

## GUIDE 1: PNPM GENERASI

Measuring the effects of conditionality in community block grants

Thinking about measurement and outcomes

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This case study is based on: “Should Aid Reward Performance? Evidence from a Field Experiment on Health and Education in Indonesia” by Benjamin Olken, Junko Onishi and Susan Wong.

J-PAL thanks the authors for allowing us to use their paper

## KEY VOCABULARY

**Counterfactual:** what would have happened to the participants in an intervention had they not received the intervention. The counterfactual cannot be observed from the treatment group; can only be inferred from the comparison group.

**Hypothesis:** a proposed explanation of and for the effects of a given intervention. Hypotheses are intended to be made *ex ante* or prior to the implementation of the intervention.

**Impact:** the true impact of the intervention is the difference in outcomes between the treatment group and its counterfactual. This is estimated by measuring the difference in outcomes between treatment and comparison groups.

**Indicators:** metrics used to quantify and measure specific short-term and long-term effects of a program

**Logical Framework:** a management tool used to facilitate the design, execution, and evaluation of an intervention. It involves identifying strategic elements (inputs, outputs, outcomes, and impact) and their causal relationships, indicators, and the assumptions and risks that may influence success or failure.

**Theory of Change:** describes a strategy or blueprint for achieving a given long-term goal. It identifies the preconditions, pathways, and interventions necessary for an initiative's success.

## INTRODUCTION

Facing poor infrastructure and systemic inefficiencies, many developing countries struggle to improve the utilization of social services by their citizens. Following the success of Conditional Cash Transfer (CCT) programs such as Mexico's PROGRESA (now called Oportunidades)—which delivered cash payments to poor families conditional on schooling and regular healthcare visits—many countries have implemented CCT programs in the hopes of both increasing family income and stimulating demand for maternal and child health services and education. However, interventions that focus on increasing demand for social services may be inappropriate in some developing countries where adequate health and education services are not in place for beneficiaries to use. In such environments, programs that directly address both the supply- and demand-side constraints may be more appropriate.

## BACKGROUND

While Indonesia has achieved remarkable progress in key human development indicators, infant mortality, child malnutrition, maternal mortality, and educational learning quality have remained problematic challenges. For example, a 2007 World Bank survey indicated that only 69 percent of childbirths were delivered by a trained midwife, 68 percent of children had been immunized, and 17.3 percent of children were malnourished. Furthermore, rural and remote areas suffer from lower health and education outcomes, revealing large geographical disparities within the country.

In order to tackle these challenges, in 2007 the Government of Indonesia launched a conditional cash transfer (CCT) program, which offers families cash grants conditional on attendance at school or preventive health visits. Through this program, the GoI aims to improve maternal child health (MCH) and education by encouraging use of and demand for such services.

To tackle the supply side of this issue, that is the provision of these health and education services, the

Gol launched an incentivized community block grant program, PNPM Generasi (the National Community Empowerment Program – Healthy and Smart Generation). This program, which can be used to fund programs or activities aimed at improving child health and education in rural villages, piggybacked on the Kecamatan Development Program (KDP)/PNPM, a community-driven development program that was already in place in Indonesia since 1998. The focus of PNPM Generasi on supporting health and education made it different from PNPM Mandiri.

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## THE INTERVENTION

Generasi provides community block grants that can be used for any activities aimed at improving maternal and child health and education in the village. In the first year of the program, the block grants average US\$8,500 per village.

As part of the program, facilitators and service delivery workers work with villagers to conduct a social mapping and participatory planning exercise to decide how best to use the block grant funds to reach 12 targeted health and education indicators, listed below.

## PERFORMANCE INDICATORS<sup>1</sup>

Generasi targets 12 indicators as key markers of progress towards long-term improvements in health and education:

HEALTH		EDUCATION
1. Prenatal visits	care	1. Primary school enrollment
2. Distributing iron tablets to pregnant women		2. Primary school attendance
3. Childbirths with trained midwives		3. Middle school enrollment
4. Postnatal visits	care	4. Middle school attendance
5. Immunization		
6. Consistent infant weight gain		
7. Monthly weight checks		
8. Distributing vitamin A pills to children		

To encourage communities to focus on the most effective policies, the Generasi program includes an incentive component in the form of an explicit performance bonus. That is, the amount of the village's block grant for the following year will vary and depend partly on the village's performance on the 12 targeted indicators.

To monitor achievement of the health indicators, facilitators collect data from health providers and community health workers, while school enrollment and attendance data are obtained from the official school register.

<sup>1</sup> In 2014, the indicators were revised to place a larger emphasis on health and nutrition

## EVALUATION DESIGN

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The year is 2007, and you have been informed that in the following year the Generasi program is expanding to cover a total of 2,120 villages in a total of 176 subdistricts.

Your evaluation team has been entrusted with the responsibility of evaluating the Generasi program's impact on health and education outcomes. You are also interested in understanding whether these impacts can be achieved without the incentives component.

Think about the dimensions in which the Generasi program in general, and incentives in particular, can affect the relevant indicators. How might it encourage villages to invest in activities that will help them achieve the indicators, hence improve the effectiveness of the program? What are the most important outcomes to test? What steps must occur in order for these changes to take place? What data should your team collect? Which measurement methods will you use to correctly evaluate the impact of the intervention? Finally, how will you design your impact evaluation?

## Discussion Topic 1

### Needs

1. What kind of communities does this program target?

**Answer:**

- **rural villages**

2. What are the challenges faced by these communities?

**Sample answers:**

- **Distance to schools and health facilities is considerable**
- **Transportation infrastructure is deficient**
- **Poor quality of services due to absenteeism, lower staff competence,**
- **Limited alternatives to existing service provider, etc.**

3. What differences might we see in urban villages, or villages with better health and education indicators?

**Sample answers:**

- **Shorter distance to schools and health facilities**
- **Reliable transportation infrastructure**
- **Better quality of services due to lower absenteeism, etc.**

## Discussion Topic 2

### Program Theory

1. What are the main characteristics of the Generasi program?

**Sample Answers**

- **Generasi provides block grant to communities that they can use to fund any activities aimed at improving maternal and child health and education in the village.**
- **To decide how best to use the block grant funds, facilitators and service delivery workers work with villagers to conduct a social mapping and plan the budget together.**
- **A village's performance is measured using 12 indicators on maternal health, child**

**health and education. Measurement performance uses data from health providers, community health workers, and official school register.**

- **The program has an incentive component in the form of an explicit performance bonus. The amount of a village's block grant for the following year will vary and depend partly on the village's performance on the 12 targeted indicators.**

2. How might the Generasi program encourage the village to improve the health and education indicators of its community? How might the incentive component improve the community's health and education?

**Sample Answers:**

- **To encourage improvement of health and education, Generasi specified that the grant can only be used for activities related to improvement of health and education in the village. The social mapping and participatory planning exercises guided by facilitators also aims to highlight priority health and education issues in the village that they can address using Generasi fund.**
- **The incentive component may encourage the village to focus more on activities that more effectively improves their performance regarding the targeted indicators to increase their next year's grant. It may also encourage a village to compete with other villages in the sub-district.**

3. What are the potential challenges? Why and how might the program fail?

**Sample answers:**

- **Fund accountability. Program implementors can embezzle, or divert the grant.**
- **Targeting beneficiaries. Benefits may not reach excluded group within the community (e. g. Ethnic or religious minorities) if they are also excluded during the planning and implementation process.**
- **Prioritizing activities. Planning process with facilitators and service providers may not correctly identify activities that should be**

**prioritized to get funded, possibly because of preference to select program that would cause minimum social tension (e. g. supplementary feeding).**

2. Which indicators would you use to test your primary hypothesis?

**Sample answers:**

- **Beyond the 12 indicators: teacher attendance, school hour, health and education infrastructure availability, nutrition status of pregnant women, children mortality.**

### Discussion Topic 3

#### *Outcomes and Indicators*

1. What are the possible positive, negative and null effects of the intervention on health and education outcomes?

**Sample answers:**

- **Positive effects: activities funded by Generasi effectively reduced child mortality and morbidity, reduced maternal mortality, increased school enrollment and attendance.**
  - **Negative effects: embezzlement involving service providers led to a removal of the service providers, exacerbating unmet needs for health and education services in the village.**
  - **No effects: activities funded by Generasi do not improve maternal, child health and education due to misplaced priority.**
2. List the indicators you would use to measure these outcomes. Think about shorter- and longer-term indicators and those other than the 12 health and education indicators.

**Sample answers,**

- **beyond the 12 indicators: teacher attendance, school hour, health and education infrastructure availability, nutrition status of pregnant women, children mortality.**

### Discussion Topic 4

#### *Defining the Hypothesis*

1. What might be some examples of key hypotheses you would test? Pick one.

**Sample Answer:**

- **You want to guide them toward something general such as “Generasi improves education/health service quality in the village”, or “Generasi improves utilization of education/health service in the village”**

### Discussion Topic 5

#### *Formalizing the Theory of Change*

1. What are the steps or conditions that link the Generasi program to the expected final outcomes?

**Answer:**

- See Figure 1 and Table 1

2. What indicators should you measure at each of these steps?

**Answer:**

- See Figure 1 and Table 1

### Discussion Topic 6

#### *Designing an Evaluation*

1. What methodology would you employ to evaluate this program? (More than one method may be possible; however, discuss just one method.)

**Answer:**

- See Table 2

2. In your evaluation, what represents the counterfactual?

**Answer:**

- See Table 2

3. What are the limitations of this method? What are the advantages?

**Answer:**

- See Table 2

Figure 1: A sample logical framework

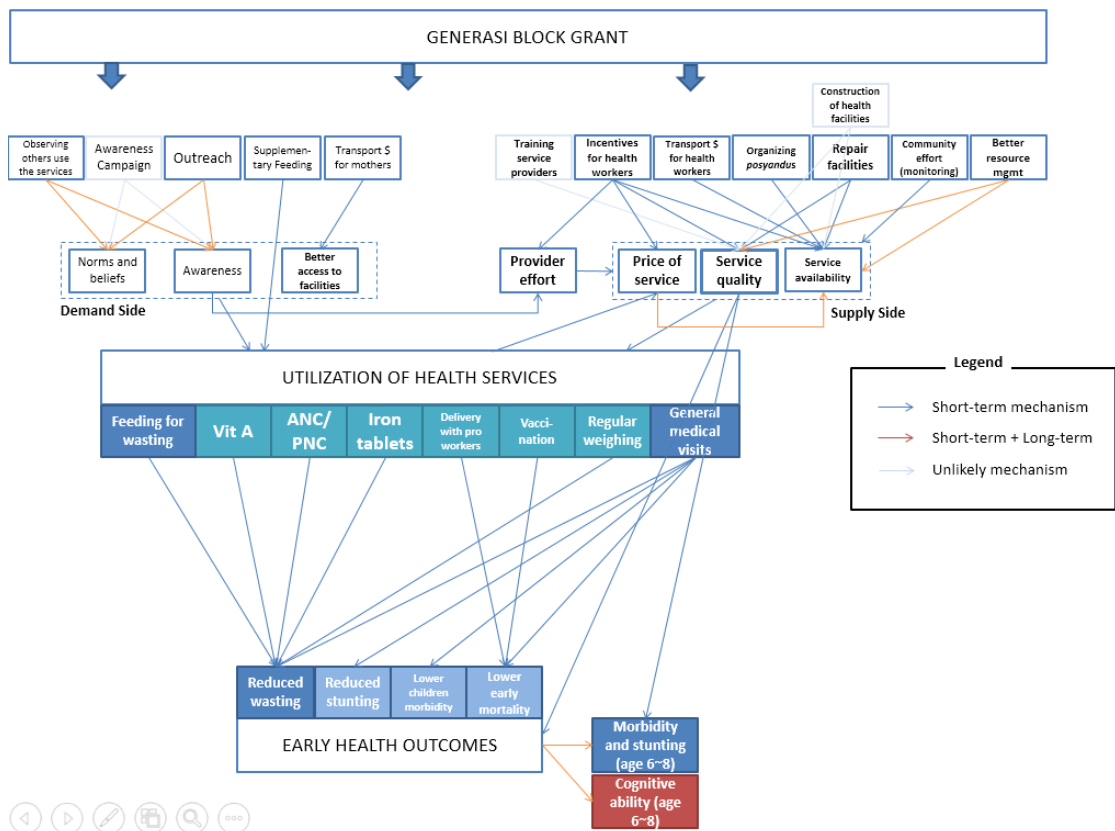


Table 1 Model with indicators

Needs	Input	Output	Outcome	Impact	Long-term goal
<b>Community in rural villages have limited access to health care facilities</b>	Block grant to villages specified for health and education purposes	Grant allocated for transport subsidy for pregnant women to check pregnancy in puskesmas	More pregnant women utilize health care facilities	Better health outcomes for pregnant women and newly-born babies	Better health outcomes in the community
<b>Sample indicators:</b>					
		Allocation of grant for expenses related to ANC	Frequency of ANC for pregnant women; Number of pregnant women who check up in health facilities	Maternal mortality, early mortality, rate of pregnant women with chronic low energy level	



Table 2. Comparison of selected evaluation methodology

Methodology	Counterfactual	Limitation	Advantages
<b>Pre-Post</b>	Program participants themselves—before participating in the program.	We do not know what the program participants would have done if they did not receive the grant. They may have been likely to change anyway without the program.	Data collection need only to be done for one group.
<b>Simple Difference</b>	Villages that did not receive the program (for any reason), but for which data were collected after the program.	Villages that receive the program may be systematically different from villages that did not receive the program. We might attribute the impact of the bias to our program.	Data collection need only to be done in one wave.
<b>Differences in Differences</b>	Villages that did not receive the program (for any reason), but for which data were collected both before and after the program.	The mix of villages in the control and treatment group may have changed over time. We may find an impact and attribute it to the program, whereas the difference was only due to the change in composition.	As long as the unobservable differences between control and treatment group have the same effect on outcomes across time, the comparison of changes will be a valid estimate of the impact of the program.
<b>Multivariate Regression</b>	Villages that did not receive the program (for any reason), but for which data were collected both before and after the program. In this case data is not comprised of just indicators of outcomes, but other “explanatory” variables as well.	It is likely that some (potentially unmeasured or immeasurable) variables that are correlated with whether a village receive the program or not have not been included (i.e. omitted variables bias). Our result can be biased.	Overcome problems with simple difference approach. Factors other than treatment status that might explain differences are controlled.
<b>Randomized Evaluation</b>	Villages that were randomly assigned to not receive the treatment before the program was rolled out.	Assignment to counterfactual group have to be done in advance, and assignment have to be kept throughout the duration of the evaluation period. Data collection for randomized evaluation are often costly.	Result is straightforward and transparent to interpret. The limited number of assumptions and the transparency of the result can provide credibility.