicated level, e.g. Elementary refers to elementary graduate against alternative no grade completed, College (Tertiary) graduate against High School (Secondary) graduate, etc.

2/ Per year in 2012 prices; food poverty threshold = PhP 18,770 per capita/year for 2012

3/ IRR adjustment (Adjusted) using probability of employment

Basic Data: APIS 1999, 2008

²³ The IRR is the rate of return that equalizes the present value (PV) of a stream of benefits from an investment and the PV of its costs over time. Generally, if the IRR is greater than the rate of interest, the net present value (NPV) of the investment would be positive, implying that its benefits would be greater than its costs in present value terms.

Table 2. Poverty incidence by level of schooling of the household head

Completed Schooling	Poor	Non-Poor	Total
No schooling	53.64	46.36	100
Incomplete elem	41.03	58.97	100
Elem Grad	30.65	69.35	100
Incomplete HS	27.76	72.24	100
High school grad	15.95	84.05	100
Post-grad	7.81	92.19	100
Incomplete tertiary	8.37	91.63	100
Tertiary grad or over	2.36	97.64	100

Source: APIS 2011

Currently, a huge proportion of poor Filipinos aged 19-25 years old, which can be regarded as the country's emerging generation of new household heads, have still not completed secondary education. The data in Table 3 below show that only 36.2 percent and 48.1 percent of the 19-25 year olds in the poorest and second poorest deciles, respectively, complete high school. These figures are much lower than the 96.8% of those in the top decile.

The challenge is how to ensure that the currently poor 12-18 year olds will complete secondary education eventually and do it on time. At present, only 69.1 percent and 72.8 percent of these children in the poorest and the next poorest deciles are enrolled in school, respectively. In contrast, the net enrolment rate of the 12-18 year olds in the top deciles stands at a high of 95.8 percent. The APIS 2011 data also reveal that of those poor 12-18 year olds who have completed Grade 6, only 79.3 percent proceeded to enroll in first year high school (see Annex 3). Moreover, the percentage of those 12-18 year olds who finished a certain level of secondary education and proceeded to the next level ranges from about 70 to 84 percent only. Given that the process of moving from successful completion of Grade 6 to graduating high school is multiplicative, these parameters combine to produce the observed low secondary education graduation rate.

That household income impedes completion of secondary education is vividly illustrated above by Figure 1 above and by Figure 2.1 and 2.2 in Annex 3. They show the bivariate relationship between household income and high school enrollment and completion rates. Table 3 presents these rates for the poorest to the richest deciles. What is interesting about this table is that the enrollment rate of 12-18 year olds appears higher for CCT than non-CCT households at lower income deciles (contrary to the usual pattern), most likely reflecting the impact of Pantawid. This observation further supports the view that CCT can make a significant difference even among older children.

Table 3. Educational profile of children age 12-18 and 19-25 years old

Household income decile	Enrolment rate of children age 12-18			Difference between CCT and non-CCT	At least high school completion rate of young adults age 19-25			Difference between CCT and non-CCT
	Non-CCT	CCT\1	Both		Non-CCT	CCT\1	Both	
1st Decile	0.677	0.726	0.691	-0.050	0.4	0.2385	0.3616644	0.156
2nd Decile	0.717	0.768	0.728	-0.052	0.48522	0.4551	0.4807772	0.030
3rd Decile	0.735	0.783	0.743	-0.047	0.58006	0.4635	0.566805	0.117
4th Decile	0.759	0.789	0.762	-0.030	0.64762	0.5034	0.6384877	0.144
5th Decile	0.766	0.754	0.765	0.012	0.69954	0.5135	0.6905282	0.186
6th Decile	0.811	0.839	0.812	-0.028	0.78997	0.6087	0.7864649	0.181
7th Decile	0.833	0.846	0.833	-0.014	0.85264	0.7000	0.8519664	0.153
8th Decile	0.881	0.800	0.880	0.081	0.90691	0.9000	0.9068844	0.007
9th Decile	0.934	0.900	0.934	0.034	0.94359	0.6667	0.9431981	0.277
10th Decile	0.958		0.958	0.958	0.96837		0.9683744	0.968
Total	0.782	0.758	0.779	0.024	0.72850	0.4043	0.707622	0.324

\1 Those who claimed to have received CCT benefits

Source: APIS 2011

Even controlling for other factors through multivariate probit analysis, the effects of income on high school enrollment (age 12-18) and completion (age 19-25) remain significantly positive. The probit equations are presented in Annex 3. From these equations was derived (after some mathematical manipulation) the income elasticity of secondary education completion. This elasticity is defined as the percentage increase in the probability that a 19-25 year old would complete high school education, in response to a percentage increase in per capita household income. Hence, an income elasticity of 4.23 in Table 4 would imply that a one percent rise in the per capita income of poor households would lead to a 4.2 percent increase in high school completion rate.

For poor families, therefore, a 10% increase in their per capita income could raise their children's secondary education completion rate by roughly 17.9 percentage points from its current value of 44.5 percent to 62.4 percent. Another way of thinking about the results of the simulation exercise is to imagine raising the secondary completion rate among poor children by 25 percentage points from 44.5 percent to 69.9 percent. The simulation results indicate that this target could be achieved by giving their households an additional income of about Php 4,000 a year on average in the form of CCT grants for HS education (Table 5).

Table 4. Income Elasticities,^{1/} Enrollment^{2/} and Completion Probabilities, and Per Capita and Total Household Income

	Elasticities		Mean of outcome		Mean annual per cap income	Mean annual HH income
	Enrollment	Completion	Enrollment	Completion		
At mean	0.309	2.139	0.862	0.708	51,271	195,886
Among poor	0.427	4.232	0.800	0.445	13,406	74,412

Source of basic data: APIS 2011

1/ Income elasticity here refers to the % change in education outcomes (enrollment or completion probability) with respect to a % change in per capita income.

2/ Enrollment here refers to the probability in the next grade or year level.

Table 5. HS grants and ex-ante impact estimates based on unconditional income effect

(1) High school annual grant amount (pesos)	(2) % rise in poor HH per capita income (compared to no subsidy)	(3) Percentage points rise in high school completion rate (%)	(4) New HS completion rate with HS grant from 44.5% in 2011	(5) Percentage points rise in the rate of next grade enrollment	(6) New rate of next grade enrollment with subsidy from 80% in 2011
2010	3	12.7	57.2	1.28	81.3
3000	4.5	19.0	53.0	1.92	81.9
4020	6	25.4	69.9	2.56	82.6
6530	10	42.3	86.8	4.27	84.3

a/ To this estimate must be added the incentive and signaling effects of conditional grant to get a more realistic estimate of its impact on HS education outcomes.
b/ Col 2: sample household mean income/capita = Php 13,406 per year; Col 2: currently, the CCT elementary education grant = Php 300/month x 10 months; (3) Col 3: HS completion income elasticity = 4.23; (4) Col 5: next grade enrollment elasticity = 0.427.

Similarly, we can derive the income elasticity of enrollment rate for poor households. The probability of enrollment in the next grade or year level of secondary education among the poor 12-18 year olds is about 0.427. This means that, *ceteris paribus*, a rise in the per capita income of poor households by ten percent could lead to a 4.27 percent increase in the probability that their children would enroll in the next HS year/grade level, given their completed level of educational attainment. This estimate appears small compared to the income elasticity of high school completion. One explanation is that, as shown by the sample means in Table 4, the next high school grade/year level enrollment rate (80 percent) is already high compared to completion rate (44 percent). An additional possible

explanation is that the estimated enrollment rate effect (unlike that of completion rate) does not capture the income effects on dropout rate.²⁴

At this juncture, a couple of issues need to be mentioned. First, the regression results clearly indicate that the income elasticities for both outcome measures are much larger for the poor than for the non-poor. As can be seen from Table 4, the completion elasticity for an average Filipino household is only about half of the estimated elasticity for the poor (4.23). This is consistent with similar findings reported in the literature.³ This implies that an income transfer from the well-off to the poor would improve equity.

Second, it should be emphasized that the above-mentioned estimates include only the pure income effect. That is, they relate only to the effects of unconditional income transfers. To get more realistic estimates of the impact of conditional cash transfers, their incentive effect needs to be added. This effect arises from the fact that CCT effectively raises the opportunity cost of not keeping children in school.⁴ Following Banerjee⁵, we may also have to add the signaling effect of CCT. Providing cash transfers conditional on high school enrolment could send a powerful signal to parents and children about the value of completing secondary education. Factoring in those potentially important signaling and incentive effects of HS conditional grants, their estimated impact and cost-effectiveness could be much greater than what the above projections show. Therefore, in projecting the budgetary requirements (Table 6) for including the proposed grant for secondary education, some allowance needs to be made for those aforementioned effects.

Third, it is legitimate to ask whether in fact providing high school grants would work, given the RCT finding regarding the apparent lack of statistical significance of the impact of CCT on the enrolment rate of 12-14 year olds (unlike that of the children age 6-11). Actually, the point estimate is very similar for both age groups: 3.9 percentage point rise for 12-14 year olds vs. 4.5 points for age 6-11. The difference between these two estimates is not statistically significant. But it must be noted that the sample size of the 12-14 year olds is half of 6-11 year olds. Consequently, the latter group would tend to have a much higher standard error (noise), which could explain RCT's non-significant finding.

The above analysis strengthens the finding aforementioned that, using APIS data, Pantawid has a significant effect on the enrolment of children age 12-14. For example, analysis of APIS 2011 (see Supplementary Annex) suggests that Pantawid is working at "both ends." Consequently, the overall effect of CCT on older cohorts could multiply when "front effect" cohorts reach HS age. So, a high school grant seems likely to work, especially if backed by advocacy on elementary-to-HS transition. The cash transfers could work even better, if they tied to secondary school enrolment and attendance to take advantage of the signaling and incentive effects of a grant that is specifically tied to secondary education.

Finally, in regards to the high school grant's financial feasibility, this depends on the ambitiousness of the educational targets that Government wants to achieve with the grant. Table 5 highlights the size of the high school grant that would be needed to reach given targets. The general conclusion is that a modest amount of conditional grant can bring about substantial improvements in the selected educational outcome indicators. The total budget, however, needed by the proposed inclusion of these grants in the Pantawid benefit package could be substantial, depending on the number of children to be covered at a given time and the level of educational improvements desired. This conclusion can be gleaned from Table 6, which shows that

³ Banerjee, Abhijit, Paul Glewwe, Sharon Powers, and Melannie Wasserman, "Expanding Access and Increasing Student Learning in Post-Primary Education in Developing Countries: A Review of Evidence," processed, April 9, 2013

⁴ The authors are still in the process of finding ways of estimating the above-mentioned incentive effect.

⁵ Banerjee, op. cit.

- Covering all eligible 12-18 year olds, the additional annual budget could range roughly from Php 5.0 – 10.0 billions for grant amounts of Php 3,000 – 6,000 /year.
- Php 5.0 billion, which would be 11 percent of Pantawid 2013 budget (Php 44.2 billion), could support a rise in secondary education completion rate from 44.5 to 53.0 percent, roughly.
- Setting the desired completion rate to say 75 percent or better would require about Php 10 billion or more, which would exceed 22 percent of 2013 Pantawid budget.

These findings highlight the need to find ways to ensure that the inclusion of conditional HS grant is affordable. On this score, the following options should be considered:

- Phasing coverage and more accurate targeting
- Prioritizing eligible CCT children based on academic readiness and school performance (simultaneously signals school performance incentives)
- Tweaking of the CCT budget allocation (e.g. reducing perhaps the budget for elementary education grants in favor of high school grants)
- Reallocation of other existing subsidies that are inefficient and have high leakage rate (e.g. corporate welfare subsidies)

Table 6. Additional annual budget for high school conditional grant: conservative estimates

Annual subsidy per grantee (pesos)	Additional budget to cover (billion pesos)	Enrolled 12 -18 yr old Pantawid children (millions), annual average over next 6years
3,000	5.0	1.65
6,000	10.0	1.76

a/ There are 1.372 million CCT children age 12-18 years old enrolled in High School, according to APIS 2011 data. Allowing for an annual population growth of 2.5%, the number of 12-18 year old CCT children for 2013 is estimated to be about 1.441 million. The assumption in the column 3 is that a conditional grant for HS education of Php 3,000 and Php 6,000 would increase enrolment by 5% and 10%, respectively, and the number of 12-18 year olds will be growing at 2.5 % per year. This further assumes other things are constant.

Source of basic data: APIS 2011

Conclusions and cautionary notes. To summarize, extending the Pantawid benefits beyond five years would be a sensible policy and strategic choice for the following reasons:

- Pantawid extension would buy time, political capital and stability for the Government to
 - develop and implement an adequate transition promotion strategy
 - pursue great opportunities for strengthening Pantawid’s impact
 - undertake policy reforms needed for the massive expansion of opportunities for good jobs that the poor needs to sustainably outgrow the Pantawid assistance
- Giving conditional cash grants to 12-18 year olds for secondary education as part of the Pantawid extension could yield high returns—yields far greater than that of elementary education.

Based on the five arguments and the evidence presented above, it is therefore recommended to extend the provision of Pantawid condition cash transfers, including secondary education grants.

This recommendation, however, comes with the following cautionary notes which should be carefully considered:

- The Pantawid should remain a bridging (pantawid) program and it should be articulated as such to avoid any hint that the Government can be pressured politically to provide limitless social assistance and will tolerate the development of long-term welfare dependency.
- There is a need to carefully study how to ensure affordability and maximize Pantawid cost-effectiveness to achieve better results.
- The ex-ante income elasticities used here are rough estimates that should be adjusted with better, experiment-based information.
- Phasing is needed not just for affordability but also to be able to address supply side constraints and work out the right amount of high school grant through learning-by-doing.

Annex 1. International Perspectives on Pantawid Extension and Design Options

By Tarsicio Castaneda

Inclusion of Secondary Education

Developing countries face many challenges in their quest to compete in the global economy. One of the main challenges are the low levels of formal education and skills of large segments of the population, especially the poor, which represent significant shares of their total population. In addition, the skills requirements are ever-increasing as economies get more interconnected and produce more sophisticated and higher value-added products. Thus, while completing primary education, a target of the MDGs, is a major achievement for the poorest countries, this is clearly not sufficient for countries that want to be poised for rapid growth taking advantage of global opportunities.

The Philippines has advanced in overall school enrolment in primary education (in accordance to the MDGs) in the last few years, but it is lagging behind similar countries in enrolment in secondary (and higher) education levels. As seen in Table 1.1, the Philippines' net enrolment rates in secondary education are much lower than those of East Asian and Pacific neighbors such as Thailand, Indonesia and more developed countries such as South Korea and Hong Kong. In the table below, only much poorer countries such as Myanmar and Bangladesh present lower enrolment rates in secondary education than those of the Philippines.

Table 1.1: Secondary education net enrolment rates: Selected countries

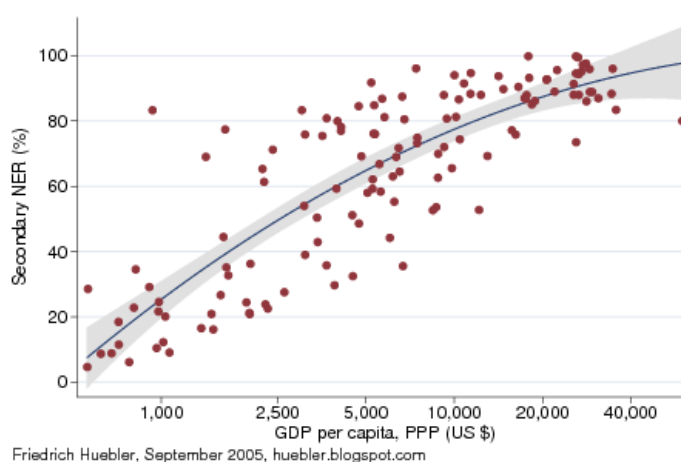
Country/Year	2008	2009	2010	2011
Bangladesh		46	47	
Hong Kong SAR China	77	76	75	73
Myanmar	50	50	51	
Indonesia	65	65	67	
South Korea	95	96	96	
Thailand	71	73	72	74
Philippines		61	62	

Note: Net enrolment rate is measured as the ration of children of the official secondary school age in secondary schools to the population of the official secondary school age.

Source: UNESCO Institute for Statistics

Completing secondary education has been shown to be a key milestone for reducing the chances of being poor and transmitting it from parents to their children. Studies find that the probability of a household head with secondary education to be below the poverty line is much lower than that of a household head with only primary education, and, thus, less likely to transmit poverty to their children. Also, as shown in Figure 1.1 below, there is a strong association between net enrolment rates in secondary education and economic development (Gross Domestic Product). Countries with higher net enrolment rates have significantly higher per capita GDP.

Figure 1. 1: Net Enrolment Rates in Secondary Education and Per Capita GDP



But increasing enrolment in and completing secondary education are not easy tasks from both the supply and demand sides of education. From the supply side, secondary education is more expensive in terms of infrastructure, equipment, teachers and school aids than primary education. From the demand side, studies in many countries indicate the important role played by family background and demographic characteristics in education enrolment in secondary education. For instance, studies in 16 Latin American countries find that children who complete secondary education are more likely to have fewer siblings (because parents have more money and time to spend in each child with fewer children), greater education levels of the mother and father (as more educated parents have higher incomes and higher awareness of the value of education of their children), larger household income, and are more likely to reside in urban areas (the supply and quality of schools may be better than in rural areas). Additionally and underpinning the above factors, there are substantial direct and indirect (opportunity) costs of secondary education. Direct costs include clothing, materials, transport, tuition or other contribution expenses, while opportunity costs increase as children grow older and can earn some money in the market place, in both urban and areas. For instance, a study found that children in rural Peru aged 10-18 years old worked 37.2 hours per week if they were not in school and about 20.3 hours if they attended school.

Clearly, increasing net enrolment rates in secondary education in the Philippines will be a gradual process (given budget and capacity constraints) taking decades to complete, but a clear sense of direction and priorities will be needed, especially with the introduction of the K-to-12 initiative, which instills additional demands on time to complete the secondary education cycle for the poor (and non-poor). Additionally, this will imply large investments in the supply of secondary education classrooms and needed facilities and teachers, as well as interventions on the demand-side to help poor parents overcome the additional direct and opportunity costs of secondary education (demand-side factors). Both types of investments need to work in tandem to successfully achieve the targets.

The existing CCT Pantawid program provides an excellent opportunity to test demand-side cash grants to induce parents and children to enroll and complete secondary education, as has been done in other countries notably Mexico, Brazil, Colombia and Chile, among others. In Latin American countries, CCT programs have had large and significant impacts on enrolment in secondary education, especially in those countries where primary completion rates are already high (as in the Philippines). For instance, in Mexico's *Oportunidades* program, in rural areas (where enrolment rates were the lowest), the percentage of children entering middle school has risen 42 percent. High school enrolment in rural areas rose by as much as 85 percent only a few years after the program started. The strongest effects on education were found in families where the mothers have the lowest schooling levels. Indigenous Mexicans have particularly benefited, staying in school longer. Also, Colombia's *Familias en Accion* increased enrolment for children

aged 12-17 years but had no effect for 8-11 year-olds. Two programs in Asia focusing on girls' education such as the CCT program in Bangladesh raised 11-18 year-old girls' enrolment, while the *Japan Fund for Poverty Reduction* initiative in Cambodia raised secondary school girls' enrolment and attendance.

The nature of the extensions

There are two possibilities for expanding Pantawid to include incentives for enrolment in secondary education:

- Increase the eligibility age to 17/18 years for all current Pantawid families plus other poor and eligible families (not currently in Pantawid but that could be eligible and found in the NHTS database). It can also include families who have exited Pantawid but have children in secondary school age and are willing to attend school. This would be the largest number of additional students. The main drawback of this alternative is that there may be large supply-side constraints, especially in rural areas. A rapid assessment of high school education supply can be made to complement this alternative;
- Increase the age limit and eligibility only for the families completing the current established five-year cycle whose children want to continue in secondary education. This then could be part and parcel of the exit or graduation strategy and will be more limited in numbers, and probably more manageable in terms of the supply-side constraints. The reason is that the graduating cohorts are from certain provinces and municipalities and the supply-side could be strengthened to accommodate the new entrants into school.

The conditionalities in either case could be the same (attending 85% of the classes or a bit less if accepted by the DepEd, as in Brazil's BF program which is 75% of school classes), but the grants need to be increased to account for higher opportunity and direct costs of education. The issue with opportunity costs is especially important in urban areas where children can make significant amounts of money by working on the informal sector (as street vendors, small shops, etc.).

Health grants

Under the current Pantawid, all beneficiary families receive a health grant (which in other programs is called "food or health and nutrition grant") in addition to the variable education grant, which depends on the number of children enrolled in the program. In Pantawid's case, and for older children (secondary school) mothers receive the health grant on the condition of mothers attending Family Development Sessions once a month. Older children in secondary education are not subject to the de-worming condition, which applies only to children in elementary education.

In either case of the extension indicated previously, the health and nutrition grant could still be provided conditional on mothers attending FDS. The key issue here is the budget constraint, as there will be a trade-off between including more children in secondary education and keeping the health and nutrition component for those children and families. That is to say, if the health grant is not provided to families with children in secondary education there will be more money for benefiting more secondary school children. The main drawback of this alternative is that by not having the FDS we may be missing an opportunity to educate parents and prepare them for livelihood projects that could help them alleviate poverty, and/or provide a safety net to smooth consumption when crisis (idiosyncratic or systemic) strikes.

Ex-Ante Evaluation of Proposed CCT Grants for Secondary Education⁶

By Aniceto Orbeta and Vicente Paqueo

Purpose. Currently, CCT stakeholders are discussing the desirability of extending the number of years within which Pantawid beneficiaries could receive the program's cash grants (the limit originally announced being five years). In this context, there is a proposal to adjust the benefits and conditionalities of Pantawid. One of the modifications under consideration is the extension of conditional grants to 12-18 year olds to support high school enrolment and completion.

The purpose of this note is to provide evidence regarding the economic desirability of the aforementioned proposal. Specifically, it seeks to estimate ex-ante the expected increase in high school enrolment and completion rates for different levels of CCT grants for secondary education. The findings of this study would be used as an input into the broader issue of whether and how to extend the Pantawid Pamilya program.

This note is organized as follows. First, it presents data on household poverty rate by level of education completed by the household head and relatedly, estimates of potential economic returns to education investments by level of educational attainment. Then, it profiles the educational status of school age children and young adults in terms of high school enrolment and completion in relation to household income and completed grade or year level. After these background data have been presented, the note lays out multivariate regression estimates of the effect of income on high school enrolment and completion. The note concludes with a discussion of the results of a simulation done using those estimates. The simulation shows what the potential increase in the aforementioned educational outcomes could be for different levels of conditional cash transfers for secondary education and what would be the order of magnitude of the required budget.

Household head's education and poverty. Education is a key determinant of earnings and the households' ability to move out of poverty. Corroborating this well-known fact, the data presented in this section indeed indicate that in the Philippines low levels of education is associated with high poverty rates and that investing in poor children's secondary education could significantly yield substantial rates of return.

Table 2.1 shows that the vast majority of poor households are headed by persons with elementary education or less (65.2 percent); only a small segment (22 percent) has completed secondary school, including those who moved on to tertiary education after graduating secondary education. Table 2.1 also shows that household poverty rate stands at 15.95 percent only for heads with completed secondary education, while a much larger percentage of households with completed elementary education (30.6 percent) remain poor. For those with incomplete elementary education, the corresponding figure is much higher at 41.03 percent.

That the economic yields from high school graduation, measured in terms of internal rate of return (IRR)⁷, can be substantial is shown in Table 2.2 below. It indicates that for completed secondary education, the IRR estimates range from 17.5-22.5 percent in 2008, up from 16.6-19.9 in 1999. These compare with

⁶ This annex draws heavily from its authors' forthcoming PIDS discussion paper.

⁷ The IRR is the rate of return that equalizes the present value (PV) of a stream of benefits from an investment and the PV of its costs over time. Generally, to simplify, if the IRR is greater than the rate of interest, the net present value (NPV) of the investment would be positive, implying that its benefits would be greater than its costs in present value terms.

12.0-13.4 percent for elementary education level. These data suggest that completing secondary education is worth the investment, given the low real rate of interest on time deposits and other savings.

The average earnings difference between elementary and high school graduates is about Php 13,000 in 2008 expressed in 2012 prices. Completion of high school raises average earnings from roughly Php 10,339 for elementary graduates to Php 23,212, a more than 100 percent increase. It is remarkable that with completed high school education, an individual can earn an average income from wages and salaries that is greater than the official 2012 per capita food poverty threshold of Php 18,770 per year. Not surprisingly, therefore, only 15.9 percent of households headed by high school graduates are poor, compared to 53.6 percent for no schooling and 41.0 percent for elementary graduates.

Table 2.1. Profile of households by poverty status and educational attainment of household heads

Educational attainment of household head	Cumulative percentage distribution of poor households with X level of education or less	Percentage distribution of poor households by level of education	Percent of households		
			Poor	Non-poor	Total
No schooling	5.8	5.84	53.64	46.36	100
Incomplete elementary	40.7	34.85	41.03	58.97	100
Elementary graduate	65.2	24.53	30.65	69.35	100
Incomplete high school	78.7	13.44	27.76	72.24	100
High school graduate	94.4	15.72	15.95	84.05	100
Incomplete tertiary education	95.2	0.77	7.81	92.19	100
Tertiary education graduate	98.8	3.67	8.37	91.63	100
Total	100	1.17	2.36	97.64	100

Source of basic data: APIS 2011

Table 2.2. Rates of return\1 to schooling by level of education

	Average earnings\2		Unadjusted		Adjusted \3	
	1999	2008	1999	2008	1999	2008
Elementary	7,371	10,339	5.5	7.1	12.0	13.4
Secondary	16,133	23,212	16.6	17.5	19.9	22.5
Post-secondary	27,039	41,202	13.9	18.4	20.8	24.4
Tertiary (4 years)	65,688	99,076	19.1	20.0	22.7	22.2

1/ IRR estimates are relative to level immediately below indicated level, e.g. Elementary refers to elementary graduate against alternative no grade completed, College (Tertiary) graduate against High School (Secondary) graduate, etc.

2/ Per year in 2012 prices

3/ IRR adjustment (Adjusted) using probability of employment

Basic Data: APIS 1999, 2008

Education profile of poor versus non-poor children and youth. Currently, a huge proportion of poor Filipinos aged 19-25 years old, which can be regarded as the country's emerging generation of new household heads, have still not completed secondary education. The data in Table 2.3 show that only 36.2 percent and 48.1 percent of the 19-25 year olds in the poorest and second poorest deciles, respectively, complete secondary education, compared to 96.8 percent of those in the top decile.

Table 2.3 Educational profile of children age 12-18 and 19-25 years old

Household income decile	Enrolment rate of children age 12-18			Difference between CCT and non-CCT	At least high school completion rate of young adults age 19-25			Difference between CCT and non-CCT
	Non-CCT	CCT\1	Both		Non-CCT	CCT\1	Both	
1st Decile	0.677	0.726	0.691	-0.050	0.4	0.2385	0.3616644	0.156
2nd Decile	0.717	0.768	0.728	-0.052	0.48522	0.4551	0.4807772	0.030
3rd Decile	0.735	0.783	0.743	-0.047	0.58006	0.4635	0.566805	0.117
4th Decile	0.759	0.789	0.762	-0.030	0.64762	0.5034	0.6384877	0.144
5th Decile	0.766	0.754	0.765	0.012	0.69954	0.5135	0.6905282	0.186
6th Decile	0.811	0.839	0.812	-0.028	0.78997	0.6087	0.7864649	0.181
7th Decile	0.833	0.846	0.833	-0.014	0.85264	0.7000	0.8519664	0.153
8th Decile	0.881	0.800	0.880	0.081	0.90691	0.9000	0.9068844	0.007
9th Decile	0.934	0.900	0.934	0.034	0.94359	0.6667	0.9431981	0.277
10th Decile	0.958		0.958	0.958	0.96837		0.9683744	0.968
Total	0.782	0.758	0.779	0.024	0.72850	0.4043	0.707622	0.324

\1 Those who claimed to have received CCT benefits

Source: APIS 2011

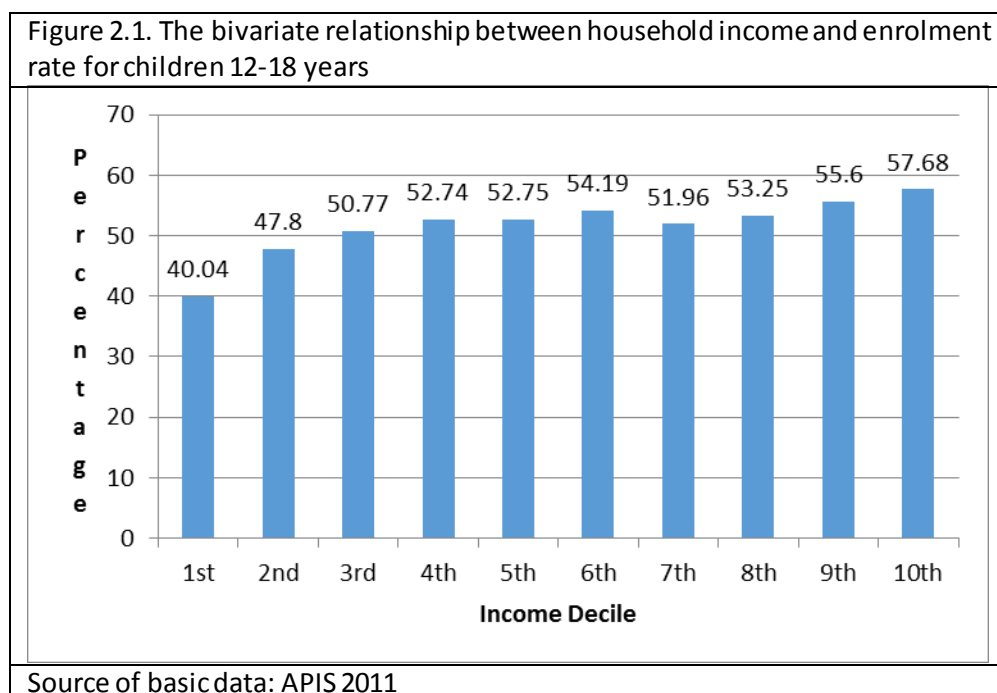
Table 2.4 Conditional enrolment rate of 12-18 year olds

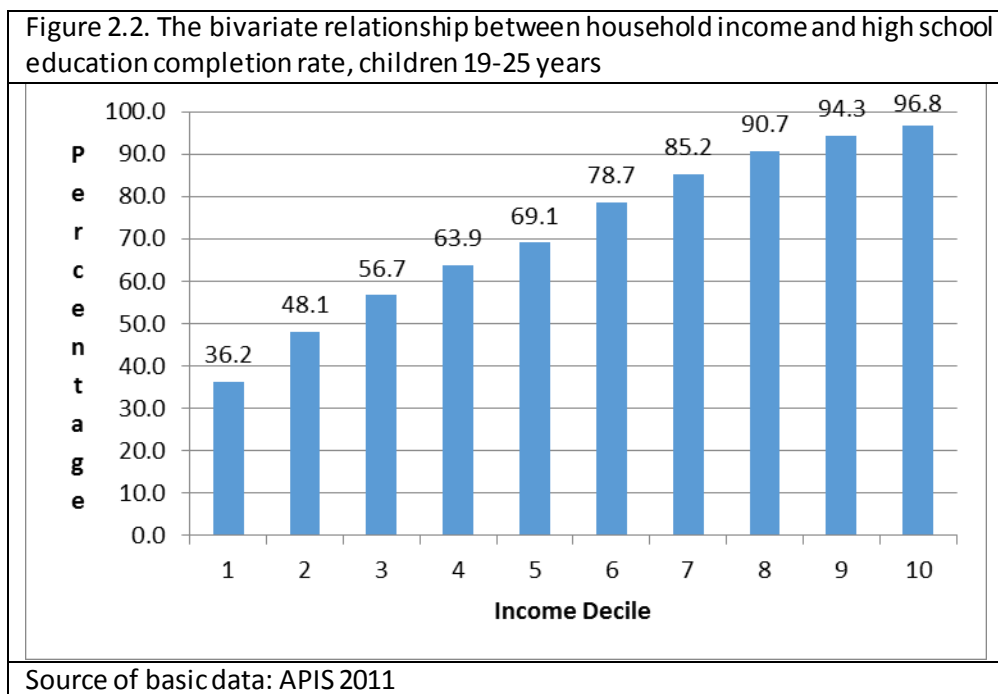
Highest grade/year completed (X)	Percent of children age 12-18 with completed grade/year level X proceeding to enrol in the next			Difference between poor and non-poor
	Poor	Non-poor	Both	
Grade 6	0.793	0.876	0.834	-0.082
1 st year	0.700	0.842	0.782	-0.142
2 nd year	0.875	0.934	0.914	-0.060
3 rd year	0.842	0.898	0.880	-0.056
4 th year	0.840	0.910	0.889	-0.070

Source: APIS 2011

The challenge is how to ensure that the currently poor 12-18 year olds will complete secondary education eventually and preferably on time. At present, only 69.1 percent and 72.8 percent of these children in the poorest and the next poorest deciles are enrolled in school, respectively. In contrast, the net enrolment rate of the 12-18 year olds in the top deciles stands at a high rate of 95.8 percent. Table 2.4 also reveals that of those poor 12-18 year olds who have completed Grade 6, only 79.3 percent proceeded to enroll in first year high school. Moreover, the percentage of those 12-18 year olds who finished a certain level of secondary education and proceeded to the next level ranges from about 70 to 84 percent only. Given that the chances of moving from successful completion of Grade 6 to graduating high school is multiplicative, these parameters combine to produce the observed low secondary education graduation rate.

That household income impedes completion of secondary education is vividly illustrated by Figure 2.1 and 2.2. They show the bivariate relationship between household income and high school enrolment and completion rates.





Multivariate regression analysis. This section presents estimates of the effects of income on high school enrolment and completion probabilities, using multivariate probit analysis. The estimates form the basis for projecting how much CCT children's high school enrolment and completion rates would rise, if conditional cash grants for secondary education were provided to Pantawid beneficiary households.

Essentially, the regression analysis estimates the probability that an event (e.g. high school enrolment or completion) would occur, given the per capita income of the child's household and his other personal and background characteristics. These variables, which can be seen in the regression equations presented in Tables 2.5 and 2.6, include the child's age, gender, years of schooling already completed, the urban/rural location of the child's household and the household head's education and age.

The use of multivariate regression analysis is an attempt to estimate the correlation of per capita income on the selected education outcomes in a way that controls for the influence of those other variables included in the regression equation. In contrast, the bivariate relationship shown in Figures 2.1 and 2.2 above do not take into account the influence of other variables. Probit is a recommended statistical tool for estimating regression equations whose dependent variable takes the value of zero or one only, as in one if enrolled, zero if not.

Table 2.5. Probit regression equation: probability of a 12-18 year old enrolling in the next grade or year level of secondary education

Variables	Coef.	P-value
Age	-0.292	0.059
Age sq.	-0.007	0.138
Male child	-0.107	0.000
Years of schooling, child	0.422	0.000
Male HH head	0.079	0.046
Age of HH head	0.005	0.001
Years of schooling, HH head	0.047	0.000
Urban	-0.074	0.020
Log(per capita income)	0.198	0.000
Constant	1.766	0.137

No. of obs.	18586
LR chi2(12)	4938
Prob > chi2	0.000
Pseudo R2	0.332

Basic data source: APIS 2011

Table 2.6. Probit regression equation on children aged 19-25 years old: completed or not at least high school

Variables	Coef.	P-value
Age	0.271	0.035
Age sq.	-0.006	0.031
Male child	-0.544	0.000
Male HH head	0.091	0.001
Age of HH head	0.015	0.000
Years of schooling, HH head	0.117	0.000
Urban	0.097	0.000
Log(per capita income)	0.622	0.000
Constant	-9.724	0.000

Number of obs	22317
LR chi2(11)	6586
Prob > chi2	0.000
Pseudo R2	0.244

Basic data source: APIS 2011

The p-value given in Tables 2.5 and 2.6 is used to test whether or not a coefficient is significantly different from zero. In Table 2.5, the near zero p-value of the estimated regression coefficient (0.198) of

the logarithm of per capita household income indicates that the probability that the estimated coefficient is in reality no different from zero (no correlation) is almost nil. The near zero p-value of the logarithm of per capita income (0.622) in Table 2.6 can be similarly interpreted in regard to high school completion.

From the probit equations in Tables 2.5 and 2.6, we derived (after some mathematical manipulation) the income elasticity of secondary education completion probability. This elasticity is defined as the percentage increase in the probability that a 19-25 year old would complete high school education in response to a percentage increase in per capita household income. Hence, an income elasticity of 4.23 in Table 2.7 would imply that a one percent rise in the per capita income of poor households would probably lead to a 4.2 percent increase in high school completion rate. For poor families, therefore, a 10 percent increase in their per capita income could raise their children's high school education completion rate by roughly 17.9 percentage points from its current value of 44.5 percent to 62.4 percent. Moreover, a ten percent rise in annual household income per capita for an average poor household would mean an increase of Php 1,340 (in 2012 prices). This would translate into an annual additional income of Php 7,440 for an average household with five children.

Similarly, from the estimated probit equation of Table 2.5 can be derived the income elasticity of enrolment rate for poor households. The probability of enrolment in the next grade or year level of secondary education among the poor 12-18 year olds is about 0.427. This means that, *ceteris paribus*, a rise in the per capita income of poor households by ten percent could lead to a 4.27 percent increase in the probability that their children would enroll in the next high school grade or year level, given their completed educational attainment. This estimate appears small, compared to the income elasticity of high school completion. One explanation is that, as shown by the sample means in Table 2.7 below, the next HS grade/year level enrolment rate is already high at 80 percent, compared to the completion rate of only 44 percent. An additional possible explanation is that the estimated enrolment rate effect (unlike that of completion rate) does not capture the income effects on dropout rate.⁸

⁸ In Table 2.5, the number of years of schooling already completed by a student appears to be positively and significantly correlated with the likelihood that he would continue on with his education and enroll in the next grade or year level. This correlation would suggest that today's decision to enroll would have positive ripple effects on the subsequent years' decision to continue on with secondary education. These effects rippling through time will not be captured by the income variable in the annual enrollment decision equation. On the other hand, they could be captured by the income variable of the completion equation that by its nature reflects the cumulative impact of past processes, particularly if current and long-term incomes are highly correlated. Not surprisingly, therefore, the effect of income would be higher on the probability of secondary education completion than on current enrollment probability. A different way of thinking about the significance of the positive coefficient of number of years of completed education in the two regression equations is that there is likely an underlying process of self-selection at work here. That is, students may become increasingly interested in completing high school education, once they have acquired the taste for it and become more confident of their ability, as they go up the ladder of secondary education.

Table 2.7. Income Elasticities,^{1/} Enrolment^{2/} and Completion Probabilities, and Per Capita and Total Household Income

	Elasticities		Mean of outcome		Mean annual per cap income	Mean annual HH income
	Enrolment	Completion	Enrolment	Completion		
At mean	0.309	2.139	0.862	0.708	51,271	195,886
Among poor	0.427	4.232	0.800	0.445	13,406	74,412

Source of basic data: APIS 2011

1/ Income elasticity here refers to the % change in education outcomes (enrolment or completion probability) with respect to a % change in per capita income.

2/ Enrolment here refers to the probability in the next grade or year level.

The regression results, it should be noted, shows that both education outcome elasticities are much larger for the poor than for the non-poor. As can be seen from Table 2.7, the completion elasticity for an average Filipino household is only about half of the estimated elasticity for the poor (4.23). This is consistent with similar findings reported in the literature regarding the impact of CCT.⁹ The implication of this differential result is that a net income transfer from the well-off to the poor will likely reduce education inequality.

Table 2.8. High School grants and ex-ante impact estimates based on unconditional income effect

(1) High school annual grant amount (pesos)	(2) % rise in poor HH per capita income (compared to no subsidy)	(3) Percentage points rise in high school completion rate (%)	(4) New HS completion rate with HS grant from 44.5% in 2011	(5) Percentage points rise in the rate of next grade enrolment	(6) New rate of next grade enrolment with subsidy from 80 % in 2011
2010	3	12.7	57.2	1.28	81.3
3000	4.5	19.0	53.0	1.92	81.9
4020	6	25.4	69.9	2.56	82.6
6530	10	42.3	86.8	4.27	84.3

a/ To this estimate must be added the incentive and signaling effects of conditional grant to get a more realistic estimate of its impact on HS education outcomes.

b/ Col 2: sample household mean income/capita = Php 13,406 per year; Col 2: currently, the CCT elementary education grant = Php 300/month x 10 months; (3) Col 3: HS completion income elasticity = 4.23; (4) Col 5: next grade enrolment elasticity = 0.427.

Finally, in regards to the high school grant financial feasibility, this depends on the ambitiousness of the educational targets that Government wants to achieve with the grant. Table 2.8 highlights the size of the high school grant that would be needed to reach given targets. The general conclusion is that a modest amount of conditional grant can bring about substantial improvements in the selected educational outcome indicators. The total budget, however, needed for inclusion of these grants in the Pantawid benefit package

⁹ Banerjee et al., op. cit.

could be substantial, depending on the number of children to be covered at a given time and the level of educational improvements desired. This conclusion can be gleaned from Table 2.9, which shows that

- Covering all eligible 12-18 year olds, the additional annual budget could range roughly from Php 5.0 – 10.0 billions for grant amounts of Php 3,000 – 6,000 /year.
- Php 5.0 billion, which would be 11 percent of Pantawid 2013 budget (Php 44.2 billion), could support a rise in HS completion rate from 44.5 percent to 53.0 percent, roughly.
- Setting the desired completion rate to say 75 percent or better would require about Php 10 billion or more, which would be in excess of 22 percent of 2013 Pantawid budget.

These findings highlight the need to find ways to ensure that the inclusion of conditional HS grant is affordable. On this score, the following options should be considered:

- Phasing coverage and more accurate targeting
- Prioritizing eligible CCT children based on academic readiness and school performance (simultaneously signals school performance incentives)
- Tweaking of the CCT budget allocation (e.g. reducing perhaps the budget for elementary education grants in favor of HS grants)
- Reallocation of other existing subsidies that are inefficient and have high leakage rate (e.g. corporate welfare subsidies)

Table 6. Additional annual budget for HS conditional grant: conservative estimates

Annual subsidy per grantee (pesos)	Additional budget to cover (billion pesos)	Enrolled 12 -18 yr old Pantawid children (millions), annual average over next 6years
3,000	5.0	1.65
6,000	10.0	1.76

a/ There are 1.372 million CCT children age 12-18 years old enrolled in High School, according to APIS 2011 data. Allowing for an annual population growth of 2.5%, the number of 12-18 year old CCT children for 2013 is estimated to be about 1.441 million. The assumption in the column 3 is that a conditional grant for HS education of Php 3,000 and Php 6,000 would increase enrolment by 5% and 10%, respectively, and the number of 12-18 year olds will be growing at 2.5% per year. This further assumes other things are constant.
Source of basic data: APIS 2011

Cautionary notes. The above income elasticity estimates, it must be emphasized, relate to the effects of unconditional income transfers. To get more realistic estimates of the impact of conditional cash transfers, their incentive effect need to be added. This effect arises from the fact that CCT effectively raises the opportunity cost of not keeping children in school.¹⁰ Moreover, as Banerjee¹¹ has argued, tying the cash transfer to high school enrolment and attendance could send a powerful signal to parents and children about the value of completing secondary education. Finally, it is clear that the ex-ante income elasticities used here are only rough estimates. They should be adjusted with better, experiment-based information.

¹⁰ Estimating the above-mentioned incentive and signaling effects is a difficult challenge that would require experimental data.

¹¹ Banerjee, op. cit.

SUPPLEMENTARY ANNEX

Further Findings from APIS 2011: Detailed Enrolment Profiles¹

I. Introduction

1. An approach developed by ADB utilizes household survey data to provide an analytical tool for looking beyond simple measures like gross and net enrolment rates to explore education participation and grade progression more deeply, including assessing comparisons across children at specific ages and those with different characteristics (e.g., by gender, socioeconomic status, geographic location, etc.). This supplementary annex replicates analysis summarized in ADB (2011)—which utilized this approach using the Philippines 2008 Annual Poverty Indicator Survey (APIS 2008)—using the latest (2011) APIS dataset.² It also goes further than that analysis in providing at least loosely indicative evidence of the influence of Pantawid Pamilya’s introduction on specific patterns of enrolment, grade progression (and to some extent repetition), and dropout in areas where the program had been introduced prior to the 2011 APIS round. This approach—and perhaps most particularly the unexpected effect on enrolment among **15 year-olds**³—may provide some further information to assess the potential effect of extending CCT grants beyond the current maximal age of age 14 at the start of the school year. It may also complement and help to further explain pathways underlying quantitative point estimates generated by the first wave of the 3 wave rigorous impact evaluation series being conducted by DSWD and key development partners.

II. Outline of the Approach and Findings of a 2008 APIS “Baseline”

2. As a first tier of disaggregation, the approach used in ADB (2011) mimics that used in several other studies (and in the main text herein), in splitting the APIS 2008 subsample of children and youth age 3-20 years of age into 18 age-specific cohorts corresponding with each age in that range, and using this to generate age-specific enrolment rates. As a second tier, that analysis subdivided these children into socioeconomic groupings: for the core results, dividing them by gender and into 3 groups referred to as “poor”, “middle-income”, and “rich”, as defined by income deciles reported in the APIS: i.e., the “poor” grouping consisted of boys and girls living in the 30% of households in the APIS sample with the lowest per capita income, while the “rich” group of children resided in the 30% of APIS households with the highest incomes. While not repeated herein, that analysis pointed to sharp socioeconomic disparities among the rich and the poor, particularly among boys. As captured by the total heights of the segmented bars, boys in the 30% highest income families (**Figure 1**) demonstrate nearly universal enrolment between ages 6-14, whereas enrolment rates among boys in the 30% lowest income households (**Figure 2**) reach a peak of just below 95% enrolment but then collapse quickly with accelerating dropout rates starting after age 11 (e.g., 24% of poor 14 year old boys have exited schooling, versus just above 3% for counterparts in the richest 30% of households).

¹ This annex was prepared by Chris Spohr (ADB) to support policy dialogue with DSWD and the Philippine government. Any errors herein are those of the author alone. While figures quoted include up to 1 decimal place, this is **not intended to convey precision**, particularly for analysis using subsamples of the data, including due to the fact that household sample weights provided in the APIS may not be accurate down to the individual level.

² ADB. 2011. Country Partnership Strategy: Philippines, 2012-2016. Manila. See especially Sector Assessment (Summary): Education (Linked Document 8).

³ This is surprising given that the, since the APIS 2011 was conducted in July 2011 (early in the school year), the gross majority of children aged 15 at the time of the survey would no longer have been eligible to receive CCT grants for attendance.

3. ADB (2011) then used a third tier of disaggregation (reflected in the different colored segments within each enrolment bar) to look beyond whether children are “in school” to ask to what extent they are on-time or delayed in their grade progression vis-à-vis national norms, which is particularly important given evidence that the poor start school late and repeat more often in the Philippines. Selectively summarizing the findings from APIS 2008 here, the dark blue bars in Figures 1-2 represent participation in various types of preschool (e.g., nursery and kindergarten) and college and other post-secondary education—at the left and right sides, respectively. The center depicts grade progression for basic education (grades 1-10) for each age cohort: for a given age (along the x-axis), the total height measures overall participation, while the purple segment captures the share of rich boys in school at a grade level that is “on-track” vis-à-vis DepEd norms, light blue depicts the share who are further advanced than expected, and other colors show attainment lagging by 1 or more years. In addition to the noted marked dropout of poor boys starting after age 11, Figures 1-2 also point to a cycle wherein poor boys enter school later than rich counterparts, are much more likely to repeat, and much less likely to complete elementary schooling or enter or complete secondary or post-secondary education. Namely, focusing on the purple and white segments for the rich versus the poor demonstrates a dramatic difference: for rich boys, the shares of children at each age that are on-track remains steady up through age 13 (which would include all elementary grades), while the light blue segments (for children ahead of schedule) and white bars (1-year lag) show a similar pattern.⁴ To the extent inference can be drawn from a single year of survey data, the relative stability of these shares across age cohorts suggests very low repetition among rich boys. By contrast, Figure 2 for boys from poor families shows that purple and white segments are collapsing even before total participation rates begin to drop: at age 7, roughly 86% of poor boys are in school and basically on-track (within 1 year of the DepEd norm of grade 7), whereas by age 11 the corresponding share has fallen to 56%. By age 14 (for which the norm would be grade 9), 76% of poor boys remain in school but one quarter of those still enrolled are actually in elementary school.

III. Are there Signs of Improvement during 2008-2011?

4. Using recently released 2011 APIS data, this annex investigates to what extent enrolment and grade attainment profiles among the poor have changed since 2008, and to what extent is there any evidence that Pantawid Pamilya may be driving such changes. The analogues of Figures 1-2 using APIS 2011 data show similarly marked distinctions between the “rich” versus “poor”, so for brevity, the below only presents findings for poor boys (again, defined as boys in the 3-20 year-old age range living in the 30% of households in the APIS sample with the lowest per capita income).

5. In **Figure 3**, the segmented bars again show the 2011 detailed enrolment profile for poor boys in each age cohort, superimposed against a dotted blue line capturing the total age-specific enrolment rate from 2008 (i.e., the total height of the bars from Figure 2). Key observations include:

- (i) **Large increase in pre-elementary enrolment.** Looking at 3-5 year olds at the left side of the Figure, the violet bars exhibit a marked rise from 2008 values (blue dots) in the share of poor boys enrolled in preschool and other forms of pre-elementary education: e.g., roughly 36% of 4 year-olds is enrolled, roughly doubling the share (17%) in 2008.
- (ii) **Sizeable rise in on-time elementary enrolment of 6-year olds.** The share of poor male 6 year-olds enrolled in some form of education has risen from roughly 77% to

⁴ Note that this is not simply an outcome of age-specific enrolment rates for the rich being constant and near 100%: older children could remain virtually all in-school while increasing numbers are behind schedule at higher grades.

87.4%. Moreover, this is fully explained by the increase in the share of 6 year-olds enrolled in grade 1 or grade 2 (i.e., on-time or ahead of schedule)—captured by the height of the green and dark green segments, respectively—which has risen from roughly 52% to nearly 64%.

- (iii) **Modest increase in height of the “enrolment plateau” for 7-11 year olds.** The share of 7 year-olds enrolled (including or excluding the violet segments for pre-elementary) has risen by roughly 5 percentage points. For 8-11 year-olds, the average rise appears to be slightly larger than 2 percentage points (i.e., from just below 95% enrolment rate in APIS 2008 to around 97% using APIS 2011 data).
- (iv) **Continued “on-time” effect among ages 7-9.** As with poor 6 year-old boys, the nearly 5 percentage point rise in enrolment among 7 year-olds is more than fully explained by a roughly 11% rise in the share who are at least on-schedule (i.e., in grade 2 or grade 3, shown in the green and dark green bars). For ages 8-9, the green and dark green segments suggest that the share of children on-time or 1 year ahead of DepEd’s norm has risen by roughly 7 and 3 percentage points. It is noticeable that the “on-time” effect completely vanishes for age 10 upwards. All of this appears closely synchronized with the introduction/scale-up of Pantawid Pamilya (see also Section IV).
- (v) **Signs of deceleration in the “enrolment plummet” during ages 12-15.** As with 2008 data (Figure 1), APIS 2011 data again show an acceleration in the share of poor boys who exit from schooling after age 11. However, the 2011 data suggest at least a slight attenuation in this drop-off among 12-15 year-olds: e.g., whereas 35.3% of poor boys were out-of-school in 2008, this figure has fallen to that 28.5% in 2011. On the surface, this may appear inconsistent with the hypothesis that Pantawid Pamilya may explain at least a sizeable share of the enrolment increases noted herein, however this is revisited in Section IV;
- (vi) **Virtually no effect on entry age to secondary education.** In Figure 3, the dashed purple line dissecting the bars for ages 11-15 shows demarcates enrolment in secondary school (the total height of all segments below the dashed line) and enrolment in primary school (the total height of all segments above the dashed line). Hypothetically, we would not expect Pantawid Pamilya to have a major effect on this, since these cohorts were born “too early” to have been affected by the introduction of CCT and aggressive expansion starting in 2008. Indeed, the share of children in each age cohort in the range 11-15 is virtually identical in 2011 as in 2008, which would also help to rule out explanations that the enrolment rise in Figure 3 versus Figure 2 primarily reflects shifts other than the introduction of CCT.
- (vii) **Increased retention of 11-15 year-olds at risk of dropout.** As elaborated below, the fact that there is no movement in shares of poor 11-15 year-old boys enrolled in secondary school means that the increase in total enrolment among these children is capturing increased elementary enrolment of boys who are 1 or more years behind schedule. International evidence suggests that children who start late and/or repeat grades are precisely most at risk of dropout, hence this observation is consistent with the explanation that CCT is preventing these at-risk children from dropping out.
- (viii) **Stagnant enrolment in ages 16-18.** It is noteworthy that the widening wedge between 2011 and 2008 enrolment rates for ages 11-15 abruptly disappears at age 16. Compared to apparent improvements of roughly 5 percentage points among 14 and 15 year-olds compared to their 2008 counterparts, enrolment shares among 16-18 year-old boys have increased by only on the order of 1 percentage point.⁵

⁵ It is noted that enrolment among 19-20 year-olds appears to have increased slightly. This should be further investigated, but may, for example, reflect improvements in access to post-secondary education due to scholarship programs, etc.

6. In sum, with the possible exception in the rise in enrolment among 15 year-old boys (revisited below), the above is highly consistent with the explanation Pantawid Pamilya is at least 1 of the key driving forces behind shifts in enrolment among poor 3-15 year-old boys in the Philippines, and that it is affecting not only total enrolment, but also timeliness of enrolment at the start of the education cycle. The detailed enrolment profiles also suggest that **CCT appears to be working “at both ends”**:

- (i) At the front-end, Figure 3 suggests CCT has had an immediate impact on on-time entry into preschool and elementary school. This is perhaps the more readily obvious effect, although it is noted that the eventual impact on enrolment and completion rates may rise as these children work their way through subsequent grades; and
- (ii) At the tail-end, Figure 3 suggests that CCT is also preventing dropout among highly at-risk 11-15 year-old boys who are overage but are being encouraged to remain in and complete their elementary studies (see also Section IV).

IV. Can a CCT Program with an Age 14 Cut-off Affect Age 15 Enrolment?

7. As noted above, assuming parents are aware of the age 14 cut-off rule, one might expect that there would be no enrolment effect at age 15—for this reason, for example, the first wave rigorous impact evaluation looked only for impacts up to age 14, though this may merit revisiting. The answer proposed here is that CCT has a follow-on or “striking distance” effect that links closely to the “tail end” effect posited above. In particular, it is suggested above that CCT may have a particularly important effect in preventing dropout among the subset of poor children who are lagging in their studies, and likely to be at the highest risk of dropout. This could be a direct incentive effect of the cash grant, but could also be the effect on increased attendance (as the core education condition), which in turn means that these children are actually learning more. Comparing Figure 3 to Figure 2, the share of 14 year-olds still enrolled in elementary school (i.e., at least 3 years overage) appears to have risen from 18.4% to 22.2%, with the share of 15 year-olds still enrolled in elementary school (i.e., at least 4 years overage) appears to have risen from 7.7% to 9.9%. Particularly for these children, it seems plausible that parents may be providing their own investment to allow the child to finish elementary school even after CCT benefits cease. Such arguments can be further explored and partially tested using comparisons of CCT and non-CCT areas in the next Section.

V. But is it Really Pantawid?

8. While falling short of the rigors of randomized control trial (RCT) or regression discontinuity design (RDD) analysis under the 3-wave impact evaluation, APIS data can provide a basis for potentially complementary analysis on a much larger sample. To the extent that the results are compatible, this would give us further confidence in saying that CCT is having a positive impact above and beyond other underlying (unobservable) factors. Finally, understanding whether and how Pantawid Pamilya is affecting enrolment decisions around the current age 14 cut-off for the program has important implications for thinking about a possible extension.

9. This Section uses an imperfect measure of exposure to CCT, utilizing the fact that APIS 2011 data was collected in 2,395 primary survey units (PSUs) throughout the Philippines, generally more than 20 PSUs per province. The analysis treated these as geographic localities, and classified each PSU as either a “Pantawid PSU” or “Non-Pantawid PSU” based on whether any APIS 2011 respondents in that PSU’s subsample reported receipt of any CCT benefits. Roughly two-fifths of poor households (still defined herein as those in the lowest 3 income

deciles) were surveyed in Non-Pantawid PSUs in APIS 2011, allowing for adequately large sub-samples to support comparisons of poor households living in Pantawid versus non-Pantawid PSUs, with the following caveats noted below.

10. A first caveat is that an APIS 2011 PSU does not align with a barangay or a “pocket of poverty” as defined in the Pantawid Pamilya’s roll-out. The fact that the analysis herein coded a PSU with **any** respondents reporting CCT grant receipt as a “Pantawid PSU” thus means that such PSUs may in fact include some non-CCT localities. This would tend to dilute any effects of the CCT program using this approach. Secondly, given the way that Pantawid Pamilya was rolled out (starting with the poorest provinces, followed by pockets of poverty), it is important to recognize that non-Pantawid PSUs cannot provide a direct control comparison to Pantawid PSUs. In particular, we would assume that prior to and in the absence of Pantawid Pamilya, on average, Pantawid PSUs would be **poorer** (in both income and non-income dimensions) than non-Pantawid PSUs.⁶ Hence, even among poor households (defined herein as those in the lowest 3 deciles from the national APIS dataset), we would expect that enrolment rates of children would be lower in Pantawid PSUs compared to non-Pantawid PSUs: i.e. the former households would be, on average, the “poorest of the poor”. This is borne out by looking at total shares of 16-20 year olds enrolled in some form of education (i.e., in secondary schools or colleges, universities, or other post-secondary institutions): in **Pantawid PSUs (Figure 4)**, only 33.7% of poor male 16-20 year-olds is enrolled in some form of education versus 34.4% of poor male 16-20 year-olds in **non-Pantawid PSUs (Figure 5)**. The gap appears largest among 16-17 year olds, where enrolment rates in Pantawid PSUs appear, if anything, slightly lower than enrolment rates for 16-17 year old poor boys in the national APIS 2008 sample (3 years earlier).⁷

11. While the magnitudes would be different for younger age groups, it would appear relatively safe to assume that a similar pattern would exist for younger children. Namely:

- (i) Since Pantawid PSUs (as defined in the 2011 APIS round) are more disadvantaged than non-Pantawid PSUs, the share of poor boys (or girls) of age x enrolled would have been lower in these areas than the overall enrolment share of poor boys (or girls) of age x within the 2008 APIS sample, which in turn would have been lower than the enrolment share of poor boys (or girls) of age x in less poor areas (non-Pantawid PSUs, as classified in the 2011 APIS).
- (ii) Looking to the 2011 APIS data, to the extent that we find enrolment rates among poor boys (or girls) higher than either the 2008 APIS enrolment profile for all poor boys (or girls), this would suggest some combination of the effects of (a) Pantawid Pamilya’s introduction in these areas; and (b) a nationwide improvement that is distinct from Pantawid Pamilya (i.e., an underlying trend).
- (iii) To the extent that we see that 2011 enrolment rates among poor boys (or girls) in Pantawid Pamilya PSUs have “crossed over” the 2011 enrolment rate profile of poor boys (or girls) in non-Pantawid PSUs, this would more unambiguously point to an impact of Pantawid Pamilya.

⁶ APIS 2008 and earlier rounds used different PSUs, so it does not appear possible to use APIS 2008 to provide a baseline comparison. Similarly, the analysis here is blind to whether, for example, Pantawid PSUs may have received preference for (or vice-versa) for other government programs such as school construction, etc. For these and other reasons, the analysis herein should be distinguished from (but may complement) rigorous impact evaluation being conducted on Pantawid Pamilya by DSWD with support from key development partners.

⁷ A similar pattern exists for girls in the poorest 3 deciles, however gaps between those living in Pantawid and non-Pantawid PSUs is smaller.

- (iv) The latter conclusion is strengthened by the fact that (as noted above) no such “crossover” is happening at ages 16 and up, which should not be directly affected by the CCT program’s introduction.

12. To accommodate a more direct comparison, **Figure 6** merges the detailed enrolment profiles for Pantawid and Non-Pantawid PSUs (shown in Figures 4-5) into one frame, again superimposing 2011 profiles against a dotted blue line capturing the detailed enrolment profile for all poor boys using APIS 2008. Solid color bars represent Pantawid PSUs, while the dotted bars to their immediate right display findings for Non-Pantawid PSUs.

13. With the caveats above, this comparison further reinforces the arguments in Section III regarding the CCT program’s apparent impact. Namely:

- (i) **Large increase in pre-elementary enrolment.** Looking at 3-5 year olds at the left side of the Figure, while the dashed violet bars suggest that there has been some improvement during 2008-2011 in Non-Pantawid PSUs, one notes that the pre-elementary enrolment rates in Pantawid Familya PSUs average nearly 10 percentage points higher. Under the assumption that Pantawid PSUs would have been worse off in 2008, this means that they have leapfrogged Non-Pantawid PSUs, such that CCT is having a larger than 10 percentage point impact. This would thus directly corroborate findings from the first wave rigorous impact evaluation (which found a 10.3 percentage point impact);
- (ii) **Sizeable rise in on-time elementary enrolment of 6-year olds.** The share of poor male 6 year-olds enrolled in some form of education in Pantawid Familya PSUs has again leapfrogged that in Non-Pantawid PSUs, exceeding the latter by about 4 percentage points. Once again, the driving factor appears to be the increase in the share of 6 year-olds enrolled in grade 1 or grade 2 (i.e., on-time or ahead of schedule)—captured by the height of the green and dark green segments, respectively—which has likely leapfrogged that in non-Pantawid PSUs.
- (iii) **Modest increase in height of the “enrolment plateau” for 7-11 year olds.** The leapfrog effect is largest among 7-8 year-olds, though Pantawid PSU enrolment rates are marginally higher for the entire age range.
- (iv) **Weaker evidence of continued “on-time” effect among ages 7-9.** The share of poor boys in Pantawid PSUs who are at least on-schedule (i.e., the green and dark green bars) is now 2-5 percentage points lower than in Non-Pantawid PSUs, however it is likely that this conceals the CCT program’s effect in narrowing a larger gap. This is borne out by looking at the gaps between the solid and dashed green and dark green segments for age 10-15, wherein the gap averages around 10 percentage points.⁸
- (v) **Signs of deceleration in the “enrolment plummet” during ages 12-15.** Among 12 year-old poor boys, the solid and dashed bars show that enrolment in Pantawid PSUs is marginally higher (whereas in the absence of CCT, we assume it would likely have been at least modestly lower). Among 13-15 year olds the sign of a leapfrog by Pantawid PSUs is stronger, particularly 13-14 year-olds, wherein Pantawid PSUs appear to have overtaken Non-Pantawid PSUs by roughly 4 percentage points.
- (vi) **No signs of a CCT effect on age of entry into secondary education.** In Figure 3, dashed purple lines (Pantawid PSUs) and dashed red lines (Non-Pantawid PSUs) demarcate enrolment in secondary school (the total height of all segments below the dashed line) and enrolment in primary school (the total height of all segments above the dashed line). For all age cohorts in the 11-15 range, we see that larger shares of poor

⁸ As argued earlier, we would not expect that CCT would have a direct impact on on-time enrolment among children who were older than 6 at the time the CCT program was launched in their locality.

boys have entered secondary, suggesting there is at least no major impact of CCT on age of entry into secondary education.

- (vii) **Increased retention of 11-15 year-olds at risk of dropout.** For each age cohort in this range, one observes that the solid orange and pink segments are much larger than their dashed counterparts. In other words, the key driving factor explaining higher enrolment rates among poor boys in Pantawid PSUs (solid bars) appears to be retention of at-risk children who have started late and/or repeated grades. As noted above, it is likely that many more of these children would have dropped out in the absence of CCT.
- (viii) **Disappearance of the “leapfrog effect” in ages 16-18.** The at least marginally higher enrolment rate among poor boys in Pantawid PSUs for every single cohort from age 3-15 abruptly disappears at age 16. The enrolment rate in non-Pantawid PSUs is consistently higher for poor boys in the age range 16-19 (though not at age 20).

14. In sum, while **not** a true “treatment-control” comparison, the comparison of detailed enrolment profiles among poor boys in Pantawid and non-Pantawid PSUs lends further credibility to the findings in earlier sections. Once again, they suggest that **CCT appears to be working “at both ends”**:

- (i) At the front-end, Figure 3 suggests CCT has had an immediate impact on on-time entry into preschool and elementary school. This is perhaps the more readily obvious effect, although it is noted that the eventual impact on enrolment and completion rates may rise as these children work their way through subsequent grades; and
- (ii) At the tail-end, Figure 3 suggests that CCT is also preventing dropout among highly at-risk 11-15 year-old boys who are overage but are being encouraged to remain in and complete their elementary studies (see also Section IV).

Figure 1: Grade Attainment Profile for Boys from 30% Highest Income Families (July 2008 APIS)

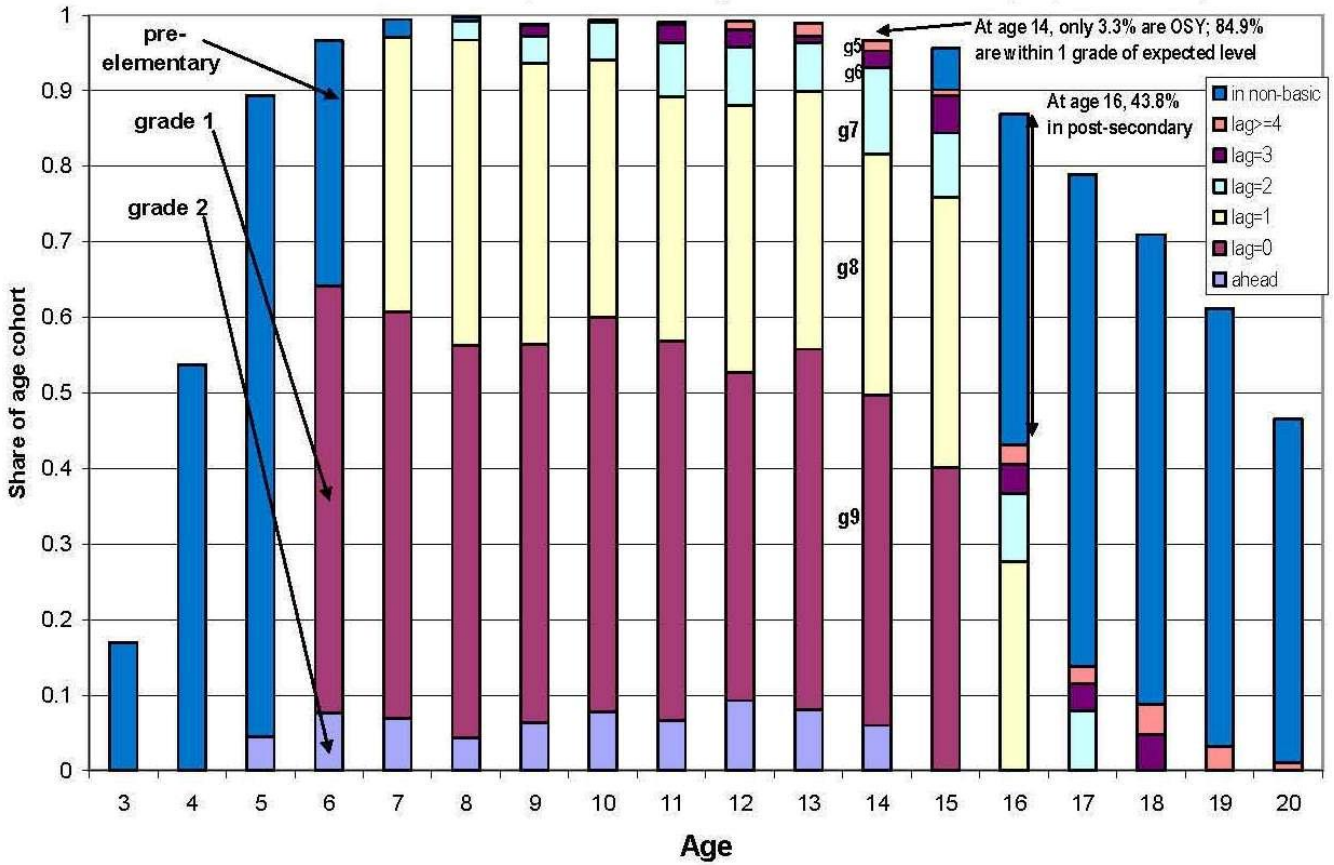


Figure 2: Grade Attainment Profile for Boys from Poorest 30% of Families (July 2008 APIS)

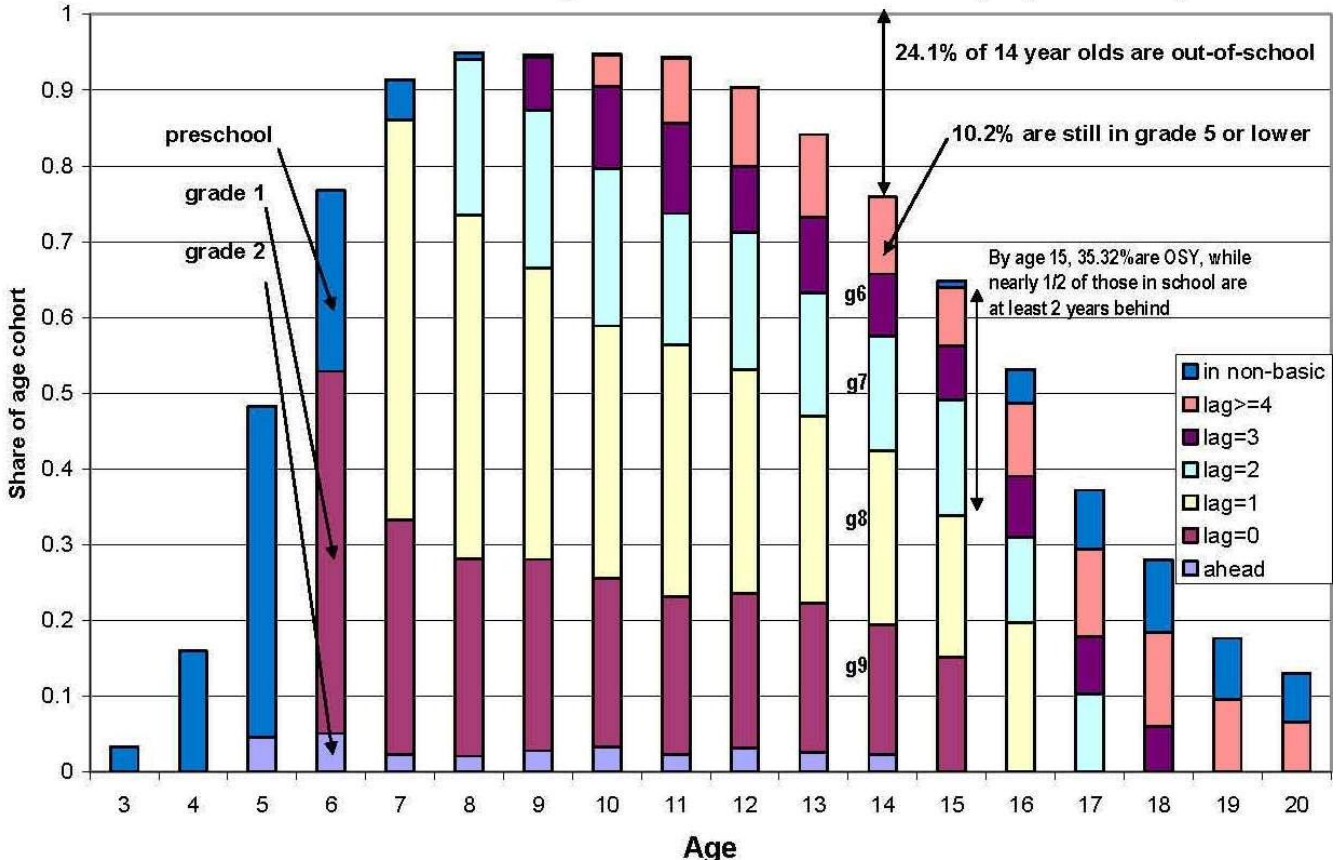
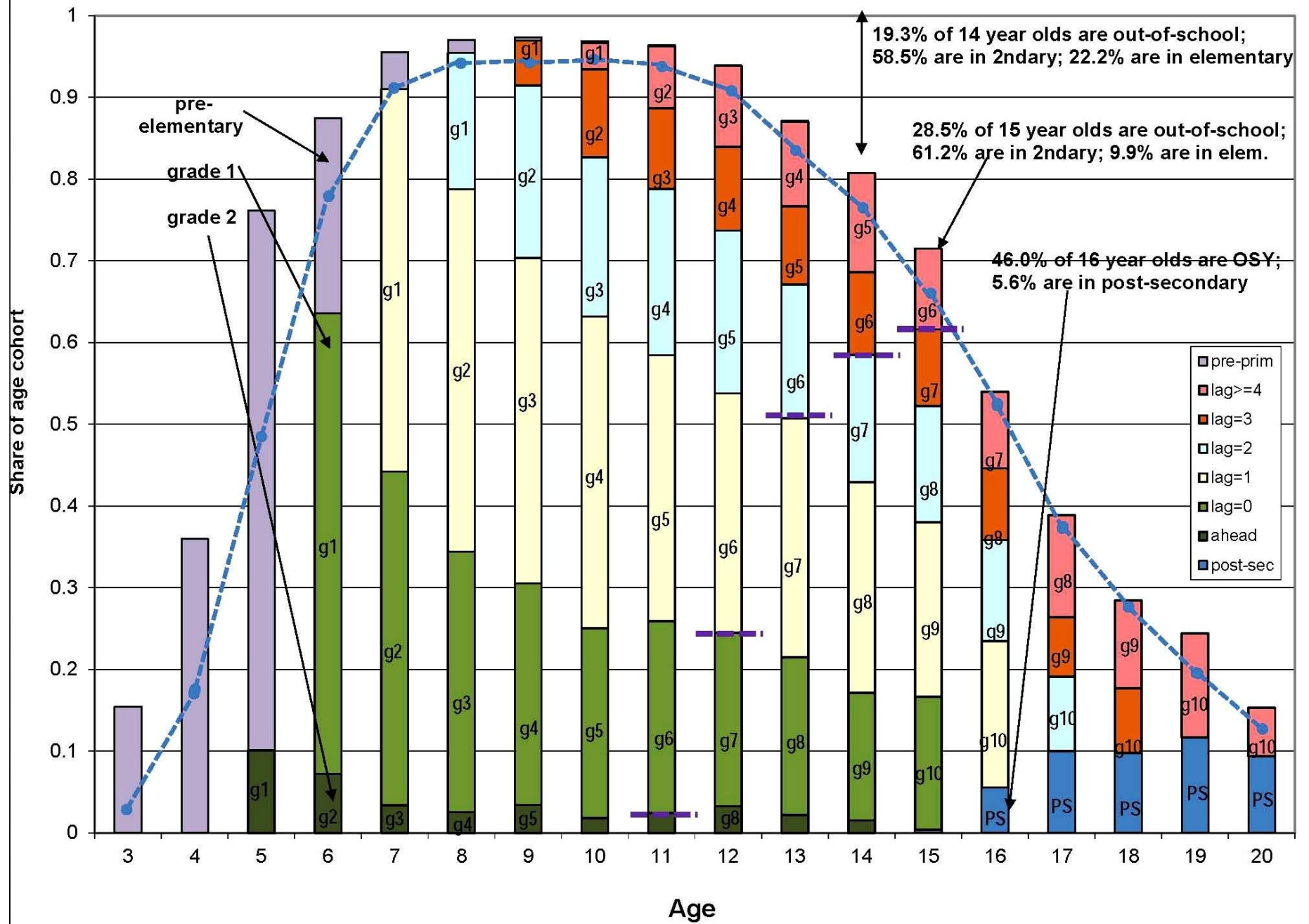


Figure 3: Detailed Enrolment Profile for Boys from Poorest 30% of Families (Using 2011 APIS Data)



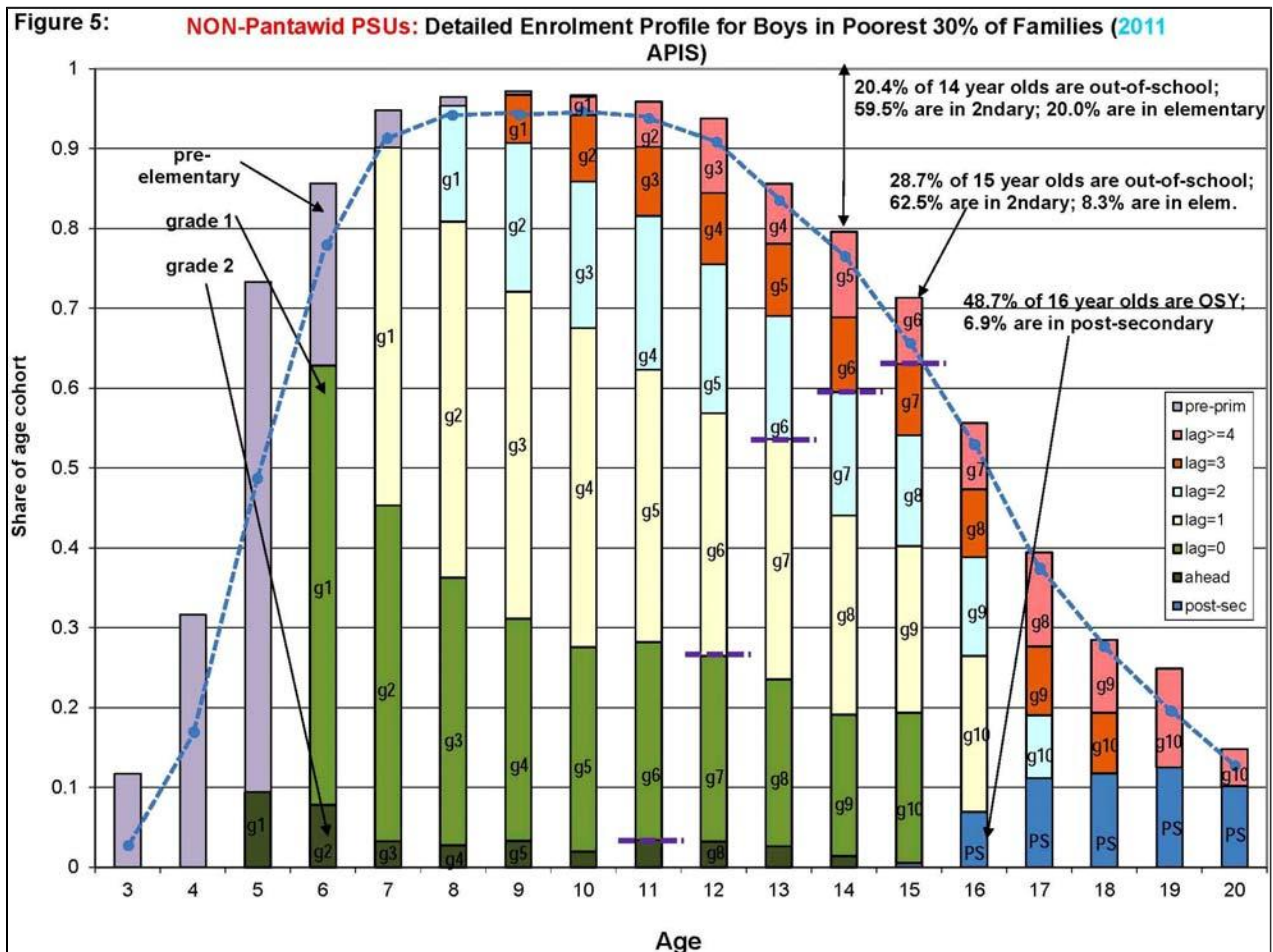
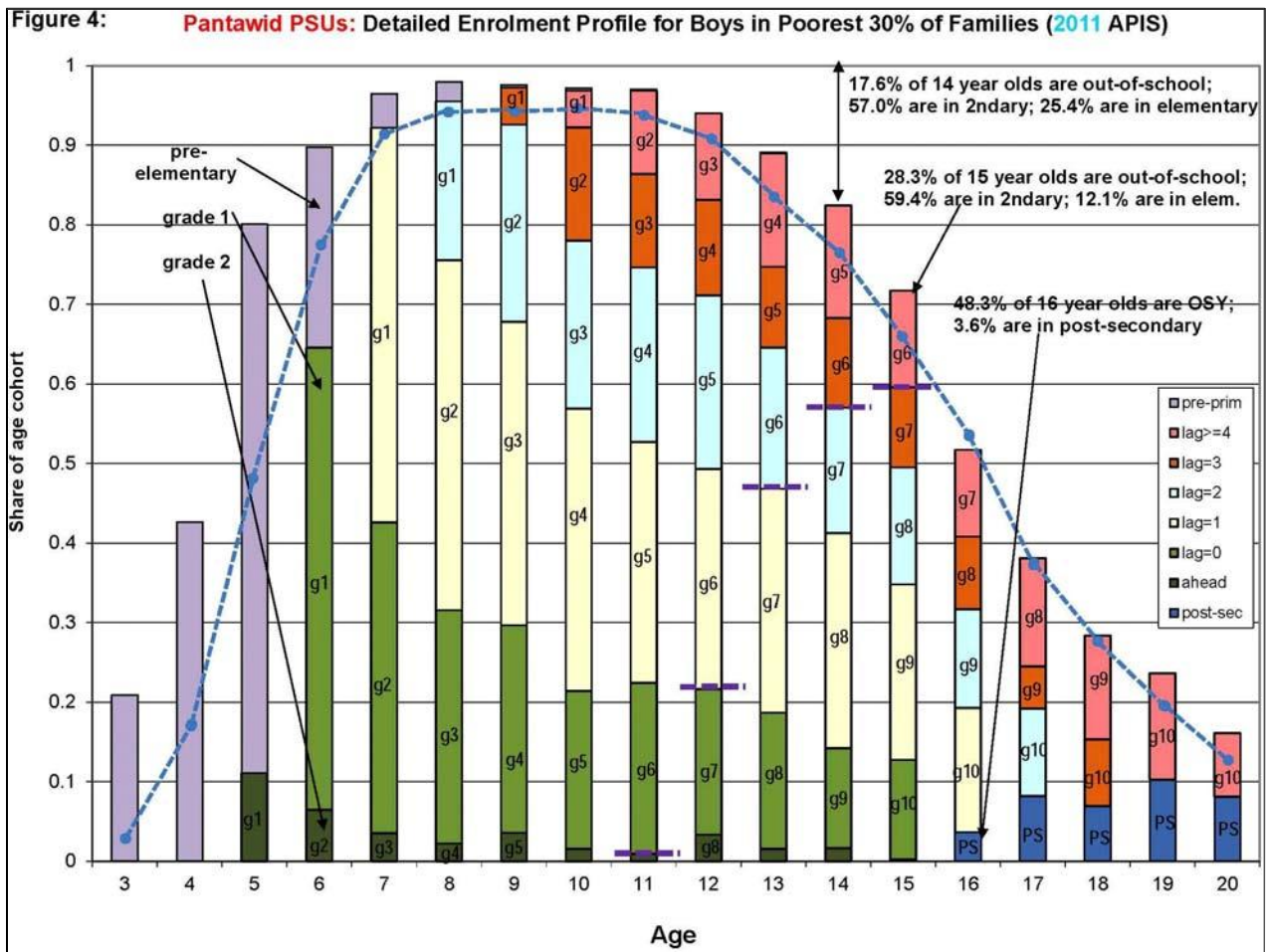


Figure 6: Pantawid vs. Non-Pantawid PSUs: Detailed Enrolment Profile for Boys in Poorest 30% of Families (2011 APIS)

