

Comments on *Assessing the Impacts of the Pantawid Pamilyang Pilipino Program*

Supplemented by selected insights from further analysis

David A. Raitzer

Economist

Economic Analysis and Operational Support Division

Economic Research and Regional Cooperation Department

Asian Development Bank (ADB)

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The logo of the Asian Development Bank (ADB), consisting of the letters 'ADB' in white serif font on a dark blue square background.

ADB

Comments on study

Sound methodology

- Nonparametric RDD
 - Rigorous identification strategy
 - Survey designed for nonparametric RDD
 - Large sample
 - Multiple bandwidths
 - Relevant covariates
- RCT
 - Gold standard design
 - Uniquely able to follow up over long time horizon
 - Complementary to RCT
- Both
 - Uniquely detailed questionnaire
 - Ability to evaluate many outcomes
- Qualitative study
 - Helps to reveal supply side constraints, perceptions of interventions

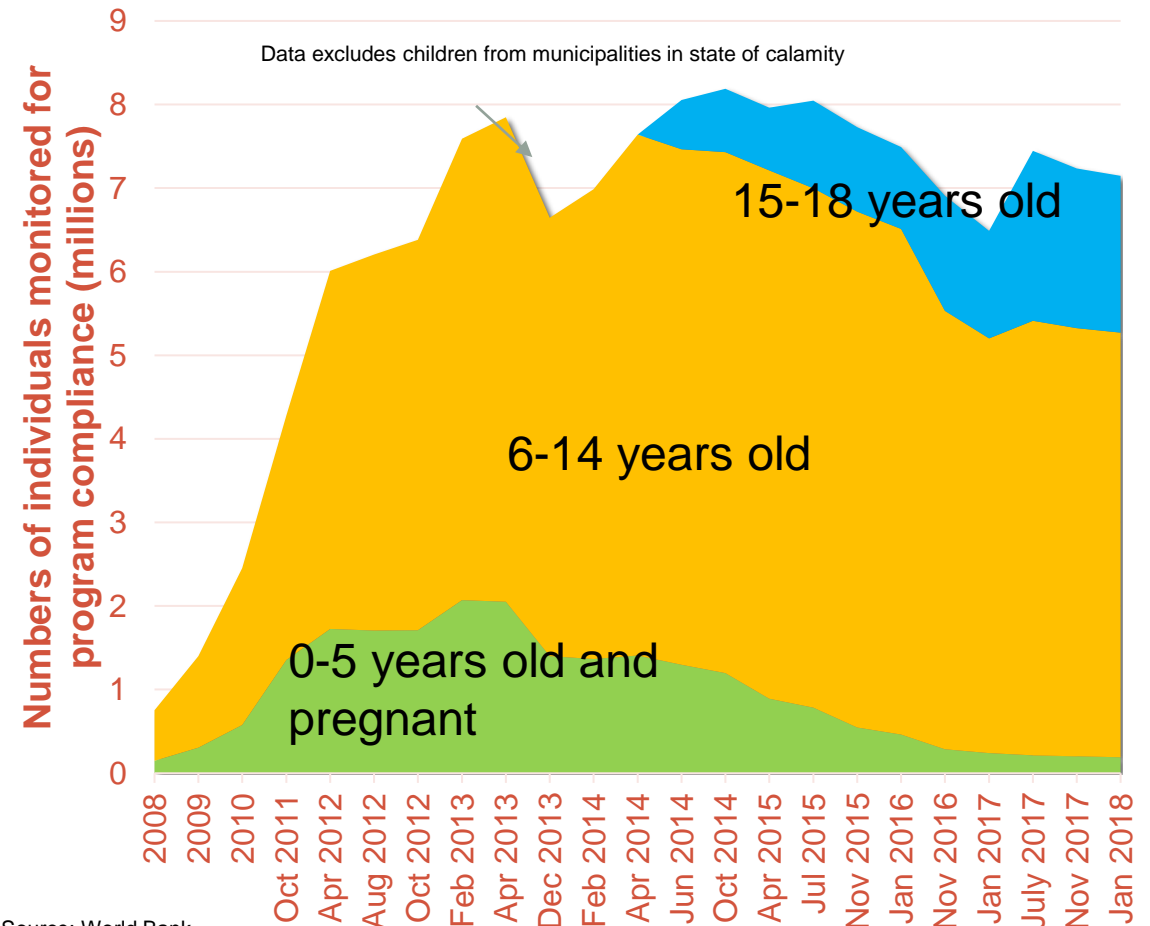
Results conform to expectations

- Behavior is found to respond to subsidies
 - Health conditionalities have limited enforcement in recent years
 - Limited enrollment of new children, monitoring of new births
 - Limited effects of conditionalities recently (RDD)
 - Health conditionalities had higher enforcement in early years of program
 - Larger effects from earlier phase (RCT)
 - Subsidies are effectively mostly on education, Family Development Sessions
 - Significant effects on parental expectations, grit, community engagement, enrollment (RDD)
- Less clear that altered behavior has expected long term outcomes
 - Educational progression, literacy
- Effects at aggregate level mask important heterogeneity
- Heterogeneity can explain puzzling nutrition results

Program context is important

- Cap of 3 children to be paid for educational compliance
- Other children are usually not monitored
- Eligibility tagging based on 2009 asset data, not updated
 - Aging cohort
 - Many young children are not eligible for educational payments
- Net effect is that program subsidizes education of some, but not all children in 4Ps households
 - Primarily older children not measured for anthropometrics

Profile of Those Monitored for Compliance with Any Conditionality of the Pantawid Pamilyang Pilipino Program



Source: World Bank

Subsidies to selected children and resource maximizing household responses

- Assume households are resource maximizers with respect to potential income
 - Following Ayalew 2005; Datar et al. 2010; Pitt et al. 1990; Rosenzweig and Schultz 1982; Rosenzweig and Wolpin 1988.
- Maximization implies that investment will be skewed towards those children with lowest costs relative to returns
- Subsidies for educational investment in a subset of children will increase the relative returns to household health/nutrition investment in those children
- Marginal returns to health/nutrition investment will equalize among children at a higher investment level for children with educational subsidies than those who are unsubsidized
 - Households will divert resources from unsubsidized children to those who are subsidized.
- Implies positive household health/nutrition investment effects on education monitored children and negative effects on those unmonitored
- Driven by increased educational expectations only among subsidized children

ADB follow-up research on intrahousehold effects of imbalanced human capital subsidies

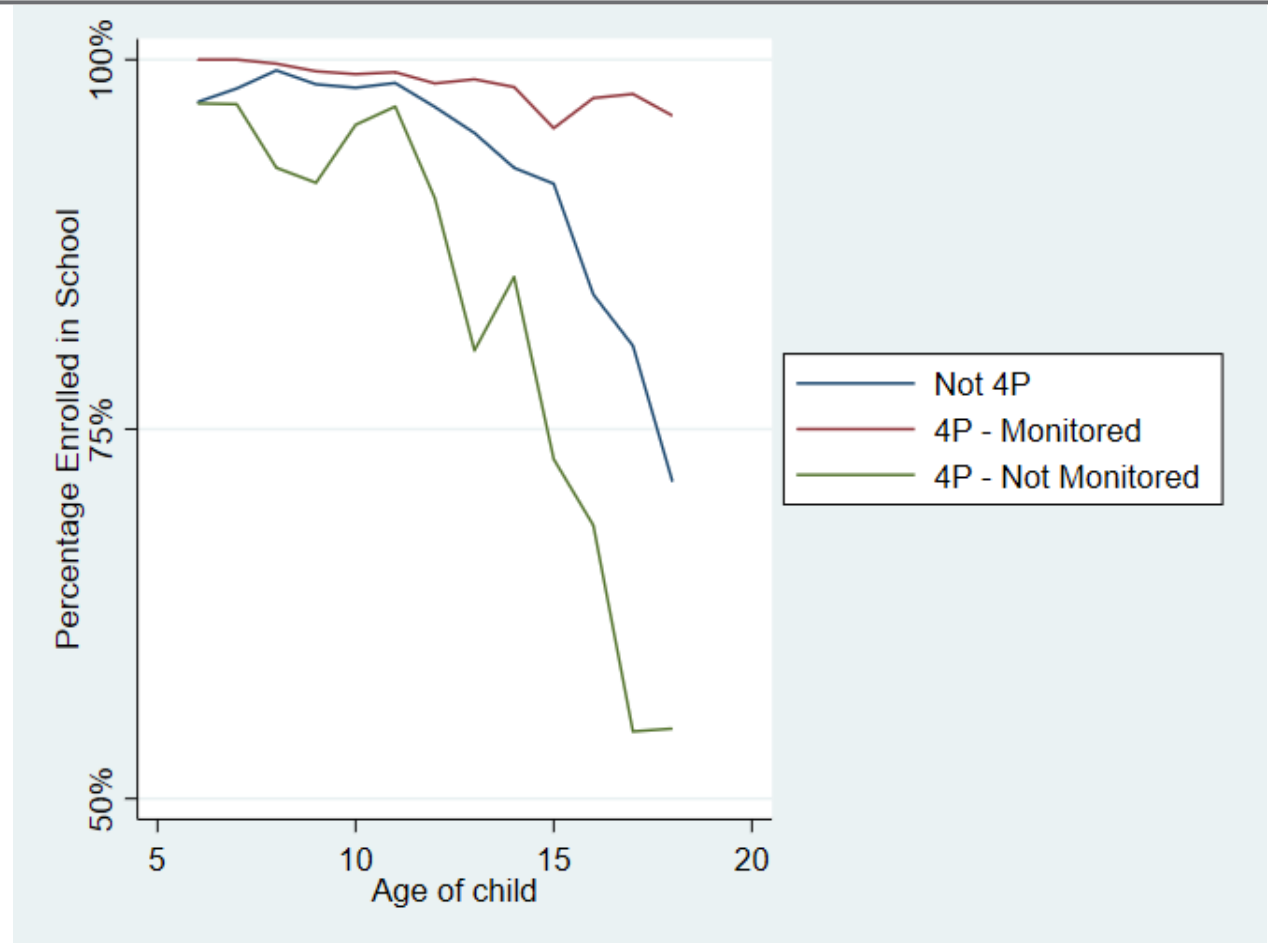
Child monitoring classification

- Monitored ~ subsidized
- For children of school age (6-18), administrative data indicate who is monitored for educational conditionalities.
- Children below school age are not yet selected, but anthropometrics only taken on this subsample for RDD.
- However, if number of children monitored=3 in household, next younger cannot be eligible
 - For children <6 years of age, program household children are monitoring ineligible or possibly eligible
 - For children 6-18 years of age, program household children are monitored or unmonitored

Context

School enrollment rates drop rapidly for the *not monitored* group as children reach the age of 12 and older.

Enrollment by age and monitoring status



The figure compares summary statistics, rather than impact estimates

Source: Raitzer et al. forthcoming

Identification strategy for effects on monitored and unmonitored children

- Comparison of monitored 4Ps children against all non-4Ps children or unmonitored against non-4Ps introduces selection bias
 - 4Ps households select children to be monitored, but non-4Ps households do not
 - Differences could be due to who is selected

- Solution is secondary instrumentation

$$D_i = \alpha_0 + \beta_1 C_i + \beta_2 Z_i + \beta_3 C_i Z_i + g(x_i) + h(v_i) + u_i$$

$$Y_i = b_0 + b_D \hat{D}_i + f(x_i) + C_i f(x_i) + j(v_i) + u_i$$

Where x is within local bandwidth, triangular kernel weighting is applied, C is binary for above cutoff, Z is secondary instrument, x is running variable, v is vector of covariates, D is treatment dummy, and Y is outcome

- CER bandwidth, triangular kernel weighting
- Instrument predicts being monitored, but does not affect schooling directly

Secondary instrument

- Pre-2015, 4Ps selected children for monitoring, under following rules at time of enrollment:
 - 6-14 year old children, in ascending order of age, followed by
 - 0-5 year old children in descending order of age,
 - Assuming same family relation to household head grantee
 - Cap of 3 children
- Instrument for monitoring of 6-14 years old is ranking among top 3 of children following these 3 criteria
- Instrument for monitoring eligibility of 0-5 year olds is whether among top 3 of children aged 18 years old or less with same relation to household head
- Relevant - highly significant predictors of treatment
- Exclusive - no significant effects among ineligible households
- Birth order covariate to control for any birth order effects
- Restrict analysis to nuclear family in 4Ps households, other additional data cleaning

Results: Parent's aspirations for children

Outcome:	RDD: Pooled Fuzzy RDD					Instrumental variables: Monitoring eligible vs non 4P			Instrumental variables: Monitoring ineligible vs non 4P		
	Coefficient	p-value	N	Mean value under treatment	Mean value in absence of treatment	Coefficient	p-value	N	Coefficient	p-value	N
Child Will Finish Elementary School?	0.03***	0.01	2344	1.00	0.96	0.04***	0.00	2046	0.01	0.67	1830
Child Will Finish High School?	0.01	0.54	3930	0.97	0.97	0.03***	0.01	4171	-0.06**	0.02	2909
Child Will Finish College?	0.02	0.63	3058	0.92	0.90	0.05	0.19	2862	-0.05	0.32	1983
Child Will Grow Up Healthy?	0.01	0.31	4981	0.99	0.98	0.01*	0.07	3880	0.00	0.74	3032
Child Will Have Decent Employment?	0.00	0.55	4277	0.98	0.98	0.00	0.73	3897	-0.02	0.20	3249
Child Will Have Better Future?	0.01	0.74	6334	0.90	0.88	0.02	0.56	5148	0.02	0.51	3689

Results: Child grit

Outcome:	RDD: Pooled Fuzzy RDD					Instrumental variables: Monitoring eligible vs non 4P			Instrumental variables: Monitoring ineligible vs non 4P		
	Coefficient	p-value	N	Mean value under treatment	Mean value in absence of treatment	Coefficient	p-value	N	Coefficient	p-value	N
Grit Index	0.15**	0.05	4066	3.48	3.32	0.17**	0.04	3435	0.14	0.34	2538
Grit: Ask for help when lesson is difficult.	0.05**	0.05	3313	0.93	0.88	0.05*	0.06	3363	0.03	0.53	2515
Grit: Strive to get higher grades.	0.04*	0.06	4033	0.93	0.89	0.05**	0.04	3453	0.03	0.50	2507
Grit: Finish school work before playing or resting.	0.04	0.17	4125	0.77	0.73	0.04	0.29	3364	0.05	0.40	2508
Grit: Finish school work despite lack of time and resources.	0.04	0.17	4329	0.85	0.82	0.05	0.12	3595	0.02	0.64	2412

Source: Raitzer et al. forthcoming

Results: School enrollment

Outcome:	RDD: Pooled Fuzzy RDD					Instrumental variables: Monitored vs non 4P			Instrumental variables: Unmonitored vs non 4P		
	Coefficient	p-value	N	Mean value under treatment	Mean value in absence of treatment	Coefficient	p-value	N	Coefficient	p-value	N
Enrollment among 16 to 17 years old	0.15**	0.02	635	0.92	0.78	0.22***	0.00	573	0.06	0.63	336
Enrollment among 6 to 11 years old	0.01	0.38	2088	0.99	0.98	0.01	0.60	1918	-0.01	0.74	1381
Enrollment among 12 to 15 years old	0.01	0.78	1232	0.95	0.94	0.05***	0.01	1565	-0.23**	0.03	679
Enrollment among 12 to 17 years old	0.06**	0.05	2028	0.94	0.88	0.10***	0.00	2149	-0.12	0.13	1240
Enrollment among 6 to 14 years old	0.01	0.20	3370	0.98	0.97	0.02*	0.08	2876	-0.02	0.45	1890
Enrollment among 15 to 20 years old	0.01	0.87	2006	0.78	0.77	0.14***	0.00	1628	-0.09	0.16	997

Source: Raitzer et al. forthcoming

Results: Child health

Outcome:	RDD: Pooled Fuzzy RDD					Instrumental variables: Monitoring eligible vs non 4P			Instrumental variables: Monitoring ineligible vs non 4P		
	Coefficient	p-value	N	Mean value under treatment	Mean value in absence of treatment	Coefficient	p-value	N	Coefficient	p-value	N
Stunting	0.06	0.41	815	0.39	0.33	0.02	0.79	617	0.17*	0.08	601
Underweight	0.06	0.45	856	0.27	0.21	0.03	0.70	676	0.17**	0.02	739
Wasting	0.01	0.92	858	0.10	0.09	0.05	0.19	551	-0.01	0.89	621
Severe Stunting	0.06	0.16	864	0.15	0.08	0.01	0.73	601	0.13**	0.03	599
Severe Underweight	0.03	0.62	851	0.07	0.05	0.01	0.72	547	0.08	0.15	595
Severe Wasting	0.01	0.57	892	0.03	0.02	0.03	0.28	519	0.01	0.75	567

Source: Raitzer et al. forthcoming

Implications

- For equitable outcomes, the program needs to eliminate distortions to investments among children within the participant households.
- Monitoring should be expanded.
- The cost to the household for educating all children should be kept uniform.
- Penalties (taxes) and subsidies can have equivalent effects.
 - If payments cannot be offered for the compliance of all children with conditionalities, penalties should be introduced for noncompliance of any children beyond the cap.
 - To equalize incentives, the penalty for each noncompliant child (beyond the cap) should be the same as the payment for each compliant child up to the cap.
- Enormous challenges after protracted face to face school closure under COVID-19.

Thank you!