

Program Keluarga Harapan

Main Findings from the Impact Evaluation of
Indonesia's Pilot Household Conditional Cash Transfer Program

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Acronyms, Abbreviations & Indonesian Terms

ARI	Acute respiratory infection
Askeskin	<i>Asuransi Kesehatan Miskin</i> (Health Insurance for the Poor)
Bappenas	<i>Badan Perencanaan dan Pembangunan Nasional</i> (National Development Planning Agency)
Bidan	Mid-wife
BLT	<i>Bantuan Langsung Tunai</i> (unconditional cash transfer program)
BOK	<i>Bantuan Operational Kesehatan</i> (Operational Health Assistance Program)
BOS	<i>Bantuan Operasional Sekolah</i> (School's Aid Program)
BPS	<i>Badan Pusat Statistik</i> (Statistics Indonesia)
BULOG	<i>Badan Urusan Logistik</i> (Logistic Agency)
CCT	Conditional cash transfer
Desa	Village
DKI	<i>Daerah Khusus Ibukota</i> (Special Capital Territory)
DPT	Diphtheria, pertussis (whooping cough) and tetanus
Dusun	Rural ward (sub-village)
GOI	Government of Indonesia
IP	<i>Infrastruktur Pedesaan</i> (Rural Infrastructure Program)
Jamkesmas	<i>Jaminan Kesehatan Masyarakat</i> (health insurance scheme for the population)
JSLU	<i>Jaminan Sosial Lanjut Usia</i> (social cash transfer for the elderly)
JSPACA	<i>Jaminan Sosial Penyandang Cacat Berat</i> (Social cash transfer for the disabled)
Kabupaten	District
KDP	Kecamatan Development Project
Kecamatan	Sub-district
Kelurahan	Urban precinct
Kemdiknas	<i>Kementerian Pendidikan Nasional</i> (Ministry of National Education)
Kemenag	<i>Kementerian Agama</i> (Ministry of Religious Affairs)
Kemenkes	<i>Kementerian Kesehatan</i> (Ministry of Health)
Kemenkokesra	<i>Kementerian Koordinator Kesejahteraan Rakyat</i> (Coordinating Ministry for Social Welfare)

Kemenkominfo	<i>Kementerian Komunikasi dan Informatika</i> (Ministry of Communications and Information Technology)
Kemensos	<i>Kementerian Sosial</i> (Ministry of Social Affairs)
MDG	Millennium Development Goals
MIS	Management Information System
NTT	Nusa Tenggara Timur (East Nusa Tenggara province)
PAM	<i>Perusahaan Air Minum</i> (public water utility)
PKH	<i>Program Keluarga Harapan</i> (Hopeful Family Program)
PKPS-BBM	<i>Program Kompensasi Pengurangan Subsidi Bahan Bakar Minyak</i> (compensation program for the reduction of oil energy subsidies)
PKSA	<i>Program Kesejahteraan Sosial Anak</i> (children's social welfare program)
PLN	<i>Perusahaan Listrik Negara</i> (State Electricity Company)
PMT	Proxy-means test
PNPM-Generasi	<i>PNPM Generasi Sehat dan Cerdas</i> (PNPM Healthy and Smart Generation Program)
PNPM-Mandiri	<i>Program Nasional Pemberdayaan Masyarakat Mandiri</i> (National Community Empowerment Program)
PODES	Potensi Desa (Village Potential Statistics)
Posyandu	<i>Pos Pelayanan Kesehatan Terpadu</i> (Integrated [health] service post)
PPLS	<i>Pendataan Program Perlindungan Sosial</i> (Data collection for [targeting] social protection programs)
PT Pos	National post office
Puskesmas	<i>Pusat Kesehatan Masyarakat</i> (community health center)
Raskin	<i>Beras Miskin</i> (program for sale of subsidized rice for the poor)
Rp	Indonesian Rupiah
RPJMN	<i>Rencana Pembangunan Jangka Menengah</i> (national medium-term development plan)
RTSM	<i>Rumah Tangga Sangat Miskin</i> (extremely poor households)
SD	<i>Sekolah Dasar</i> (primary school)
SMP	<i>Sekolah Menengah Pertama</i> (junior secondary school)
TNP2K	<i>Tim Nasional Percepatan Penanggulangan Kemiskinan</i> (National Team for the Acceleration of Poverty Reduction)
UGM	University of Gadjah Mada
UPP	Urban Poverty Program
UPPKH	Unit Pelaksana Program Keluarga Harapan (PKH Implementation Unit)

Executive Summary

In 2007, the Government of Indonesia launched its first household-based conditional cash transfer program: *Program Keluarga Harapan* (PKH, or the Hopeful Family Program). The program is intended to improve the welfare of extremely poor households by providing them with quarterly cash transfers ranging from Rp 200,000 to Rp 600,000 per quarter. At the same time, the program is designed to break the transmission of poverty to next generations by encouraging families to increase their use of public services to, over time, improve the health and education outcomes of their children. It does this by providing the transfer only to households with pregnant women and/or children, provided that they fulfill specific health and education-related obligations. The implementing agency, the Ministry of Social Affairs (*Kementerian Sosial*, Kemensos) initially provided benefits to 432,000 “extremely poor” households in 7 provinces.

PKH represents a new generation of social assistance programs that incorporate rigorous monitoring and evaluation methods into program design from the beginning. Treatment sub-districts (*kecamatan*) were randomly selected for participation in the PKH pilot, making it possible to measure the program’s impact by comparing behaviors and outcomes with households that did not receive cash transfers. A baseline household survey in participating (treatment) and non-participating (control) *kecamatan* was conducted in 2007. The same households were surveyed again in 2009, producing a full panel of data that was used to evaluate the program’s impact.

The evaluation found that PKH was effective in terms of improving the welfare of beneficiary households. Their average monthly expenditures increased by Rp 19,000 per person, equal to a 10 percent increase in comparison to pre-program levels. Households used this additional income to increase their spending on food (especially high-protein foods) and health costs. There is no evidence that beneficiaries misspent the additional funds on non-productive goods such as tobacco or alcohol.

The program also demonstrated a positive impact on helping households to increase their usage of primary healthcare services. The likelihood of mothers from beneficiary households completing four pre-natal check-ups increased by more than 13 percent above pre-program levels, and completing the recommended two post-natal visits increased by nearly 21 percent. The likelihood of children (ages zero to 5 year olds) being taken to local health facilities to be weighed increased by 30 percent above baseline levels. At the same time, beneficiary households increased the likelihood of completing their children’s vaccinations by approximately 11 percent. Increased usage of health services also contributed to an increase in the share of households that treated their children for diarrhoea by 13 percent. Beneficiary households, however, did not demonstrate increased usage of recommended vitamins (iron tablets for pregnant women or vitamin A for children), which is partly due to insufficient stocks. There is no evidence yet of changes in long-term health outcomes – such as child malnutrition and mortality rates – which are not expected to be observed over the short timeframe of the three-year survey.

The benefits of the program also extended to neighbouring households that did not receive cash transfers but nevertheless changed their behaviours (i.e., a “spill-over effect”). Their pre-natal visits increased by over 6 percent compared to pre-program levels and child weighings increased by 10 percent compared to pre-program levels. Changes among these neighboring households may have been encouraged by the positive example of beneficiaries as well as PKH facilitators who played an important role in helping to spread information about healthy behaviours.

The pilot program had little impact on changing education behaviors. For children from beneficiary households who were already in school, the program helped to increase the time they spent in school. Junior secondary students spent approximately 40 minutes more in school per week, while primary school students spent 20 more minutes per week. During the initial pilot phase, however, PKH had no impact on drawing more children into the education system and keeping them in school. Enrolment rates, drop-out rates, and the incidence of wage labor remained unchanged after three years. This is likely because the quarterly cash transfers were too late and too little. Payments did not coincide with the academic school year, so parents did not have the funds when needed. Also, the amount received was not adequate to cover additional fees that parents must usually pay, especially for junior secondary school.¹

PKH is a cost-effective program due to limited leakage of benefits and reasonable overhead costs. Program administrative costs – averaging approximately Rp 200,000 per beneficiary per year – accounted for 14 percent of total spending in 2008 and 2009. This is down from 17 percent during the first year of implementation, which involved greater “start up” costs, especially related to capital spending. These costs are moderate in comparison with other cash transfer programs in Indonesia, and compare relatively well to CCT programs in other countries. As the program goes national, average administrative costs could be expected to further decline.

Because of early implementation difficulties and delays in some crucial processes, the evaluation results presented herein do not represent impact estimates from a well-implemented conditional cash transfer and therefore they may be underestimates. In particular, information dissemination was limited, resulting in low levels of awareness among village officials and local service providers. Also, during the first two years compliance verification systems were not fully functional, resulting in few (if any) penalties for households that did not comply with program conditions. A management information system was not operational, contributing the delays in payment deliveries. Although sub-districts (*kecamatan*) included in the pilot were deemed to have sufficient supply of health and education facilities, households in rural areas faced difficulties in accessing community health centers and junior secondary high schools. Approximately 10 percent of surveyed health centers did not have readily available stocks of vaccinations or appropriately stored vitamin supplies.

Since the launching of PKH, however, there have been continuous improvements in the systems that support implementation of the program. The management information system and compliance verification system, for example, are now functional. As of late 2010, over 85 percent of households were captured in the compliance verification system (a component of the MIS system). Also, changes in implementation procedures address some of the problems flagged by the recent assessments. For example, the payment schedule is now synchronized with the academic year. With these changes, the impact of the program in encouraging positive health and education behaviors is expected to be greater.

PKH has emerged as one of the government’s key social assistance programs. As of 2010, the program has expanded to reach 810,000 households across 13 provinces. According to the current national medium-term development plan (RPJMN), the program will be doubled to reach more than 1.5 million poor households by 2012. The Government of Indonesia is currently considering expanding coverage to 3 million households by 2014. Before this expansion continues, there is a need to clarify the role of PKH

¹ On average, the costs of junior secondary schooling for households in the poorest quintile equals 25 percent of per capita consumption, less than the PKH cash transfer that is equal to 15-20 percent of per capita consumption.

in the integrated social safety net that Indonesia is starting to develop. Also, as the program expands there is still room for improvements in the design and implementation of the program to maximize its impact. To this end, the following lessons learned and recommendations are proposed:

1. **Continue to target all chronic poor in Indonesia during the expansion, while developing a lighter version of the program for eligible households located in supply-deficient areas.** Not all areas with chronic poor will meet all supply-side criteria; in such areas, a preparatory PKH program with minimal and affordable conditions can provide an introduction to the principles of a conditioned cash transfer, the program's facilitators, service providers, and household responsibilities. Cross-government efforts should focus on improving health and education facilities in "supply poor" areas, which may include innovative programs such as the community-based block grant program, PNPB-*Generasi*. When the supply of services catches up, households should graduate to regular PKH.
2. **Re-design benefits to improve PKH's impacts on drawing children into the education system and keeping them in school.** Disbursements should arrive shortly before school fees are assessed while payments for meeting education conditions need to be revised upward to meet the total costs of education. Payments need not be of equal size; consider providing a greater share of the annual transfer amount before school fees are due. Financial rewards for successfully completing the primary-to-secondary school transition as well as increased facilitator outreach to dropouts can increase PKH's effectiveness during the risky transition phase.
3. **Continuously improve program implementation and strengthen coordination among all relevant agencies.** Implementation studies show roadblocks in the PKH implementation process (for example, compliance verification forms not been delivered on time) can lead to further delays (for example, in payment disbursement) which diminish the positive household impacts of the program. The PKH program will not run at peak effectiveness and efficiency until all agencies have improved coordination and can reliably deliver the right amount of assistance when it is needed. PKH's sophisticated MIS system also requires inter-agency coordination and a common understanding of the system's capabilities and its role in the continuous program reform cycle.
4. **Maximize impact by ensuring that all social assistance programs work in concert to protect the most vulnerable.** Currently it is unlikely that PKH households will receive all complementary services and programs like Jamkesmas (the health service fee waiver), Raskin (the subsidized rice program), or the education ministry's scholarship program (for PKH students who continue on to senior secondary education) even though they are eligible. GOI efforts to establish a unified national registry will jumpstart the coordinated approach to targeting the most vulnerable with a set of complementary initiatives. In the future, PKH facilitators should be responsible for checking that PKH households receive all benefits to which they are entitled and provide remedies for households who may have been left out.
5. **Prepare for future rounds of implementation assessments and household surveys to track progress.** Implementation assessments are instrumental in ensuring continued progress towards implementing reforms and improving program performance. Budget and prepare for future follow-up survey to assess the impact of PKH on long-term outcomes including child and maternal mortality rates, and school transition rates. Future studies can incorporate piloting and testing the additional benefits of complementary activities, such as awareness programs that help parents to understand the benefits and recommended practices for vitamins, natal visits, child weighing and vaccinations.

1 Introduction

Household conditional cash transfer (CCT) programs offer countries a new way to tackle poverty and prevent the transmission of poverty to future generations. They do so by providing regular cash payments to families on the condition that they fulfill basic obligations, which are typically related to the usage of health and education services. The Government of Indonesia launched its own household conditional cash transfer program, *Program Keluarga Harapan* (PKH or Hopeful Family Program), in order to improve lagging health and education outcomes among extremely poor households. The program delivers quarterly cash transfers to very poor households with children or lactating/pregnant women provided that they fulfill a range of health and education-related obligations. When the pilot program first began in 2007, cash transfers were delivered to over 300,000 poor households in 7 provinces. Since then, PKH has expanded to over 700,000 households and is now active in 13 provinces.³

PKH has emerged as one of the government's strategies to reduce poverty and reach its Millennium Development Goals (MDGs). The Government of Indonesia is currently considering expanding coverage to 3 million households by 2014. The government is also piloting other innovative approaches, including a complementary community conditional cash transfer program – *PNPM Generasi Sehat dan Cerdas* (*Generasi*, or Healthy and Smart Generation Program) – that was piloted and evaluated alongside PKH.

Programs such as PKH and *PNPM Generasi* stand apart from earlier generations of poverty reduction programs in that rigorous monitoring and evaluation methods were incorporated into the programs' design from the beginning. Both pilots randomized sub-district participation into the design of the program, making it possible to directly measure program impact. A baseline survey of participating (treatment) and non-participating (control) sub-districts and households was conducted in 2007. Spot checks were carried out in 2009 to assess the implementation, institutions, and processes of the PKH program. Another survey was conducted during late 2009 to collect data for the final impact evaluation of both programs. This has provided powerful data and information for the government and its development partners to assess the effectiveness of the program and resolve problems with design and implementation before the programs are scaled up.

This report presents the main findings from the impact evaluation of the PKH pilot. Chapter 2 describes the design of the household CCT program and a description of quality of implementation at the time of the impact evaluation. Chapter 3 summarizes the findings from the implementation assessments of the pilot. Chapter 4 reviews the design of the impact evaluation and provides an explanation about the research methodologies used. The main findings of the evaluation are presented in Chapter 5. Chapter 6 presents a brief analysis of the costs of implementing the PKH program and PKH's cost-effectiveness. Finally, Section 7 provides recommendations to policy-makers, applying findings from the evaluation to formulate next steps that should be considered during the planned expansion of the program.

Results from this impact evaluation are also included also in the PKH background chapter of the "Indonesia Household Social Assistance Public Expenditure and Program Review", which is a larger report analyzing the effectiveness, implementation success, and efficiency of all GOI household-based social assistance initiatives – see World Bank (2011b) and World Bank (2011c) for the report and background chapter respectively.

³ Based on PKH administrative data (Kemensos, 2010) the program reached 703,338 households in 13 provinces as of February 2011.

2 Program Design

2.1 Program Background

In response to climbing world oil prices in 2005, the Government of Indonesia decided to cut domestic fuel subsidies to stem major fiscal losses. They also decided to apply some of the savings from the subsidy reduction to social assistance programs with the intention to mitigate the negative effects of fuel price increase for poor and vulnerable households. This fuel subsidy compensation scheme (*Program Kompensasi Pengurangan Subsidi Bahan Bakar Minyak*, PKPS-BBM) included: health insurance for the poor (*Asuransi Kesehatan Miskin*, Askeskin); rural infrastructure program (*Infrastruktur Pedesaan*, IP); a school aid program (*Bantuan Operasional Sekolah*, BOS); and a temporary unconditional cash transfer program (*Bantuan Langsung Tunai*, BLT). This was the first national, large-scale cash transfer program to be implemented in Indonesia.

The BLT program reached approximately 19.1 million households in 2005, and provided approximately US\$120 in four installments over a one-year period. Opponents of the program, however, criticized the targeting of the program. The program cast a wide safety net and transferred a significant portion of the program benefits to households that, though vulnerable, were above the poverty line.⁴ They also criticized the program based on the assumption that cash handouts would create dependency on the government and provide an incentive for poor households to work less. Many also feared that providing an unconditional transfer, with little monitoring of the usage of funds, would make it more likely that recipients would misspend the additional income on non-productive goods like tobacco or alcohol.⁵ In September 2006, the program drew to a close as planned; the other PKPS-BBM programs continued and formed the core of the government's households-centered social assistance programs.

Despite sustained economic growth and the launching of social assistance and other poverty reduction programs, Indonesia's human development outcomes among the poor remained a cause for concern. Maternal mortality rates were among the highest in Southeast Asia; for every 100,000 live births about 228 women died.⁶ Infant mortality and children-under-five mortality rates also remained much higher than in neighboring countries.⁷; the prevalence of underweight children under the age of five was estimated to be 18.4 percent in 2007.⁸ Many children were dropping out or did not continue from primary to junior secondary school; while primary school enrolment rates were 94 percent, junior secondary enrolment rates were only 65 percent.⁹ Policy makers responded by designing a new generation of social assistance programs that were better designed and targeted to provide assistance to poor families and communities, and ensure that future generations can escape poverty. These

⁴ High inclusion errors were partly the result of quickly compiling a beneficiary list so that benefits could be delivered in time to buffer households from the price increase shock.

⁵ The World Bank has reviewed and assessed the performance of the BLT program in light of these criticisms. The findings are available in "Social Safety Nets Indonesia: *Bantuan Langsung Tunai* (BLT) Temporary Unconditional Cash Transfer." Jakarta, Indonesia: World Bank 2010a (Forthcoming). The document is one of a series of policy notes summarizing current issues in the major household-targeted social assistance interventions launched by the Government of Indonesia. Also see the World Bank's "Targeting Effectiveness of Current Social Assistance Programs in Indonesia" that includes an assessment of the targeting performance of two rounds of BLT. The policy note is part of the Targeting in Indonesia Policy Paper Series that aims to examine all elements of a national targeting system in Indonesia, which will involve assessing the effectiveness of different targeting methods, mapping the most effective method to different targeting objectives, assessing the institutional, fiscal, political, social and capacity constraints facing targeting in Indonesia, and recommending implementation strategies.

⁶ Indonesia Demographic and Health Survey, 2007 (Government of Indonesia).

⁷ World Development Indicators, 2009. Comparison countries include: Malaysia, Philippines, Sri Lanka, Thailand, and Vietnam.

⁸ Basic Health Research, 2007 (Government of Indonesia).

⁹ World Bank, 2006.

showcased two conditional cash transfer programs: one community-based (PNPM *Generasi Sehat dan Cerdas*, or *Generasi*) and the other household-based (PKH).

2.2 Program Objectives

Household conditional cash transfer programs offer countries a new way to tackle poverty. These programs provide cash disbursements to families that fulfill basic obligations, which are typically related to increased usage of health and education services. By providing a financial incentive for families, the program contributes to improving short-term poverty alleviation. At the same time, in order to continue receiving the cash transfer, households must commit to improving preventative health care practices and increasing education enrollment rates. These investments in the family's human capital contribute to breaking inter-generational poverty by improving health and education outcomes for children to equip them for better opportunities in the future.

Two particularly successful models – the *Bolsa Familia* program in Brazil and the *Progresa* program in Mexico – triggered a replication of similar programs in Latin America, which has spread throughout the world. While country-by-country experience has varied, impact evaluations have largely concurred that CCT programs have generally been successful in increasing household consumption and decreasing poverty.¹⁰ These success stories inspired the Government of Indonesia to introduce and pilot PKH as a complement to the other social assistance and community development programs included in the national poverty reduction strategy.

In addition to boosting household consumption, evaluations of CCTs generally find that these programs have also had a positive effect on increasing use of health and education services. Virtually every program that has been credibly evaluated has found a positive effect on school enrolment and some have found increased usage of health facilities.¹¹ The evidence on final health and education outcomes, however, is mixed. International evidence has shown that although CCTs have increased the likelihood that households will take their children for preventative health check-ups, only in some cases has this been shown to improve child nutritional status among beneficiary households. Similarly, school enrollment rates have generally increased among program beneficiaries but there is less evidence that this has led to improvements in learning outcomes.

The overall aims of PKH are similar to CCT programs in other countries. The main overall objectives of Indonesia's program are: a) to reduce current poverty and b) to improve the quality of human resources among poor households. The government also identified four specific program objectives: (i) improving the socio-economic conditions of the poorest households, (ii) improving the educational level of children; (iii) improving the health and nutritional status of pregnant women, post-partum mothers, and children under 6 years in the poorest households; and (iv) improving the access to and quality of education and health services, especially for the poorest households. With these ends in mind, PKH is expected to also contribute to progress towards achievement of six of the eight MDGs.¹²

¹⁰ Fiszbein and Schady, 2009. The policy research report, drawing on evaluation findings from around the world, finds that CCTs have had, by and large, positive effects on household consumption and poverty (as measured by the headcount index, the poverty gap, or the squared poverty gap). They also report that CCTs have led to significant (and, in some cases, substantial) increases in the use of health and education services.

¹¹ Fiszbein and Schady, 2009. The authors note that these positive education effects in CCT evaluation results are sometimes found among some age groups and not others.

¹² For this reason, the duration of the program was initially planned until 2015, which coincides with the timeframe for achievement of the MDGs.

Beneficiary households are intended to stay in the program for a period of approximately two to four years. By the end of this time, the program aims to achieve improvements in the following welfare and human development indicators:¹³

- a. Reductions in the poverty level of beneficiary households;
- b. Reductions in child malnutrition levels;
- c. Increases in the consumption of high-energy and high-protein foods;
- d. Increases in the average education attainment level among children;
- e. Increases in the attendance rate of children from beneficiary households; and,
- f. Reductions in the number of child working hours or work participation rates among children.

¹³ See Table 2.1 for a full list of PKH's success indicators. In addition, the Government of Indonesia also identified a series of general program performance indicators. For example, at least 60 percent of program benefits are intended to reach the poorest 20 percent of the population.

Table 2.1 PKH Success Indicators

<p>Welfare</p> <p>Objective: Household economy of poor families improved.</p>	<p>Health</p> <p>Objective: Increased access to and utilization of health services by poor pre-school aged children, pregnant and breast-feeding mothers.</p>	<p>Education</p> <p>Objective: Use of education by poor school aged children increased.</p>
<ol style="list-style-type: none"> 1. Per capita annual total household expenditures increased relatively by 13% 2. Share of food expenditures in the household budget increased by 4 percentage points 3. Expenditure on nutrient dense foods (meat, fruit and vegetables) increased relatively by 2% 4. The decrease in household poverty levels of PKH participants after 2 to 4 years of program implementation. 5. Decline in poor nutritional status for children under five after 2 to 4 years of the program. 	<ol style="list-style-type: none"> 1. Percent of women who receive at least four prenatal care visits increased by 10 percentage points 2. Percentage of pregnant women with at least two doses of tetanus toxoid vaccine increased by 10 percentage points 3. Percentage of pregnant women who receive at least 12 sachets of Iron tablets increase by 10 percentage points 4. Percentage of deliveries assisted by trained professionals increase by 10 percentage points 5. Percentage of mothers and infants who receive postnatal care at least two times increase by 10 percentage points 6. DPT3 coverage (proportion children age 12-23 months who received three doses of DPT) increased by 10 percentage points 7. Measles coverage (proportion of children age 12-23 months who were immunized with measles vaccine before age 12 months) increased by 10 percentage points 8. Fully immunized child coverage (among 12-23 months olds immunized before age 12 months) increased by 10 percentage points 9. Percentage of children under five who have received 2 vitamin A capsules in the past 12 months increases by 10 percentage points 10. Percent of children age 0-3 taken to health control and weighed in the last month increased by 15 percentage points 11. Percentage of infants with monthly weights increasing appropriately (monthly increase of >500g for under 6 months and >300g for 6-11 month olds) increased by 10 percentage points 	<ol style="list-style-type: none"> 1. Primary school (SD) gross enrollment of children 7 to 12 years old increased by 5 percentage points 2. Middle school (SMP) gross enrollment of children 13 to 15 years old increased by 10 percentage points 3. Attendance of children enrolled in primary school increased by 10 percentage points. 4. Attendance of children enrolled in middle school increased by 10 percentage points. 5. Drop-out rate decreased by 5 percentage points 6. Class repetition rate decreased by 5 percentage points 7. Increasing of the average length of school of the children coming from poor families after 2 to 4 years program implementation. 8. Decreasing the number of working hours or no more children working after 2 to 4 years of program implementation.
<p>Targeting Performance: At least 60% of the program’s benefit enjoyed by 20% of the poor.</p>		

Source: Government of Indonesia, Ministry of Social Affairs (Kemensos)

2.3 Geographic Targeting

The government piloted and tested *Program Keluarga Harapan* and *PNPM-Generasi* in six provinces and the city of Jakarta. In the trial stage, the conditional cash transfer pilots were implemented in five common provinces: West Java, East Java, North Sulawesi, Gorontalo, East Nusa Tenggara (NTT). PKH was implemented in an additional two regions: West Sumatra and DKI Jakarta. The provinces were selected based on their willingness to participate in the pilot, and extent to which they represented Indonesia's diversity. The final selection for the pilot includes provinces with varying characteristics: high/medium/low poverty rates, both urban and rural areas, coastal areas and islands, and areas that are both highly accessible and difficult to access.¹⁴

Within each province, the richest 20 percent of districts (*kabupaten*) were excluded from both CCT programs. The ranking was based on district poverty rates, incidence of malnutrition, and transition rates from primary to secondary schooling. Districts receiving the rural community-driven development project (Kecamatan Development Program, KDP – the precursor to *PNPM Rural*) were eligible for *Generasi*. From these, 20 were selected for participation in *Generasi* and stratified by province. All eligible districts in Gorontalo and North Sulawesi were selected, while in NTT, East Java and West Java selection was randomized.¹⁵ PKH eligible districts were drawn from the remaining pool of districts, as well as eligible districts in West Sumatra and DKI Jakarta. For this reason, there was no overlap between the two programs. Furthermore, the PKH targeted districts tend to be more Java-based than *PNPM-Generasi*, which was concentrated in Sulawesi and NTT. In total, 49 districts and cities were considered eligible for PKH (Figure 2.1).

Sub-districts that were considered “supply-side ready” were randomly selected to participate in the program. Readiness was determined by a statistical analysis of existing health and education facilities and providers (Figure 2.2).¹⁶ The threshold for readiness criteria was set at a lower level for sub-districts (*kecamatan*) off-Java, which tend to have a more limited supply of health and education services than for sub-districts on Java. This was done to ensure greater inclusion of off-Java sub-districts in the pilot program. Based on the application of these criteria, a total of 588 sub-districts were selected for participation in the pilot program. Sub-districts were then randomly assigned for participation in the pilot program. In the end, 259 sub-districts were included in the PKH treatment groups (Figures 2.1). The remaining 329 sub-districts were retained as control groups. The majority of PKH-eligible sub-districts (both treatment and control areas) were on Java. The remainder was split, almost equally, between NTT and Sulawesi.

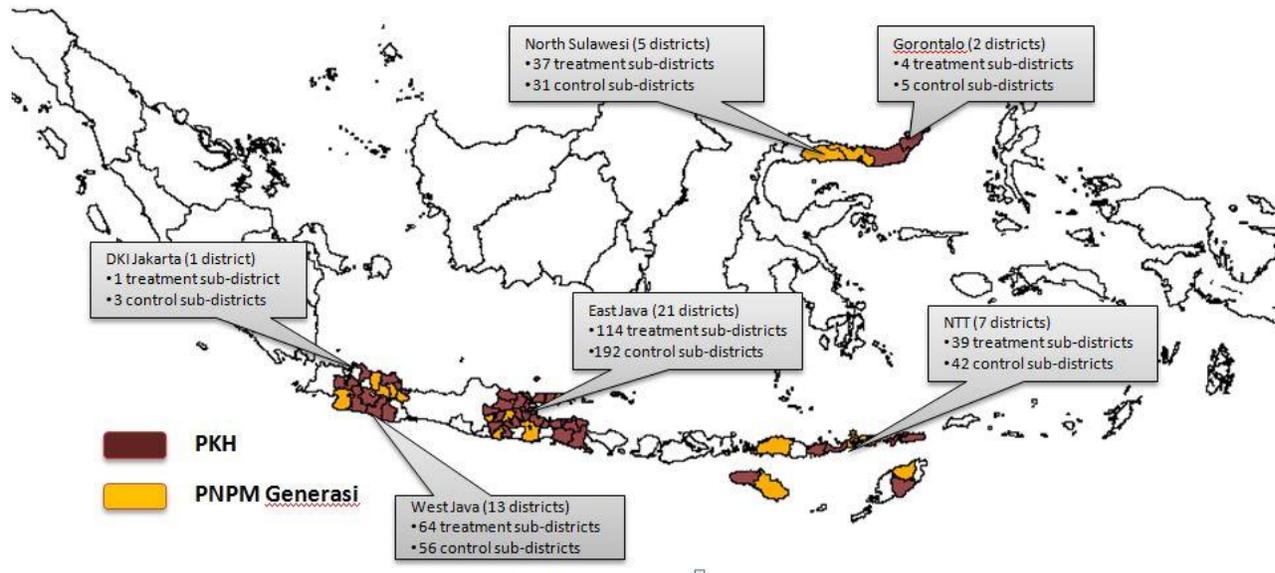
During early 2008, the government rolled out the program in the following six areas: Nanggroe Aceh Darussalam, North Sumatra, Banten, South Kalimantan, West Nusa Tenggara, and the Yogyakarta Special Region. The government plans to continue expanding this program in the future to cover all provinces and cities in Indonesia.

¹⁴ World Bank, 2008 (Sparrow et al.).

¹⁵ World Bank, 2008 (Sparrow et al.). Within the selected districts, sub-districts were not eligible for *PNPM Generasi* if they had participated in the Urban Poverty Program (UPP) or where less than 30 percent of the villages (*desa*) and urban precincts (*kelurahan*) are considered as rural by Statistics Indonesia (BPS). This final screening yielded 300 *PNPM Generasi* eligible sub-districts, which were randomly assigned to incentivized treatment, non-incentivized treatment, and the control group. Randomization was stratified by district.

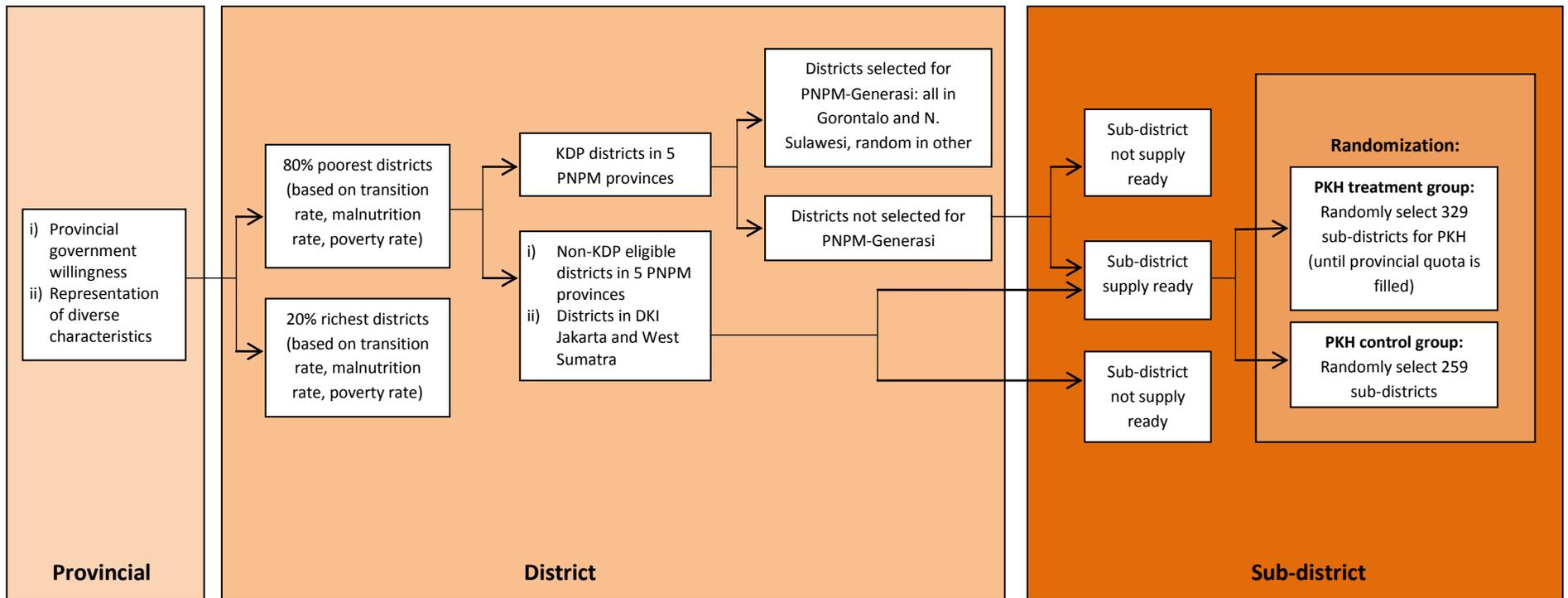
¹⁶ World Bank, 2008 (Sparrow et al.). Data to determine supply-side readiness was drawn from the Village Potential Statistics (PODES), a Statistics Indonesia survey that provides information about village characteristics for all of Indonesia, with a sample size of approximately 65,000 villages.

Figure 2.1 Map of Districts Piloting the Household Conditional Cash Transfer Program



Note: World Bank, based on data from the Ministry of Social Welfare (Kemensos)

Figure 2.2 Area selection and sub-district randomization



Based on: Sparrow et al., World Bank 2008.

2.4 Beneficiary Selection

Program Keluarga Harapan targeted households classified as extremely poor (*Rumah Tangga Sangat Miskin*, RTSM) by Statistics Indonesia using both economic and asset-based poverty measurements.¹⁷ To create the initial beneficiary roster, Statistics Indonesia first surveyed poor and extremely poor households, which were drawn from the 2005 BLT beneficiaries list (known as PPLS05). Approximately 30-40 percent of BLT beneficiaries were not included in the resulting roster. To minimize exclusion errors they also conducted “sweepings” in targeted sub-districts, which involved interviewing poor households with the intent to identify newly poor households that were not included in PPLS05. The sweeping exercise was limited, however, and only resulted in the addition of approximately 5 percent of households to the PPLS05 list. The agency then applied a proxy-means test (PMT) to all poor households to identify the extremely poor households targeted by PKH.¹⁸ From this pool of households, Statistics Indonesia used health and education survey data to demographically screen households on the roster and identify eligible household that met program criteria:¹⁹

- Households with pregnant and/or lactating women.
- Households with children aged 0-15 years.
- Households with children aged 16-18 years who have not yet completed 9 years of basic education.

Statistics Indonesia delivered the list of eligible and poor households to the implementing agency – Ministry of Social Affairs (Kemensos) – which was responsible for finalizing and approving the PKH beneficiary list. To carry out this responsibility, the PKH Implementation Unit (UPPKH) conducted a series of assemblies to review the data with the potential PKH candidate households and approve the final PKH beneficiary list. Originally the program was designed to only include “very poor” households. Additional resources became available later to include a small percentage of households that were identified as “poor.”²⁰ Not all eligible poor households, however, were included in the pilot program. A cut-off point was established and PKH benefits were then rationed to eligible poor households who were closer to the bottom end of the consumption distribution. In the end, a total of approximately 430,000 beneficiary households were identified through this selection process.

2.5 Transfer Delivery and Verification Mechanisms

Typical of conditional cash transfer program elsewhere, *Program Keluarga Harapan* delivers a quarterly cash transfer to mothers. Women are more likely to be primary caregivers and, as such, are more likely to take care of the daily nutritional and health needs of children, and ensure that children attend school. The program, therefore, provides an unmeasured empowering benefit for women by providing them with greater access to (and potentially control over) resources for investing in their families. The PKH cash benefit is transferred directly to mothers through the nearest post office. There are no specific

¹⁷ An extremely poor household is defined by Statistics Indonesia as one whose living conditions are inadequate, whereby a large portion of their income is used for basic staple food consumption and they are unable to afford medical treatment except at the community health clinic or other public health facilities subsidized by the government. They are also unable to buy clothing once a year, cannot afford to send their children to school or can afford schooling for their children only until junior high school.

¹⁸ The PMT consisted of 29 variables that included housing characteristics, education attainment levels, fuel sources, type of employment and access to health and education services.

¹⁹ The eligibility verification process relied on data from the Health and Education Basic Service Survey (*Survei Pelayanan Dasar Kesehatan dan Pendidikan*), a Statistics Indonesia survey.

²⁰ Ayala, 2010.

rules about how the transfer must be used by beneficiary households. The program designers hoped, however, that beneficiary families would use the transfer to contribute towards the health of women and children as well as basic education of their children.

The amount of the cash transfer was designed to be approximately equal to 15-20 percent of the estimated consumption of poor households. Annual household disbursements vary between Rp 600,000 and Rp 2.2 million per year. The amount is based on the number of the children in the household and their ages (Table 2.2). For example, if a mother is pregnant and/or has children aged 0-6 years, she will receive Rp 1,000,000 per year or Rp 250,000 per quarter, regardless of the number of under-five children. If a mother has two primary-school aged children (6-12 years) and one secondary-school aged child (13-15 years) and these children are attending school, she will receive Rp 1,800,000 per year or Rp 450,000 per quarter. A mother with a child 0-6 years and three primary school-aged children will receive Rp 2,200,000 per year, the maximum possible annual transfer amount.

Table 2.2 Calculation of Annual Cash Transfer Amounts (Rupiah, per household)

Fixed cash transfer	200,000
Cash transfer for per household with	
a. Child aged less than 6 years	800,000
b. Pregnant or lactating mother	800,000
c. Children of primary-school age	400,000
d. Children of secondary-school age	800,000
Minimum transfer per household	600,000
Maximum transfer per household	2,200,000

Source: Government of Indonesia, Ministry of Social Affairs (Kemensos)

Each household continues to receive their allocation in quarterly tranches as long as they meet the health and education conditions, which were specified at the beginning of the program. These conditions include the following:

- | | |
|--|---|
| Households with pregnant or lactating women | <ul style="list-style-type: none"> i. Complete four antenatal care visits and take iron tablets during pregnancy. ii. Be assisted by a trained professional during the birth. iii. Lactating mothers must complete two post-natal care visits. |
| Households with children aged 0-6 years | <ul style="list-style-type: none"> iv. Ensure that the children have complete childhood immunization and take Vitamin A capsules a minimum of twice a year. v. Take children for growth monitoring check-ups (monthly for infants 0-11 months, and quarterly for children 1-6 years). |
| Households with children aged 6-15 years | <ul style="list-style-type: none"> vi. Enroll their children in primary school and ensure attendance for a minimum of 85 percent of school days. vii. Enroll junior secondary school children and ensure attendance for a minimum of 85 percent of school days. |
| Households with children aged 16- | <ul style="list-style-type: none"> viii. Enroll their children in an education program to complete 9 |

18 years but have not completed years equivalent.
nine years of primary and
secondary school

Trained PKH facilitators provide beneficiaries with information and advice and are responsible for explaining the importance of adhering to the stipulations and conditions of PKH so that the cash support they receive will not be discontinued. The verification process relies on health and education service providers, which are delivered back to the district PKH office (regional UPPKH). The officials are expected to input the compliance verification data online before initiation of following payments. If, at any time, the health and education conditions are not being met, beneficiary households will at first receive a warning letter that will be delivered by a PKH facilitator. The second breach will result in a ten (10) percent discount of the benefit. After the third breach, non-compliant households will be expelled from the program and not receive any further transfers.

2.6 Complementary Programs

PKH is one of the government's eight major household-centered social assistance programs (Table 2.3). A temporary unconditional cash transfer program (BLT) was deployed in 2005 and again in 2008-09 to mitigate the inflationary impact caused by fuel price adjustments as well as to protect vulnerable households from the effects of the global financial crisis. Raskin aims to distribute subsidized rice to 18 million families across the country. Jamkesmas is a health insurance for the poor program that covers 18.2 million households, making it the largest permanent program in terms of coverage. There is a range of cash transfer programs that provide assistance to students from poor families for education costs. These programs join an array of small programs targeting highly vulnerable groups including at-risk children (PKSA), the disabled (JSPACA) and vulnerable elderly (JSLU). These programs form the basis of an emerging social safety net in Indonesia.

Several national programs work alongside PKH to improve the provision of basic health and education services for poor families, including the Operational Health Assistance program (*Bantuan Operasional Kesehatan*, BOK) and the national School Aid Program (*Bantuan Operasional Sekolah*, BOS). In addition to these, the government decided to also launch a complementary community-based conditional cash transfer program, PNPM-*Generasi*. The program, piloted under the flagship National Community Empowerment Program (*Program Nasional Pemberdayaan Masyarakat*, PNPM-*Mandiri*), provides annual block grants to communities that have committed to improve health and education outcomes. The grants can be used for a variety of purposes to improve the supply of local health and education services, such as hiring extra midwives for the village, improving health buildings and schools, providing school uniforms and education materials, or building a road to improve access to facilities. The amount of the grant for subsequent years is based on village performance against health and education development indicators.

Table 2.3. Indonesia has 8 major household-centered social assistance programs
(Summary of major GOI household-centered social assistance programs as of 2010)

Name	Transfer Type	Target group	Target number of beneficiaries	Coverage	Benefit level	Key executing agency
1. BLT*	Cash	Poor & near-poor households	18.7 Mn HHs	National	IDR 100,000 per month for 9 months	Ministry of Social Affairs (Kemensos)
2. Raskin	Subsidized Rice	Poor & near-poor households	17.5 Mn HHs	National	14 kg rice per month	Bureau of Logistics (BULOG)
3. Jamkesmas	Health service fees waived	Poor & near-poor households	18.2 Mn HHs	National	Varies depending on utilization	Ministry of Health (Kemenkes)
4. BSM	Cash & Conditions	Students from poor households	4.6 Mn students	National, but not full scale	IDR 561,759 per year	Ministry of National Education (Kemdiknas) & Ministry of Religious Affairs (Kemenag)
5. PKH	Cash & Conditions	Very poor households	810,000 HHs	Pilot	IDR 1,287,000 per year	Kemensos
6. PKSA	Cash, Conditions, & Services	Vulnerable children	4,187	Pilot	IDR 1,800,000 per year	Kemensos
7. JSPACA	Cash & Services	Vulnerable disabled	17,000	Pilot	IDR 3,600,000 per year	Kemensos
8. JSLU	Cash & Services	Vulnerable elderly	10,000	Pilot	IDR 3,600,000 per year	Kemensos

Source: World Bank Staff. *During last usage in 2008-09.

A recent evaluation of the *Generasi* program found that improving services through conditional block grants improves some key development outcomes, especially in low-performing areas. The program successfully improved participation in village health post activities, the frequency of weight checks for young children, and the number of iron sachets that pregnant women received through antenatal care visits.²¹ The program also demonstrated a decrease in malnutrition rates for children aged 0-3 years old, and increased school participation rates for students aged 7-12 years old. PNPM-*Generasi* can be especially effective in regions where the provision of health and education services is very limited (i.e., the program was about twice as effective in areas at the 10th percentile of service provision).

²¹ Benjamin Olken, Junko Onishi and Susan Wong, "Indonesia's PNPM *Generasi* Program: Final Impact Evaluation Report," October 2010 (Forthcoming).

3 Program Implementation Assessment

Implementation assessments of the *Program Keluarga Harapan* pilot provide a snapshot of the quality of the main operational aspects of the program, which is useful in interpreting the results of the impact evaluation. Because PKH is one of the government's largest "next generation" social assistance programs, it has been closely observed and monitored. The Center for Health Research at the University of Indonesia, for example, conducted a "spot check" exercise to observe implementation of the program in nine districts across six provinces, during October 2009 – February 2010. In addition, SMERU, an Indonesian research institute, conducted a qualitative assessment of the program's performance from 2007 until 2010. Although the program has been continuously improving, there were a series of implementation problems during the initial three years of the program. These problems may have contributed to dampening the effect of the program on improving health and education behaviors and outcomes.

3.1 Program Socialization

As is common practice for most social assistance programs and other government-provided services in Indonesia, socialization and advertising activities were delegated to the Ministry of Communication and Information (Kemenkominfo). An operations engineering report, however, found that program socialization for PKH was deficient in content, frequency, and intensity.²² Program beneficiaries did not receive written materials and time allocated for information dissemination was limited.

Spot checks revealed that only beneficiaries were informed about the program. In order to avoid the potential for jealousy and conflict, village officials and non-beneficiary households in the same locations were not informed about the program.²³ Village officials and local service providers were therefore often unaware of the program. In five surveyed treatment areas, for example, all midwives complained that they were not involved in the program and one had not even heard of PKH.²⁴ Even PKH program officers were sometimes unable to answer simple questions about program goals or eligibility criteria. As a result, many stakeholders reportedly perceived PKH as if it were an unconditional cash transfer.²⁵ Lack of socialization also led to false notions of eligibility for social assistance – for example, beneficiaries and PKH facilitators alike were unaware that PKH beneficiaries were eligible for all other government social assistance schemes for poor households.

3.2 Verification Systems

The program's conditionality verification system did not start working as outlined in the program implementation manual until 2010. This was largely due to the lack of a functioning management information system (MIS). There were four main issues that contributed to this problem. First, the forms provided by UPPKH to record the new flows of information were not always available to personnel at the relevant offices. Service providers found the forms confusing and lacked the capacity to fill them out in a timely manner. Second, there were too few human resources at both service providers (including PT Pos, health providers and schools) and the local UPPKH offices to efficiently handle the flows of information that were being generated. As a result, backlogs in data entry and processing

²² Ayala, 2010.

²³ SMERU, 2011.

²⁴ SMERU, 2011.

²⁵ Center for Health Research, University of Indonesia, 2010.

occurred almost immediately. Third, in some regions the information recorded on forms did not enter an MIS system capable of aggregating information and transmitting it on to the PKH units responsible for managing demographic updates and compliance verification results.²⁶ Finally, personnel at education and health service providers received too little training prior to the introduction of PKH and were unprepared to assist in the delivery the unique outreach, intake (at the service center), and data recording processes that the PKH program utilizes.

During the first two years of implementation, verification of compliance and recalculation of benefits were not fully operational. As a result, there were few – if any – penalties for non-compliant households. Most households continued to receive their initial allocations; the actual average annual payments per household did not decrease over the three-year pilot evaluation period (Table 3.1). There are indications, however, that beneficiary households were aware of the threat of losing full payment in areas where facilitators made extra efforts to inform them about the consequences of non-compliance. In remote areas, however, facilitators reportedly spent more time traveling and completing their administrative responsibilities, than working directly with families and informing them about program expectations.²⁷

Table 3.1 Actual PKH Payments

	2007	2008	2009
Number of <i>kecamatan</i>	337	671	732
Number of households per <i>kecamatan</i>	1,151	605	923
Average total payment per <i>kecamatan</i> (Rp)	1,506,687,189	1,145,539,115	1,207,852,971
Average payment per year per household	1,308,967	1,265,341	1,308,377

Source: Government of Indonesia, Ministry of Social Affairs (Kemensos)

3.3 Adequacy and Timing of Payments

The amount of the payments may not be adequate for beneficiary households to meet some of the program’s conditions. For example, the poorest 20 percent of households in Indonesia spend, on average, Rp 2.8 million for a year of secondary education per student, which represents approximately 30 percent of total household expenditures. The additional income that a family receives from PKH is not likely to be sufficient to enable them to afford to enroll children in secondary education, especially considering that the average PKH family has over five children. Similarly, midwives reportedly cost anywhere from Rp 150,000 in some rural areas to as much as Rp 800,000 in urban areas, which may be unaffordable for beneficiaries even after receiving the PKH benefit.²⁸ This problem was further compounded by delivering the payment in tranches, which reduced the amount of additional funds for school or midwife fees.

Households tend to use PKH funds immediately for daily consumption needs and do not tend to save for planned education and health costs.²⁹ Therefore, it is important to time payments so that additional

²⁶ Additional complications were power outages; a mismatch between BPS household data (that higher-level PKH implementing units were using) and PKH-collected demographic data on the same households (which lower-level PKH implementing units were collecting); and a lack of advance awareness of service providers and beneficiaries regarding the conditions households are responsible for meeting in order to receive the cash transfer portion of PKH.

²⁷ SMERU, 2011.

²⁸ SMERU, 2011.

²⁹ SMERU, 2011.

funds are available when needed by beneficiary families. For example, if payments are timed to arrive just before the calendar school year begins, parents will have the funds needed to afford school registration fees. During the first two years of PKH operation, however, payments did not coincide with school placement fees. While these fees are typically due in May, payments were only made in July (during 2008 and 2009) or later (November in 2007). Moreover, actual disbursements were sometime later than scheduled disbursements. Approximately 11 percent of interviewed beneficiaries reported that payment was delayed two weeks from the scheduled disbursement date.³⁰

3.4 Inter-Agency Coordination

The success of the CCT program depends on ensuring that public service providers are able to respond to increased usage. For this reason, close cross-agency collaboration and coordination is critical. A wide range of central agencies collaborated in designing and implementing the PKH program, including: the National Development Planning Agency (Bappenas), the Coordinating Ministry for Social Welfare (Kemenkokesra), the Ministry of Social Affairs (Kemensos), the Ministry of National Education (Kemdiknas), the Ministry of Health (Kemenkes), Statistics Indonesia (BPS), the Ministry of Communications and Information Technology (Kemenkominfo) and the national post office (PT Pos). A centralized program implementation team (UPPKH) was established to oversee program implementation and is housed in Kemensos. Local implementation of the program, meanwhile, falls under the responsibility of program units at the provincial and district/municipality levels.

An important aspect of inter-agency coordination for conditional cash transfer programs is to ensure that health and education services are prepared for additional uptake of patients and school children. To address this issue, only districts with sufficient availability of services (i.e. "supply-ready") were eligible for participation. Despite this precaution, implementation assessment reports found that there were still significant problems in service availability in the *kecamatan* where PKH was piloted. 12.5 percent of all monitored *puskesmas*, for example, did not have complete vaccination stocks and interviewed beneficiaries also complained about storage of vitamins.³¹ This was especially a problem in NTT province where *posyandu* services were difficult to access from remote areas (some households would have to walk for hours to reach the closest one) and there were limited staff and midwives to provide all the required services.³² Similarly, while all households had easy access to primary schools, those in areas such as NTT still had difficulties in reaching junior secondary schools – a problem that was exacerbated by the unavailability of public transportation services.

Inter-agency coordination difficulties also emerged in the targeting of household-centered social assistance programs. Although Jamkesmas is meant to provide health insurance coverage for the poor, not all PKH households were included as beneficiaries. PKH households were often under the impression that their PKH cards would be sufficient to access all health services. Without Jamkesmas cards, some interviewed beneficiaries reported that they still could not afford to access local public health services.³³ Similarly, few PKH households were also the recipients of programs implemented by the Kemdiknas and the Ministry of Religion (Kemenag), which aim to provide assistance to poor students to enroll and stay in school.

³⁰ Center for Health Research, University of Indonesia, 2010.

³¹ Center for Health Research, University of Indonesia, 2010.

³² SMERU, 2011.

³³ Center for Health Research, University of Indonesia, 2010.

A mostly complete physical supply of services is likely not enough to effectively change long-term behaviors and expectations among PKH households. All affiliated service providers have to be PKH “owners” in the sense that they are all invested in providing conditioned services, outreach, and follow-up to beneficiaries. For example, health service providers not should not only record a household’s progress with conditioned services but should also provide information about healthy practices at home; should provide access to other low-cost or no-cost health services either publicly or privately provided; and should provide encouragement and reminders to new PKH households to continue complying with conditions and visiting modern health care facilities for regular treatment. In PKH’s early stages, service providers were not generally PKH program owners in this way and were given no special training to learn how to function as PKH program owners.

3.5 Improvements in Implementation

Over 2009 and 2010, PKH administrators instituted reforms to address some of the implementation challenges and bottlenecks have eased. In particular, the MIS system is now fully functional and demographic updates are being processed. As of late 2010, over 85 percent of households were captured in the compliance verification system (a component of the MIS system). The content of the verification forms have been revised to make them easier for service providers to use while the printing and supply chain of those forms has been rationalized in consultation with PT Pos, who is responsible for delivering the forms, and the PKH facilitators, who are responsible for alerting households to actions they must take as well as scheduled delivery of PKH funds.

In addition, payment schedules have been changed back to the original quarterly schedule and are synchronized with the academic year. The revision and delays in quarterly payments were due in part to the mismatch between records, lack of household verification, and lack of information throughput in the MIS system. The improvements mentioned above to the sub-processes in the overall MIS system as well as to the form printing and delivery supply chain have already alleviated the payment backlog problem and UPPKH has explicitly enforced the original quarterly payment schedule; this payment schedule is now synchronized with the school fee schedule.

4 Program Evaluation Design

4.1 Evaluation Indicators

The initial allocation of PKH funds to sub-districts and the evaluation survey instruments were designed so that program impacts could be measured accurately. A baseline survey, fielded prior to the first PKH transfer, was fielded between June and August 2007. It included a random sample of beneficiary and non-beneficiary (i.e., eligible-but-not-receiving) households in randomly selected PKH treatment sub-districts (*kecamatan*). The survey also included a random sample of eligible households in randomly selected control areas (i.e., sub-districts scheduled not to receive PKH). These same households participated in a follow-up survey fielded in October to December 2009, approximately 2 years after the initial PKH payments. The follow-up survey used the original baseline questionnaire and respondent lists.³⁴

This impact evaluation report summarizes the estimated effects of PKH on the following immediate (short-term) outcomes: household consumption; the utilization of preventative health services; school enrollment, attendance, and hours; and child labor indicators. The analysis also measures impacts, focusing on changes in long-term health and education changes.³⁵ For example, Table 4.1 provides examples of some of the immediate outcomes and impacts tracked in this evaluation.³⁶

Table 4.1 PKH Evaluation Indicators

	Immediate Outcomes	Expected Long-term Impact
Welfare	<ul style="list-style-type: none"> ▪ Total Household expenditure (per-capita) ▪ Food Household expenditure (per-capita) ▪ Education Household expenditure (per-capita) ▪ Health Household expenditure (per-capita) ▪ Share of food expenditure on protein 	<ul style="list-style-type: none"> ▪ Decrease in malnutrition indicators ▪ Consistent infant weight gain
Children health	<ul style="list-style-type: none"> ▪ Complete childhood immunization ▪ Participation in child growth and development monitoring program (weighing children under 5 regularly) ▪ Children taking Vitamin A tablets 	<ul style="list-style-type: none"> ▪ Consistent infant weight gain ▪ Decrease in the incidence of diarrhea ▪ Decrease in malnutrition indicators (incidence of child stunting, wasting and underweight) ▪ Decrease in infant mortality
Maternal health	<ul style="list-style-type: none"> ▪ Prenatal healthcare visits ▪ Consumption of iron tablets during pregnancy ▪ Births assisted by trained professionals (doctor or midwife) ▪ Postnatal healthcare visits 	<ul style="list-style-type: none"> ▪ Decrease in maternal mortality

³⁴ A separate but qualitatively similar household and community facility survey (both baseline and follow-up) was fielded in PNP-Generasi treatment and control areas during the same time period.

³⁵ The distinction between short- and long-term outcomes or impacts is neither purely arbitrary nor purely empirical. The judgment call made here adopts an approach common in the program impact literature and involves a consensus-based determination of the likely time horizons over which affected behaviors can produce changes in human capital indicators.

³⁶ The mapping from Immediate Outcomes is not meant to be one-to-one with the corresponding row in Impacts. Some indicators are logically both Immediate Outcomes and Impacts (e.g. child labor), and some logically appear in more than one area of activity (e.g. share of household food expenditure on protein).

Education	<ul style="list-style-type: none"> ▪ Primary school enrollment for children aged 7-12 ▪ Regular primary school attendance (<85%) for children aged 7-12 ▪ Junior secondary school enrollment and attendance rates for children aged 13-15 ▪ Regular junior secondary school attendance (<85%) for children aged 13-15 	<ul style="list-style-type: none"> ▪ Lower incidence or fewer hours of child work (economic and/or domestic) ▪ Higher test scores for junior secondary students
Child Labor	<ul style="list-style-type: none"> ▪ Rates of child work (economic, domestic) ▪ Duration of working hours per week 	<ul style="list-style-type: none"> ▪ Higher school enrollment rates

4.2 Sample Construction

The PKH *kecamatan* included in the survey sample are located in five out of the six regions; the survey was not fielded in West Sumatra. The resulting set of surveyed *kecamatan* is located in 44 out of the 49 districts included in the initial PKH pilot. From the list of randomly assigned treatment *kecamatan*, 180 were randomly chosen to receive the survey. Another 180 *kecamatan* were randomly drawn from the list and assigned as control *kecamatan*. Both treatment and control samples were stratified by urban and rural classification.³⁷ The resulting survey sampling frame draws mostly observed households in Java, which is similar to actual program allocation. Java contributed just over 70 rural sub-districts (or 30 percent of all surveyed Javanese sub-districts) while Sulawesi contributed only four rural sub-districts; there were no rural sub-districts from NTT.

There were discrepancies between the original randomized design and the *de facto* allocation in both treatment and control areas:

- Program implementation was delayed in four (out of the 180 surveyed treatment *kecamatan*) due to lack of preparedness by the regional UPPKH offices and service providers.³⁸
- The program was never implemented in two treatment *kecamatan* because the District Head refused to pilot a program in only randomly selected *kecamatan*.³⁹
- 39 out of the 180 control *kecamatan* included in the survey received PKH funds through an early and unanticipated expansion of the program.

These 45 “contaminated” *kecamatan* introduce potential sources of bias into the sample. This is because some of the areas had reduced exposure to the program. Also, there may be unobservable characteristics within these problematic *kecamatan* that may have led to a departure from the initial implementation plan while, at the same time, affecting household responses to PKH.

Within each surveyed *kecamatan*, eight villages (*desa*) were randomly drawn. Within each village one rural ward (*dusun*) or, within cities, one urban precinct (*kelurahan*) was randomly drawn to be surveyed. Concerns that randomly sampling *dusun* or *kelurahan* households could yield a small number of treated observations in the sample led to a quota-based approach to household sampling. Potential survey participants included only those households on BLT eligibility lists. Only villages with at least five BLT households were considered for surveying. In cases when less than 8 villages were sampled in a given sub-districts (because one or more villages did not have at least 5 BLT households), additional wards

³⁷ A sub-district is classified as rural if the share of urban precincts (*kelurahan*) is less than 30 percent of the total of *kelurahan* and rural villages, according to the 2005 PODES. (Sparrow et al., 2008).

³⁸ Service providers refers to the operators of schools and community health centers (*puskesmas*).

³⁹ This took place in Indramayu district located in the province of West Java.

were selected from the remaining villages in order to balance the number of total sampled wards. Identified BLT-eligible households were then divided into three groups:

- (i) Households with pregnant/lactating mothers or married women who were pregnant in the last two years;
- (ii) Households with children aged 6-15 years; and
- (iii) All other households.

For every *dusun/kelurahan* included in the sample, two households from group (i), and three households from group (ii) were randomly selected. None from group (iii) were included. In the end, 14,326 households, consisting of 73,563 individuals, were interviewed in the baseline sample (Table 4.2).⁴⁰ Households included in the PKH evaluation survey tend to be Java-based and urban. Slightly less than 75 percent of surveyed households are located in approximately 230 sub-districts in Java; the remaining 25 percent of households are located in either 47 sub-districts in NTT or 37 sub-districts in Sulawesi. Approximately 75 percent of survey households were located in urban areas.

⁴⁰ The households and individuals are about evenly divided between treatment and control groups. Other sample modules include 6,153 children younger than 3 years; 18,946 children age 6-15 years; 14,987 married women age 16-49; 358 community health centers (*Puskesmas*); 1,407 midwives; and 1014 junior secondary schools. In the follow-up survey, the total number of households interviewed increased slightly, but panel households attrite at a rate of approximately 2.5 percent, leaving 350 fewer panel households in 2009.

Table 4.2 Evaluation sample size

	Survey Baseline 2007			Survey Follow-up 2009			Survey Panel 2007-2009		
	Treatment	Control	Total	Treatment	Control	Total	Treatment	Control	Total
Sub-districts	180	180	360	180	180	360	180	180	360
Villages	1,369	1,354	2,723	1,369	1,352	2,721	1,369	1,352	2,721
Households	7,195	7,131	14,326	7,196	7,142	14,338	7,028	6,948	13,976
Individuals	36,801	36,762	73,563	39,880	39,740	79,620	36,041	35,934	71,975
Conditionality Groups									
Children under 3 years	3,076	3,077	6,153	4,369	4,335	8,704	2,814	2,802	5,616
Children age 6-15	9,396	9,550	18,946	9,429	9,572	19,001	7,199	7,099	14,298
Married women (16-49)	7,516	7,471	14,987	7,485	7,437	14,922	6,807	6,795	13,602
Health Service Providers									
Puskesmas	178	180	358	178	180	358	177	180	357
Midwife	702	705	1,407	701	696	1,397	464	458	922
Education Service Providers									
Junior high schools	507	507	1,014	712	712	1,424	348	346	694
Primary schools	N/A	N/A	N/A	526	522	1,048	N/A	N/A	N/A

Source: PKH Household Survey; University of Gadjah Mada; and Government of Indonesia, Ministry of Social Affairs (Kemensos)

4.3 Data Sources

The primary data source for the impact evaluation was a household survey that was designed to measure household welfare and behaviors. The survey collected household information on socioeconomic and demographic characteristics such as schooling, health, nutrition, labor market outcomes, and attributes of the physical infrastructure of the household (Table 4.3). The survey also conducted interviews with mothers to collect information on the health and education status of children, their behaviors before, during, and after pregnancy, and their use of health and education services. The University of Gadjah Mada (UGM), an independent institution with no association or affiliation with the PKH program, carried out the data collection and fieldwork. The baseline survey was fielded between June and August 2007; the follow-up survey was conducted between October and December 2009 (approximately 26-30 months after PKH implementation began).

In addition to household survey data, the evaluation also uses administrative data obtained from the Ministry of Social Affairs. This data is useful for cross-checking with survey data when the latter may include errors in reporting receipt for PKH benefits. For example, households do not always accurately differentiate between the different sources and purposes of the assistance that they receive. It is possible that surveyed households may have mistakenly reported not receiving (or receiving) conditional cash transfers even when they actually collected (or did not collect) quarterly PKH benefits. By referring to administrative records payments made to PKH beneficiaries over the entire period covered by the household survey, it is possible to verify which households actually received PKH benefits. This cross-checking revealed that administrative data does not always agree with household survey data about the program status of a given household. Approximately 560 survey households (4 percent of all survey households) who were consistently paid during the 2007 to 2009 period reported in the survey that they did not receive PKH payments.⁴¹

The survey also collected information on health and education service providers in the sample areas.⁴² One community health center (*Puskesmas*) was randomly selected from a list of all community health centers operating in each PKH *kecamatan*. For those *kecamatan* without community health centers, the sampling frame covered community health centers located in neighboring *kecamatan* with catchment zones that included the selected areas. The sampling frame for midwives was constructed from two sources: (i) a list of midwives working for health community centers in each *kecamatan* but also running a private practice, and (ii) a list of private midwives. Information for the latter list was obtained directly from households. In each *kecamatan*, two midwives were selected from the first list and two midwives were selected from the second list, yielding a sample of four midwives from each *kecamatan*. Three secondary schools were randomly selected from all secondary schools (public, private, regular/vocational, or other type of equivalent school) located in the PKH *kecamatan*.

⁴¹ Households that were consistent PKH beneficiaries according to administrative data but who do not recall having received PKH were included in the final sample in order to maintain sample size. Results do not change (though standard errors are larger) if these same households are removed from the sample prior to evaluation.

⁴² Community respondents included village or ward heads, heads of health service provider, midwives, and school principals.

Table 4.3 Survey Questionnaire Modules and Sample Sizes

Module	Contents	Sample Size (Panel)
Household Core. Respondent: female household head or spouse of a male household head.	Household roster, deaths in previous 12 months, migration, water/sanitation, receipt of government poverty programs, participation in non-formal education, consumption, assets, economic shocks, health insurance, morbidity, outpatient care use, social capital.	13,976
Mothers. Respondent: Married women, ages 16–49 years.	Fertility history, use of health services during pregnancy, family planning, health and education knowledge.	14,793
School-aged Children. Children ages 6–15 years. Respondent: mother of child.	School enrollment, attendance, grade repetition, cost of schooling, scholarships, child labor.	19,298
Babies and Toddlers. Children ages less than 3 years. Respondent: Mother of child.	Growth monitoring, immunization records, motor development (follow-up survey), breastfeeding and nutritional intake, weight measurement, height measurement.	8,408
Home-based Tests. Respondent: children ages 6–15.	Test of math and reading skills administered at home (separate test for ages 6–12 and ages 13–15).	7,459 (baseline) 16,321 (follow-up)
Village Characteristics. Respondent: Village Head.	Demography of the village, hamlet information, access to health services and schools, economic shocks, access to media, community participation, daily laborer wage rate, development projects in the village (follow-up survey).	2,718
Community Health Centers (Puskesmas)	Head of facility background, coverage area, budget, staff roster, time allocation of head doctor and midwife coordinator, service hours, services provided, fee schedule, number of patients per service during the previous month, medical and vaccine stock, data on village health post, direct observation regarding cleanliness.	319
Village Midwives (Bidan)	Personal background, location of duty, condition of facility, time allocation, income, services provided, fee schedule (public and private), experiences during past three deliveries, number of patients seen per service during the previous month, equipment and tools, medical supplies and stock, village health post management, structure of subsidies received.	1,396
Primary school. Sekolah Dasar (SD). Follow-up survey only.	Principal background, principal time allocation, teacher roster, school facilities, teaching hours, enrollment records, attendance records, official test scores, scholarships, fees, budget, direct observation of classrooms, including random check on classroom attendance.	2,067
Junior Secondary School. Sekolah Menengah Pertama (SMP).	Same questionnaire as for primary school.	2,476
Village Health Post Cadre. Follow-up survey only.	Respondent characteristics, health post characteristics, service providers, cadre roster, tools and equipment.	2,832

Source: PKH Household Survey; University of Gadjah Mada; and Government of Indonesia, Ministry of Social Affairs (Kemensos)

4.4 Methodology

PKH was designed from the beginning so that the impact of the program could be measured. Impact, however, can be measured in several different ways. Therefore, using the rich survey and administrative data available, the study measures program impact in three ways:

- i. **Placement effect.** This approach compares average outcomes between all surveyed eligible households in treated PKH *kecamatan* (whether they received PKH benefits or not) with all surveyed eligible households in control *kecamatan* (who did not receive the program).
- ii. **Participation effect.** This approach compares average outcomes of beneficiary households with similar eligible households in control *kecamatan* not receiving program benefits.⁴³
- iii. **Spill-over effect.** This approach compares average outcomes of eligible *non-beneficiary* households in treatment *kecamatan* with similar eligible households in control *kecamatan*.

Since the pilot randomly selected which *kecamatan* would be included in the pilot, it was initially thought that the comparison of beneficiary households with counterfactual households was a straightforward way to measure impact. This assumption is supported by the analysis that shows that the household observable characteristics between these two groups are balanced at baseline (see Annex B).⁴⁴ Three issues, however, complicate the evaluation and make a simple comparison of average outcomes of these eligible beneficiary and counterfactual households difficult:

- First, there was “contamination” of the original random allocation, meaning some areas received or did not receive PKH in contradiction to their original random designation. This makes it difficult to be certain that receipt of PKH results in the expected outcomes for all households.
- Secondly, the allocation of PKH cash transfers among eligible households within *kecamatan* was purposive, not random. Program benefits were rationed based on selection criteria, guidelines, manuals, quotas, and other information. For this reason, not all eligible non-beneficiary households serve as appropriate counterfactuals.⁴⁵
- Finally, not all panel households have pre- and post-program observations for every indicator because of regular household demographic changes (e.g., behaviors relevant to a particular age group or a particular mother-and-newborn combination).⁴⁶

To deal with these complicating factors, the analysis uses a mix of methods and provides robustness checks to identify the effect of PKH on those households who received it. Details about the methods used are provided in Annex D.

⁴³ The methodology used to identify “similar” households in treatment and control areas, which are then used as counterfactuals to measure participation and spill-over effects is explained in detail in Annex D.

⁴⁴ See also Sparrow et al., World Bank 2008.

⁴⁵ This is demonstrated in the distribution of certain characteristics, which is different for beneficiary households than for counterfactual households. For example, among eligible beneficiaries, PKH was rationed and targeted to larger households that were more well educated, with fewer assets and lower expenditure, and were more often primarily agricultural (among other differences). These differences are summarized in Annex C, which contains output from a propensity scoring regression of household PKH status on over 30 observable characteristics.

⁴⁶ For example, if at baseline a mother has recorded her own breastfeeding behavior for her current 6 month old, she will not be asked to record these same behaviors two years later when that child is now nearly 3 years old. She may or may not have another newborn about which breastfeeding questions could be asked again. Therefore, the evaluation dataset may sometimes be closer in spirit to a repeated cross-section within a set of true panel households. The only reliable exception is per-capita household expenditure, which is recorded twice for all panel households.

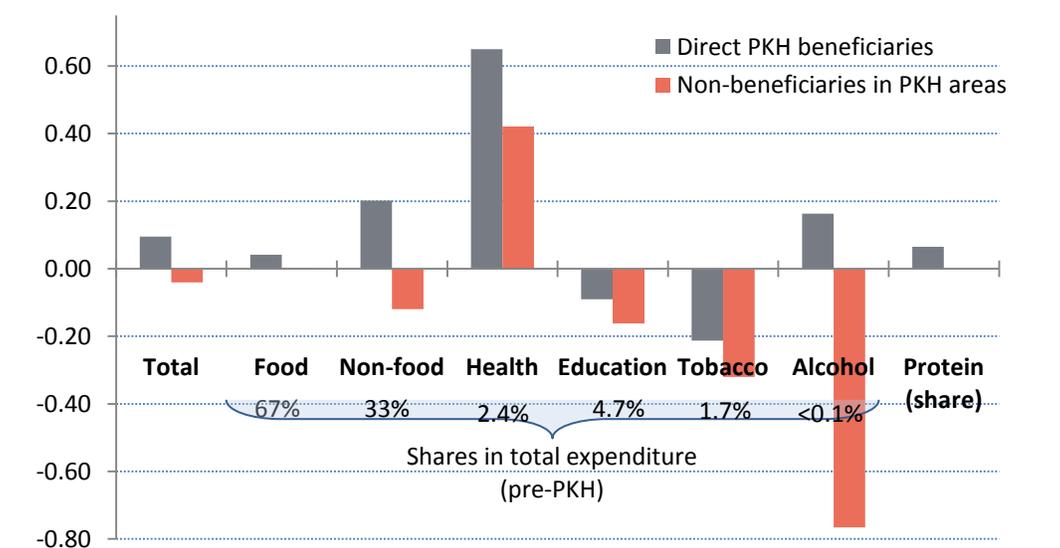
5 Main Results

This section summarizes main findings from the empirical analyses described above by examining indicators across three main areas: household welfare, health behaviours and outcomes, education behaviours and outcomes, and child labour. When possible, the impact of the program is assessed by each of the three measures: impact on all households in treatment *kecamatan* (placement effect), impact on only households that receive PKH benefits (participation effect), and eligible households in treatment areas that do not receive benefits (spill-over effect). The final section considers the impact of the program disaggregated by household characteristics.

5.1 Household Welfare

The program has a significant impact on household welfare. Total expenditures in beneficiary households increased by approximately Rp 19,000 per capita per month, representing approximately 10 percent of the mean monthly per capita expenditure levels of eligible households at baseline. Beneficiaries saw their monthly expenditures rise from an average of Rp 184,000 to reach a monthly expenditure level of Rp 200,262 (March 2009 poverty line). Households used this additional income to increase their spending increases in food, health, and all non-food categories; there was no change, however, in education expenditures (Figure 5.1). There are indications that beneficiary households spent slightly more on high quality nutritious foods: the share of food expenditure on high-protein foods (meat, fish, eggs, dairy) increased by nearly three quarters of a percentage point. Households that received PKH benefits were not more likely to spend the funds on non-productive goods such as tobacco or alcohol.

Figure 5.1. PKH Expenditure Impacts, % of baseline average value



Source: World Bank staff calculations

Eligible households that did not receive the PKH benefit, but lived in the same treatment area *kecamatan*, also altered their consumption patterns. They increased their expenditure on health

services and other related goods (like medicines) by approximately 1 percent of their baseline mean monthly per-capita health expenditure.⁴⁷ In order to expand health spending, these households cut non-food expenditures, leading to an overall decrease in total expenditures.

5.2 Health Behaviors and Outcomes

PKH had a largely positive impact on the usage of primary healthcare services among all eligible households in treatment areas (placement effect). In these areas, pregnant women were more likely to complete more pre-natal visits; the share that attended at least four pre-natal check-ups increased by over 7 percentage points. There are also indications that the share of assisted deliveries (either by midwives, nurses, doctors or at medical facilities) increased by approximately 5 percentage points.⁴⁸ There was no change, however, in the share of pregnant women taking the recommended dosage of iron tablets during their pregnancy.

Overall post-delivery behaviours in treatment areas showed improvement as well. Young mothers in these areas were more likely to conduct post-natal visits; the share of women attending at least the two post-natal check-ups increased by 7 percentage points. In addition, the rate of monthly weighing for children (newborns until five years old) from eligible households in treatment *kecamatan* increased by almost 15 percentage points.

The positive impact of the program on health behaviours is even more pronounced for confirmed program beneficiaries (participant effect) – see Figure 5.2 below.⁴⁹ Beneficiary households increased the likelihood of completing four pre-natal check-ups by more than 9 percentage points for a 13 percent improvement over baseline, and completing the recommended two post-natal visits increased by nearly 10 percentage points for a 21 percent improvement over baseline. These households increased children (ages zero to 5 year olds) weighing by 22 percentage points, representing an increase of between 30 and 40 percent over baseline rates.⁵⁰ At the same time, beneficiary households increased the likelihood of completing their children’s vaccinations by approximately 3 percentage points, or a nearly 11 percent increase over baseline rates. Increased usage of health services also contributed to an increase in the share of households that treated their children for diarrhoea by 7 percentage points. Beneficiary households, however, did not demonstrate increased usage of recommended vitamins, not iron tablets for pregnant women or vitamin A for children.

There is evidence of spill-over effects. That is, some behavioural changes were observed among neighbouring and eligible households (in treatment areas) which did not receive any cash transfers. Behavioral changes among these neighboring households may be encouraged by the presence of the

⁴⁷ This increase is about half of the increase experienced by PKH beneficiary households that increased their health expenditures by approximately 2 percent of baseline mean monthly per-capita health expenditure.

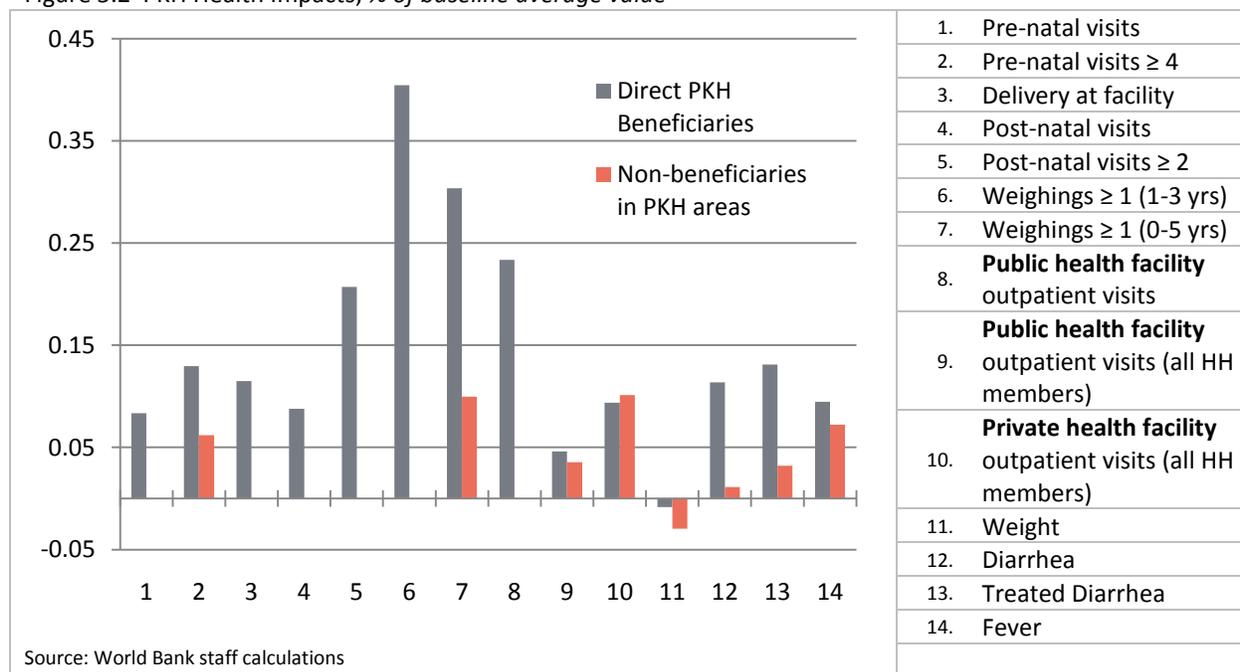
⁴⁸ Estimates of PKH impacts on the share of assisted deliveries and deliveries at a medical facility, calculated without baseline values, are statistically significant. Estimated standard errors for these outcomes are equal across all three specifications used, but only the absolute increases (not increases relative to baseline values) are large enough to register statistically. See Annex E, column 7 and 8.

⁴⁹ Actual beneficiaries are confirmed with Kemensos administrative data. In Annex E the impact on actual beneficiaries is referred to as the “participation effect” (See Columns 2, 5 and 8).

⁵⁰ Coefficients and estimated standard errors are very stable across the three different B1 specifications for assisted or at-facility delivery, immunization, and monthly weighings for the crucial newborn group (zero to 11 months old), and coefficients are predicted to be significantly different from zero for at least one of the B1 specifications (Annex D). Both the magnitude and the estimated precision of the positive delivery-at-facility, assisted-delivery, and immunization results are confirmed in the B2 difference-in-differences specification (Annex E). The magnitude of the estimated monthly weighings for newborns coefficient is roughly double, while the estimated standard error is roughly halved, in the B2 specification relative to the B1 IV specifications. Together these coefficient and standard error patterns suggest that the increases in PKH households in healthy delivery and post-delivery (immunization and weighings) behaviours are statistically significant.

PKH program in peer households and the demonstrated changes in behaviour among those households; the PKH program’s facilitators, and the role they played in helping to spread knowledge concerning healthy behaviours; and possibly service providers who spread PKH-conditioned “good practices” to a wider group. These positive effects, however, are smaller than those demonstrated by PKH beneficiaries. The incidence of four or more pre-natal visits increased by over 4 percentage points and weighings for children aged 0-5 years old increased by over 7 percentage points, representing increases over baseline rates for these households of approximately 6 and 10 percent respectively.⁵¹

Figure 5.2 PKH Health Impacts, % of baseline average value



Interestingly, the benefits extend beyond simply maternal and child primary healthcare. Evaluation findings show that outpatient visits by household members to public and private health facilities also increased for all eligible households in treatment areas. The increases, however, are quite small: a 0.5 percentage point increase for public health facilities and a 0.2 percentage point increase for private health facilities.

There is no evidence that improvements in health behaviors have already led to better long-term health outcomes.⁵² Malnutrition and child mortality rates, however, are not expected to improve within the short three-year period of the pilot project. Instead, they must be tracked with future survey instruments over a longer period of time to assess the contribution of the program to these long-term outcomes.

⁵¹ There is weaker evidence of increases in assisted deliveries. Absolute increases (not relative to baseline values) in delivery at facility, but not assisted delivery, are also noticeable for non-beneficiary households in PKH *kecamatan* relative to the same absolute increases in non-PKH *kecamatan*. The impact of PKH exposure on delivery at facility (but not assisted delivery) is confirmed in the B2 difference-in-differences specifications summarized in Annex E.

⁵² The results for health outcomes, although not statistically significant, are mixed. For example, the estimated impacts of PKH on weight-for-age and height-for-age, both which are defined relative to an OECD standard according to World Health Organization algorithms, are opposite in sign. The increase in mortality rates for PKH households with newborns from 6 to 11 months is a statistical artifact that can be traced to a low incidence in the set of surveyed households together with a slight baseline imbalance. That is, at baseline there were 0.17 mortality events (among 6 to 11 month olds) per *kecamatan* in control areas and only 0.12 mortality events in PKH areas. At follow-up those numbers had fallen to 0.09 and 0.08 respectively.

Contrary to expectations, reports of fever (for 0 to 3 year olds in the past month) increased among all eligible households in treatment areas by approximately 4 percentage points. Similarly, reported cases of infant diarrhoea among beneficiary households increased by 3 percentage points. There is no *a priori* reason why the incidence of any of the reported medical conditions (height, weight, illness) would be expected to worsen in a random sample of *kecamatan*. The increase in reports of fever and diarrhoea, therefore, may be due to successful knowledge transfer from health professionals to households in PKH areas. Increased usage of health facilities may provide greater opportunities for health facility staff to educate parents about how to recognize, report and provide treatment for common childhood illnesses.⁵³

5.3 Education & Child Labor

While the pilot program was successful in improving utilization of primary healthcare services, the increase in the utilization of educational services was weak and limited. Among eligible households in treatment areas, PKH led to a more intensive participation in class for those students who were already attending school. The hours spent in the classroom for students aged 13 to 15 years old increased by approximately 0.7 hours per week. Even similar aged students from households in treatment areas that did not receive benefits increased the number of hours in the classroom by over half an hour per week. Among beneficiary households, students in primary school also increased the time spent in classrooms by approximately 20 minutes.

Although the program helped to increase the amount of time that students spent in class, it did not successfully draw more children into the school system. Neither primary school participation rates (for 7 to 12 year olds) nor net enrollment rates increased for any eligible households in treatment areas, in comparison to the control groups. The results are the same for junior secondary students (13 to 15 years old); participation rates did not increase and net enrollment remained unchanged.⁵⁴ The pilot program showed no success in keeping children in school either. There was no difference in drop-out rates, late-enrollment rates, or transition rates between primary school or junior secondary students in treatment and control areas.

Lack of impact in education participation, enrollment and transition to higher grades may be due to the program's disbursement schedule during the pilot period. Payments did not coincide with the academic school year, therefore beneficiary families did not have the additional funds when most needed. Also, the amount received was not adequate to cover additional fees that parents must usually pay, especially for junior secondary school. The cash transfers, therefore, were too late and too little to have a positive impact on pulling more children into the education system and keeping them in school.⁵⁵

Given that the program was not effective in keeping children in school, it is not surprising that the program was neither successful in significantly reducing child labor. Overall, eligible households in

⁵³ We do not observe any data that could directly test the "knowledge transfer" hypothesis for the relative increase in reported illness incidence.

⁵⁴ A separate specification with controls for cohorts (results not presented) reveals that there was increasing participation and enrollment for all individuals entering the survey after 2007 in both PKH and control *kecamatan*

⁵⁵ The experience of other household-centered social assistance programs in Indonesia demonstrates that the timing of disbursements of benefits makes a difference in affecting outcomes. During the most recent roll-out (over 2008 and 2009) of Indonesia's nationwide temporary unconditional cash transfer program *Bantuan Langsung Tunai* (BLT), beneficiary households recorded increased spending on education only when payments arrived slightly before tuition, registration, and other associated school fees were due. See World Bank (2010a).

treatment areas reported a small decrease in wage work (during the last month) of 0.6 percentage points. Children (aged 7-12 years old), particularly from agricultural-based households, experienced a reduction in wage work by approximately 7 hours per week. This positive trend, however, did not influence neighboring households who did not receive program benefits. “Spillover” households reported an increase in the number of hours of wage work for 7 to 12 year olds by approximately 20 minutes per week; however, this was balanced by a decrease in the time devoted to household work by almost half an hour per week.

At the same time, there was a slight increase in the number of hours children spent per week working in family enterprises: approximately one hour for 7-12 year olds and almost 2 hours for 13-15 year olds. Oddly, this effect was stronger among children from beneficiary households that experienced an increase of almost 2 hours for children 7-12 years old and almost 3 hours for children 13-15 years old. The increase among younger children was largely driven by non-agricultural households, while the trend for older children was driven by agricultural households. This suggests that much remains to be learned how different types of households respond to conditional cash transfers in making decisions about their children’s future and how this affects household income and welfare.

5.4 Disaggregated Results

PKH may affect households differently depending on factors such as: geographic location, sector of employment, parental education levels, relative income levels, and gender. The following section examines how each of these factors affects the impact of the program on beneficiary households.⁵⁶ The analysis can be useful in deepening an understanding of where and to whom the program delivers a greater (or less) impact.

Availability of Public Services

There are indications that PKH has a stronger impact on improving health behaviours in areas where the supply of health services is greater. As mentioned earlier, *kecamatan* that were considered “supply-side ready” were randomly selected for participation in the program. Readiness thresholds, however, were set lower for *kecamatan* off-Java where health and education services tend to be more limited. Java *kecamatan*, therefore, serve as a proxy for areas that are more supply-side ready, while off-Java *kecamatan* proxy for areas that with relatively weaker supply.⁵⁷ The results show that Java *kecamatan* were more likely to make pre-natal visits (by 11 percentage points) and post-natal visits (by 13 percentage points) and deliver at health facilities (by 10 percentage points). Beneficiary households off of Java, however, experienced no change in any of these indicators. They were also more likely to make outpatient visits at public health facilities. This supports the finding that the impact of PKH appears to be stronger in areas where the supply of public facilities is greater.

The heightened impact of PKH in areas where there is a greater supply of health services is reinforced by the findings from geographic analysis that separated urban and rural areas. Urban beneficiary households experienced a 9 percentage point increase in pre-natal visits and a four percentage point increase in completing immunizations for their children. Rural beneficiaries, on the other hand,

⁵⁶ Findings are based on results from the disaggregation of participation effects only (i.e., effects on beneficiary households). Results are detailed in Appendix G.

⁵⁷ In Java, 30.97 percent of our sample is rural and 60.02 percent of household heads work in agriculture. Off Java (primarily *kecamatan* in NTT and Sulawesi, as described above), the corresponding sample frequencies are 5.1 percent rural and 80.09 percent in agriculture.

experienced no significant changes. Urban beneficiaries were also more likely to make more outpatient visits at both public and private health facilities, and treat their children for diarrhoea. This contrast between urban and rural beneficiaries is likely due to a greater supply of health facilities and personnel, and greater access to medicine in urban areas.

This is also reinforced by examining impact by sector of employment for the head of household. Non-agriculturally based households tend to live in areas where public facilities are provided at lower cost, while agriculturally based households are typically located in rural areas where access to public facilities is more limited.⁵⁸ The analysis finds that non-agricultural beneficiary households are more likely to have assisted delivery and deliveries at health facilities (by 15 percentage points) and comply with the recommended two or more post-natal visits (by 16 percentage points). Non-agricultural households experienced no changes in these practices. The trend, however, is not entirely consistent; agricultural households were more likely to see improvements in pre-natal visits and treating their children for diarrhoea.

Parental Education

The knowledge environment created by parents' education level is potentially an important factor shaping the behaviour and expectations of children. The effects of PKH may be constrained by household situations where parental levels of education are, on average, low: the average (mode) school attainment level for mothers and fathers in beneficiary households is primary school level. At the same time, however, participation in the program may improve parental knowledge in areas such as recommended health practices.

Disaggregating the evaluation results by level of parental education, no clear pattern emerges. Mothers with some formal education (primary school or more) are more likely to deliver babies at health facilities, make post-natal visits at health facilities, and immunize their children. Mothers with no formal education at all, however, are more likely to have an assisted delivery or treat their children for acute respiratory infection. Similarly, no pattern emerges when considering the formal education level of fathers in beneficiary households. Children whose fathers have some formal education are more likely to be delivered in a health facility, with assistance, and breastfed more quickly after birth. However, children of fathers with no formal education at all are more likely to be weighed in the last month and receive their complete immunization.

These findings do not undermine the importance of parental knowledge and education about healthy behaviours and practices. Rather, they find no relationship between formal education and better decisions about maternal and child health. Informal education methods – such as parental awareness raising activities and mother support groups – may be effective in improving outcomes, but the effect of these kind of awareness-raising activities were not tested through the pilot.

Relative Income Levels

PKH was intended for very poor households. In the survey sample, baseline median per-capita expenditures were roughly Rp 164,375 per month for PKH households, equal to approximately 87.5 percent of poverty-line expenditure in 2007. Nonetheless, there are a few noteworthy differences in

⁵⁸ Note: households where the head of household is working in agriculture comprise about two-thirds of the survey sample.

PKH impacts on health between relatively better-off and relatively poorer PKH households.⁵⁹ In particular, there are larger increases in pre-natal visits for poorer households, and larger increases in delivery at facility and post-natal and outpatient visits for better-off households. Lastly, increases in household expenditure on health are noticeably greater in poorer PKH households. All else equal, this indicates that not all of the health services that PKH households are encouraged to use have the same marginal costs for households and that the size of PKH benefits are not large enough to cover all of the increased costs associated with more healthy behaviours.

Gender Analysis

By providing funds directly to mothers, conditional cash transfer programs can be a means of empowering women as decision-makers in their households. Interviews with beneficiary households signal that PKH empowered women, who managed and spent the additional funds.⁶⁰ This effect is supported by quantitative analysis. The PKH program has a stronger impact among female-headed households (8 percent of all beneficiary households).⁶¹ In these households, pregnant and new mothers with PKH demonstrate larger magnitudes of increase in pre-natal visits (21 percentage point increase, as opposed to 9 percentage point increase for male-headed households), assisted delivery (25 percentage point increase, in comparison with no impact for male-headed households), delivery at facility (23 percentage point increase, compared to 6 percentage points for male headed households), but not in related activities such as post-natal visits or child weighings.

Male-headed households with PKH see greater increases in the number of hours spent in school by all children than female-headed households and also encourage switching to family enterprise work more often. If we assume that households headed by females often lack a second wage earner, then the costs of pulling children from work and into school may be higher than for male-headed households. Understanding the different opportunity costs of schooling and labor for different types of families (e.g., household composition, demographics, and location) can shed more light on the challenges of avoiding negative coping strategies.⁶²

Empowering women, however, this has not automatically resulted in gender-equal impacts. There are significant differences in the effects PKH has on boys and girls. In health, rates of complete immunization increase by far greater amounts when the PKH child in line to receive vaccines is a boy (8.5 percentage point increase for boys, compared to no change for girls). In education, PKH girls of both primary- and secondary-school age saw larger decreases in school participation while PKH boys in these two age groups saw larger increases in the number of hours in school (conditional on participation). All together, this suggests that male and female children do not always share equally in the gains in positive household behaviors encouraged by PKH.

⁵⁹ Here, a household is considered “rich” if it enjoys baseline per-capita expenditure above the median for all sample households and “poor” if it does not.

⁶⁰ SMERU, 2011.

⁶¹ In our sample of female-headed households, 61 percent have less than primary education.

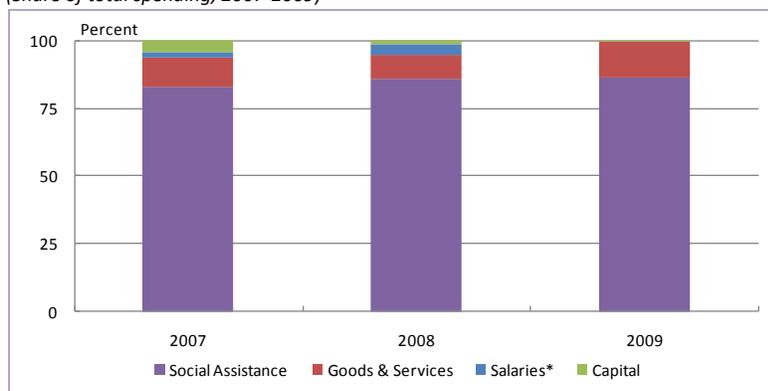
⁶² In our sample, female-headed households lack a present biological father 56.07 percent of the time. In female-headed households, other adults present are most often the daughter/son in-law (9.68 percent of the time) and the parents/parents in-law (8.99 percent of the time).

6 Program Cost Effectiveness

Understanding administrative costs is an important component of analyzing program efficiency. PKH's high-level economic classifications indicate that benefits – classified as social assistance – account for 86 percent of total program spending (Figure 6.1). Administrative costs – classified mainly as goods & services - accounted for 14 percent of total spending in 2008 and 2009, down from 17 percent during the first year of implementation which involved greater “start up” costs, especially related to capital spending. These high-level budget classifications exclude civil servant salary costs, however, which are instead recorded under the overall budget in the Directorate General's where the PKH program is located. This makes it difficult to quantify staff costs for an individual activity or intervention.

Figure 6.1. Spending on PKH by economic classification

(Share of total spending, 2007-2009)



Source: World Bank staff calculations based on Kemenkeu budget data.

PKH's average administrative costs per beneficiary total around Rp 200,000 or roughly US\$20 per year, while the overall administrative overhead ratio was between 14-15 percent in 2008 and 2009, down from 18 percent in 2007. These costs appear moderate compared to other cash transfer interventions in Indonesia – all of which are known to suffer from underdeveloped administration and management structures and whose performance suffers as a result. For example, the government's temporary unconditional cash transfer (BLT) – which had comparable generosity to PKH – is estimated to have had an administrative overhead of just 6 percent in 2008 and average administrative costs per beneficiary of just US\$4. On the other hand, two small – but generous – pilot social cash transfer programs for the severely disabled and abandoned elderly had estimated overheads of between 11-13 percent in 2009, but high per beneficiary administrative costs of around US\$50 per year.

PKH costs are comparable to CCT programs in other countries. For example, an international survey of nine CCT programs found that average administrative costs were around 8 percent.⁶³ Moreover, large scale, well-run CCTs in Latin America with positive impacts confirmed by credible impact evaluations indicate that a good CCT program spends from 6 to 12 percent on administrative costs.⁶⁴ Thus, the administrative efficiency indicators for PKH appear to be reasonable, especially considering the program is still in a pilot stage and not yet operating at scale. As the program goes national, average administrative costs could be expected to further decline.

⁶³ World Bank (2008), pp. 391.

⁶⁴ Lindert, Skoufias and Shapiro 2006.

Table 6.1. PKH Efficiency Indicators, 2007-2009

	2007	2008	2009
Unit cost (Total spending/No. beneficiaries,Rp)	1,560,994	2,331,394	1,581,044
Administrative costs per beneficiary (Non-benefits/No. beneficiaries, Rp)	274,012	338,438	220,299
in USD	30	35	21
Administrative overhead ratio (Non-benefits/Total spending)	18%	15%	14%
Cost of delivering benefits ratio (Non-benefits/Benefits)	21%	17%	16%
Civil servants per 10,000 beneficiaries	n/a	n/a	n/a
Memo items:	0.0%	0.0%	0.0%
No. of beneficiary households	387,887	405,955	675,636
Number of civil servants	n/a	n/a	n/a
Avg. value of annual CCT (Rp)	1,286,982	1,992,955	1,360,745
Total spending (IDR bn)*	605	946	1068
o/w Benefits	499	809	919
o/w Non-benefits	106	137	149
o/w Civil servant salaries	0.0	0.0	0.0
o/w General admin/other	56.6	109.3	121.3
o/w Socialization	24.6	10.5	8.5
o/w Evaluation (M&E)	0.0	3.2	8.8
o/w Training	0.1	0.0	10.2
o/w Targeting	25.0	14.4	0.0
o/w Follow-up	0.0	0.0	0.0

Source and note: World Bank staff calculations based on Kemenkeu budget data. *While original budget data allocates personnel expenses to the DG as a whole, expenses for PKH have been estimated based on staff numbers.

7 Recommendations

Program Keluarga Harapan is effective in improving the welfare of extremely poor households and altering attitudes, expectations, and behaviors regarding the use of key health services. It shows the potential to contribute to the government's short-term and long-term poverty reduction goals. The Government of Indonesia is currently considering plans to expand coverage to 3 million households by 2014. Along the way, improvements to the design, benefit delivery, and other implementation arrangements will help the program maximize its impact on poor households. Further expansion will bring additional challenges, so continuing the PKH tradition of thorough and carefully-designed qualitative and quantitative assessments of program design and implementation engineering will be critical. Priority areas for further assessment include disbursement timing, MIS systems and the incorporation of MIS-generated information into the "continuous program reform" cycle, and more effective program socialization, facilitation, and knowledge transfer.

PKH has been more effective in areas where the supply and delivery of public services (especially health) are stronger. This emphasizes the importance of using selection criteria from the national village census (PODES) during the expansion of the program to identify sub-districts that are supply-side ready and more likely to benefit from the program. In areas where supply of these services is weak, measures can be taken to prepare sub-districts for participation in the program. These actions may include direct supply-side interventions with local government agencies responsible for providing health and education services. It may also suggest a need to issue and enforce minimum service provision standards, linked to financial incentives. Also, community-driven development programs that aim to improve supply (PNPM and, especially, *Generasi*) can be used to induce supply-side readiness, complementing PKH's approach in stimulating demand.

During the expansion phase, not all areas will meet all supply-side ready criteria; in those areas, a preparatory PKH program can be considered, providing cash transfers to households while instituting only minimal and affordable conditions at the beginning, based on the availability of services available in the area. Such a program can provide welfare benefits to needy households in "supply poor" areas while, at the same time, provide an introduction to the principles of a conditioned cash transfer, the program's facilitators and other service providers. Such conditions could include, for example, attendance at PKH socialization meetings, participation in community service or neighborhood improvement drives, or monthly collective visits to health and education service providers. Once then the availability of health and education services surpasses an agreed upon threshold, these households can graduate to the standard PKH program with the full set of household obligations.

PKH's impacts on education can likely only be improved by re-designing the education benefits. Four separate areas should be addressed: timing, amounts, bonuses, and facilitation and outreach. As poor households in Indonesia spend cash benefits quickly on food and basic necessities, PKH disbursements should arrive shortly before school registration fees are due. This is especially important during the first quarter of the school year, when assessed fees are 70-75 percent higher than in later quarters, and during the primary to junior secondary transition, when first quarter junior secondary school fees are as much as 170 percent higher than the last-assessed primary school fees. PKH benefits for education compliance need to be recalculated as they currently fall far short of the total costs of education for a single primary or junior secondary student. Also, payments need not be of equal size; consider providing a greater share of the annual transfer amount before school fees are due. Poor students

especially drop out in the greatest numbers during the transition from primary to secondary school. The PKH education benefits should include a financial bonus for completing graduating primary school and enrolling in secondary school to keep children continuously enrolled. Finally, PKH facilitators are not providing enough outreach or encouragement to students who have dropped out (or who are at risk of dropping out) of the public education system. Facilitators should coordinate with the drop-out's household, school, and local social welfare office on a plan to bring a drop-out back into the education system.

Currently it is unlikely that PKH households will receive all complementary services and programs like Jamkesmas (the health service fee waiver), Raskin (the subsidized rice program), or the education ministry's scholarship program (for PKH students who continue on to senior secondary education) even though they are eligible. GOI efforts to establish a unified national registry will jumpstart the coordinated approach to targeting the most vulnerable with a set of complementary initiatives. In the future, PKH facilitators should be responsible for checking that PKH households receive all benefits to which they are entitled and provide remedies for households who may have been left out.

All affiliated service providers have to be PKH "owners" in the sense that they are all invested in providing conditioned services, outreach, and follow-up to beneficiaries. The PKH program will not run at peak effectiveness and efficiency until each facilitator, PKH program administrator, local government or administration official, health and education provider, and post office officials have improved coordination. Qualitative studies have noted that coordination is essential for PKH's MIS processes; roadblocks at any point (for example, compliance verification forms have not been delivered on time) can lead to further delays (for example, in payment disbursement) which diminish the positive household impacts of the program.

The impact evaluation reveals results that are difficult to interpret. Although the program successfully encourages positive health behaviors, it shows no overall effects in some key indicators such as Vitamin A capsules for children. Given that there are no indications of supply-side constraints (rural households show a positive change, but urban households do not), why are these behaviors not changing? Similarly, the program shows other puzzling results: Why is growth in primary school enrollment rates in treatment areas not as strong as growth rates in non-PKH areas? Why do male and female children not always share equally in the gains in positive household behaviors encouraged by PKH? Qualitative research can help understand the decisions that PKH families are making, which may have implications for program design adjustments.

Finally, changes in some behaviors and long-term outcomes are not likely to be captured in a three-year study window. The government may consider a future follow-up survey to assess the impact of PKH on outcomes including child and maternal mortality rates, and school transition rates. Future studies may also incorporate piloting and testing the additional benefits of complementary activities, such as awareness programs that help parents to understand the benefits and recommended practices for vitamins, natal visits, child weighing and vaccinations. Although such studies are time- and resource-intensive, they can provide policy makers with a clearer picture of program impact in order to assess how long the program should be sustained in the future.

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Annex A Indicator Definitions

	Indicator	Description	Target	Unit	Recommended
Welfare	Per capita expenditure	Household's total per capita expenditure	Household	Rp	
	Per capita non food expenditure	Household's per capita non food expenditure	Household	Rp	
	Per capita food expenditure	Household's per capita food expenditure	Household	Rp	
	Per capita education expenditure	Household's per capita expenditure on education	Household	Rp	
	Per capita health expenditure	Household's per capita expenditure on health	Household	Rp	
Health	Iron tablets during pregnancy	Number of iron tablets consumed during pregnancy	Pregnant women	tablets	90
	Pre-natal visits	Number of health center visits during pregnancy	Pregnant women	times	4
	4 or more pre-natal visits	4 or more health center visits during pregnancy	Pregnant women	dummy	
	Post-natal visits	Number of post partum visits	Pregnant women	times	2
	2 or more post-natal visits	2 or more post partum visits	Pregnant women	dummy	
	Assisted deliveries	Birth attended assisted by skilled health staff	Pregnant women	dummy	
	Breast feed	Has ever been breast feed	Infant 0-36months	dummy	
	Breast feed after	Waiting time for the first breastfeeding after delivery	Infant 0-36months	hours	
	Breast feed long	Length of breastfeeding	Infant 0-36months	months	9-10
	Weighing	2 or more weighing in the past two months	Infant 0-36months	dummy	
	Complete immunization for age	Has received complete and timely vaccination	Infant 0-36months	dummy	
	Complete immunization	Has received complete vaccination	Infant 0-36months	dummy	
	Times taking Vitamin A	Number of Vitamin A consumed	Infant 0-36months	dummy	Once every 6 mo
	Percentage of Vitamin A on schedule	Percentage of timely received Vitamin A	Infant 0-36months	dummy	
	Two or more Vitamin A in a year	Has received 2 or more vitamin A in a year	Infant 0-36months	dummy	
	Outpatient visits: public health facilities	Number of outpatient visits to public health facilities	Infant 0-36months	times	
	Outpatient visits: private health facilities	Number of outpatient visits to private health facilities	Infant 0-36months	times	
	Outpatient visits: traditional facilities	Number of visits to traditional health facilities	Infant 0-36months	times	
	Weight-for-age (Z score)	Weight-for-age Z score	Infant 0-36months		Better than -1SD
	Weight-for-age malnutrition	Weight-for-age Z score < -1 SD of Z score	Infant 0-36months	dummy	
	Severe weight-for-age malnutrition	Weight-for-age Z score < -2 SD of Z score	Infant 0-36months	dummy	
	Height-for-age (Z score)	Height-for-age Z score	Infant 0-36months		Better than -1SD
	Height-for-age malnutrition (stunting)	Weight-for-age Z score < -1 SD of Z score	Infant 0-36months	dummy	
	Severe height-for-age malnutrition	Weight-for-age Z score < -2 SD of Z score	Infant 0-36months	dummy	
Weight-for-height (Z score)	Weight-for-height Z score	Infant 0-36months		Better than -1SD	
Weight-for-height malnutrition (wasting)	Weight-for-age Z score < -1 SD of Z score	Infant 0-36months	dummy		
Severe weight-for-height malnutrition	Weight-for-age Z score < -2 SD of Z score	Infant 0-36months	dummy		

	Indicator	Description	Target	Unit	Recommended
	Diarrhea (% points)	Incidence of diarrhea in the past month	Infant 0-36months	dummy	
	Treated diarrhea	Has ever been treated for the last diarrhea	Infant 0-36months	dummy	
	Fever	Incidence of fever in the past month	Infant 0-36months	dummy	
	Cough	Incidence of cough in the past month	Infant 0-36months	dummy	
	Cough and rapid breath	Incidence of cough and rapid breath in past month	Infant 0-36months	dummy	
	Acute Respiratory Infection (ARI)	Incidence of ARI in past month	Infant 0-36months	dummy	
	Treated ARI	Has ever been treated for the ARI	Infant 0-36months	dummy	
	Illness	Incidence of diarrhea/fever/cough	Infant 0-36months	dummy	
	Number of diarrhea	Number of diarrhea in the past month	Infant 0-36months	times	
	Number of days of the last diarrhea	Number of days of last diarrhea	Infant 0-36months	days	
	Mortality 0-28 days	Infant mortality 0-28 days after birth	Infant 0-36months	dummy	
	Mortality 1-2 months	Infant mortality 1-2 months after birth	Infant 0-36months	dummy	
	Mortality 3-5 months	Infant mortality 3-5 months after birth	Infant 0-36months	dummy	
	Mortality 6-11 months	Infant mortality 6-11 months after birth	Infant 0-36months	dummy	
	Mortality 0-11 months	Infant mortality 0-11 months after birth	Infant 0-36months	dummy	
Education	Gross participation rate	School participation	Children 6-15 yrs	dummy	
	Nett enrollment primary school (%)	Primary school enrollment for children 7-12 yrs old	Children 6-15 yrs	dummy	
	Nett enrollment secondary school (%)	Junior secondary school enrollment for 13-15 yrs olds	Children 6-15 yrs	dummy	
	Frequency of School Attendance > 85%	Daily school attendance of at least 85%	Children 6-15 yrs	dummy	
	Late enrollment rate (% points)	Child enrolled in primary school over 7 years old	Children 6-15 yrs	dummy	
	Dropout rate	Drop out from school	Children 6-15 yrs	dummy	
	Transition rates	Transition from primary to junior secondary school	Children 6-15 yrs	dummy	
Child Labor	Hours wage work last week	Total hours child works for wages last week	Children 6-15 yrs	hrs	
	Hours family business work last week	Total hours child works for family business last week	Children 6-15 yrs	hrs	
	Hours household work last week	Total hours child works for household work last week	Children 6-15 yrs	hrs	
	Hours wage work total last month	Total hours child works for wages last month	Children 6-15 yrs	hrs	
	Hours family business work total last mth	Total hours child works for family business last month	Children 6-15 yrs	hrs	
	Hours household work total last month	Total hours child works for household work last mth	Children 6-15 yrs	hrs	

Annex B Baseline Balance Test Results

Children 0-3 years Baseline Characteristics

Variable	Treatment	Control	Difference	se	P	NT	NC
Female	0.4895	0.4983	-0.0088	0.017	0.60	1430	2322
Age (months)	16.3197	15.8517	0.4679	0.393	0.23	1402	2264
Height (cm)	71.5905	70.3953	1.1952	0.439	0.01	1400	2260
Weight (kg)	8.7055	8.6798	0.0258	0.093	0.78	1387	2249
Child acute morbidity							
Diarrhea last month	0.2772	0.2614	0.0158	0.018	0.39	1432	2322
Diarrhea treated	0.5164	0.5470	-0.0306	0.037	0.40	397	607
High fever last month	0.4368	0.4288	0.0081	0.023	0.72	1433	2323
Cough last month	0.5345	0.5157	0.0188	0.022	0.39	1433	2323
Cough and rapid breath	0.2729	0.2622	0.0107	0.019	0.57	1433	2323
ARI last month	0.1877	0.1774	0.0104	0.017	0.53	1433	2323
ARI treated	0.6059	0.6553	-0.0494	0.045	0.27	269	412
Illness last month	0.6920	0.6882	0.0038	0.021	0.86	1432	2322
Diarrhea or ARI	0.3785	0.3643	0.0142	0.021	0.50	1432	2322
Immunization							
BGC immunization	0.8089	0.7854	0.0235	0.020	0.24	1392	2255
Polio: 1 immunization	0.7722	0.7848	-0.0126	0.020	0.54	1383	2240
Polio: 2 immunizations	0.6538	0.6604	-0.0066	0.025	0.79	1372	2220
Polio: 3 immunizations	0.5558	0.5603	-0.0045	0.027	0.87	1371	2204
Polio: 4 immunizations	0.4484	0.4270	0.0214	0.027	0.43	1367	2199
DPT: 1 immunization	0.6874	0.6781	0.0093	0.025	0.71	1369	2215
DPT: 2 immunizations	0.5880	0.5737	0.0143	0.028	0.60	1364	2205
DPT: 3 immunizations	0.5121	0.4886	0.0235	0.028	0.40	1361	2200
Measles immunization	0.5284	0.5142	0.0142	0.021	0.50	1372	2215
Hepatitis B: 1 immunization	0.6601	0.6489	0.0112	0.028	0.69	1368	2210
Hepatitis B: 2 immunizations	0.5421	0.5161	0.0260	0.027	0.34	1365	2205
Hepatitis B: 3 immunizations	0.4736	0.4446	0.0290	0.027	0.28	1364	2193
Complete immunization given age	0.3632	0.3490	0.0142	0.027	0.59	1319	2129
Complete immunization	0.3187	0.2945	0.0242	0.024	0.31	1365	2204
Complete immunization for children age 10 months +	0.4664	0.4407	0.0256	0.033	0.44	877	1375
Malnutrition							
Weight-for-age: not malnourished	0.7597	0.7800	-0.0202	0.018	0.26	1361	2195

Weight-for-age: malnourished	0.2403	0.2200	0.0202	0.018	0.26	1361	2195
Weight-for-age: severely malnourished	0.0602	0.0647	-0.0044	0.010	0.66	1361	2195
Height-for-age: not malnourished	0.5153	0.4921	0.0232	0.023	0.31	1374	2205
Height-for-age: malnourished	0.4847	0.5079	-0.0232	0.023	0.31	1374	2205
Height-for-age: severely malnourished	0.2911	0.3329	-0.0418	0.024	0.08	1374	2205
Weight-for-height: not malnourished	0.8680	0.8714	-0.0034	0.013	0.80	1348	2177
Weight-for-height: malnourished	0.1320	0.1286	0.0034	0.013	0.80	1348	2177
Weight-for-height: severely malnourished	0.0549	0.0528	0.0021	0.009	0.81	1348	2177
Health measurement							
Nr. of times weighed in last two months (in freq. unit)	1.1774	1.1102	0.0673	0.049	0.17	1381	2206
Not weighed in last two months	0.2390	0.2575	-0.0185	0.021	0.39	1381	2206
Weighed once in last two month	0.3838	0.4216	-0.0378	0.022	0.09	1381	2206
Weighed at least twice in last two months	0.3773	0.3209	0.0563	0.028	0.04	1381	2206
Vitamin A							
Receiving vitamin A of at least 2 per year age 6 mth-5 years	1.5886	1.6344	-0.0459	0.058	0.43	1349	2131
Nr. of times child received vitamin A (in freq. unit)	0.4051	0.4299	-0.0248	0.022	0.27	1054	1640
Nr. of opportunity to receive vitamin A (in freq. unit)	3.2898	3.2284	0.0614	0.068	0.37	1408	2268
Rate of uptake of vitamin A from the official distribution	0.4727	0.4991	-0.0264	0.020	0.20	1324	2079

Children 6-15 years Baseline Characteristics

Variable	Treatment	Control	Difference	se	P	NT	NC
Female	0.4788	0.4764	0.0024	0.009	0.80	4271	7055
Age	10.0254	10.0819	-0.0565	0.061	0.35	4098	6677
Rural	0.2313	0.2778	-0.0465	0.054	0.38	4271	7055
Enrolled	0.8251	0.8173	0.0078	0.013	0.56	4271	7055
Enrolled in primary school	0.6715	0.6659	0.0056	0.012	0.65	4271	7055
Enrolled in secondary school	0.1524	0.1502	0.0022	0.011	0.84	4271	7055
Transition to secondary school	0.7633	0.7340	0.0293	0.028	0.30	942	1590
Attend school 85% last 2 weeks	0.9424	0.9294	0.0130	0.009	0.14	3056	5016
Attend school 85% last week	0.9407	0.9375	0.0033	0.009	0.73	2598	3933
Attend school 100% last 2 weeks	0.9038	0.9079	-0.0041	0.011	0.72	3056	5016
Attend school 100% last week	0.9403	0.9354	0.0049	0.009	0.60	2598	3933
Economic work activities	0.1100	0.1160	-0.0059	0.013	0.65	4271	7054

Domestic work activities	0.6228	0.6041	0.0186	0.019	0.34	4239	7038
20 hrs work (non domestic)	0.0564	0.0580	-0.0016	0.008	0.84	4271	7054
20 hrs work (all)	0.2592	0.2604	-0.0012	0.018	0.95	4271	7055
Scholarship in last 2 years	0.0567	0.0564	0.0004	0.008	0.96	3526	5767
Travel time to school (minutes)	18.2941	17.2650	1.0290	1.018	0.31	3506	5750
Travel costs to school (Rp.)	173.6416	132.3452	41.2965	32.898	0.21	3460	5667
Dropout rate from primary	0.0796	0.0839	-0.0043	0.009	0.64	4271	7055
Dropout rate from secondary	0.0159	0.0152	0.0008	0.003	0.77	4271	7055
Late enrollment	0.0409	0.0441	-0.0032	0.008	0.69	3524	5766
Net enrolment junior primary school	0.8671	0.8639	0.0032	0.010	0.75	2694	4424
Net enrolment junior secondary school	0.4588	0.4774	-0.0186	0.027	0.50	922	1527
Gross participation rate (age 7 to 12)	0.9317	0.9204	0.0113	0.009	0.23	2694	4424
Gross participation rate (age 13 to 15)	0.6649	0.6857	-0.0208	0.028	0.46	922	1527

Children 7-12 years Baseline Characteristics

Variable	Treatment	Control	Difference	se	P	NT	NC
Female	0.4761	0.4855	-0.0094	0.011	0.39	3163	5135
Age	8.9510	8.9870	-0.0360	0.045	0.42	3163	5135
Rural	0.2204	0.2722	-0.0519	0.052	0.32	3163	5135
Enrolled	0.8780	0.8664	0.0116	0.012	0.34	3163	5135
Enrolled in primary school	0.8230	0.8177	0.0052	0.011	0.63	3163	5135
Enrolled in secondary school	0.0544	0.0485	0.0059	0.007	0.38	3163	5135
Transition to secondary school	0.7208	0.6259	0.0949	0.050	0.06	240	401
Attend school 85% last 2 weeks	0.9467	0.9347	0.0120	0.009	0.17	2401	3890
Attend school 85% last week	0.9427	0.9429	-0.0001	0.010	0.99	2043	3011
Attend school 100% last 2 weeks	0.9059	0.9136	-0.0078	0.011	0.49	2401	3890
Attend school 100% last week	0.9427	0.9406	0.0022	0.010	0.82	2043	3011
Economic work activities	0.0737	0.0762	-0.0025	0.011	0.82	3163	5134
Domestic work activities	0.5824	0.5701	0.0123	0.022	0.57	3142	5127
20 hrs work (non domestic)	0.0300	0.0310	-0.0009	0.006	0.88	3163	5134
20 hrs work (all)	0.2049	0.2055	-0.0006	0.019	0.98	3163	5135
Scholarship in last 2 years	0.0500	0.0539	-0.0039	0.008	0.64	2778	4450
Travel time to school (minutes)	17.2941	16.0983	1.1958	1.113	0.28	2764	4444
Travel costs to school (Rp.)	92.8440	68.2338	24.6102	24.789	0.32	2725	4371
Dropout rate from primary	0.0281	0.0356	-0.0075	0.005	0.15	3163	5135

Dropout rate from secondary	0.0003	0.0004	-0.0001	0.000	0.86	3163	5135
Late enrollment	0.0353	0.0373	-0.0020	0.007	0.77	2777	4449
Net enrolment junior primary school	0.8671	0.8639	0.0032	0.010	0.75	2694	4424
Gross participation rate (age 7 to 12)	0.9317	0.9204	0.0113	0.009	0.23	2694	4424

Children 13-15 years Baseline Characteristics

Variable	Treatment	Control	Difference	se	P	NT	NC
Female	0.4946	0.4604	0.0342	0.020	0.09	922	1527
Age	13.7581	13.7996	-0.0415	0.029	0.16	922	1527
Rural	0.2451	0.3065	-0.0614	0.060	0.31	922	1527
Enrolled	0.6649	0.6857	-0.0208	0.028	0.46	922	1527
Enrolled in primary school	0.1594	0.1650	-0.0056	0.023	0.81	922	1527
Enrolled in secondary school	0.5022	0.5160	-0.0139	0.030	0.65	922	1527
Transition to secondary school	0.7869	0.7876	-0.0007	0.028	0.98	671	1130
Attend school 85% last 2 weeks	0.9417	0.9163	0.0254	0.015	0.10	532	896
Attend school 85% last week	0.9459	0.9256	0.0203	0.016	0.21	462	726
Attend school 100% last 2 weeks	0.9154	0.8973	0.0181	0.020	0.35	532	896
Attend school 100% last week	0.9437	0.9242	0.0195	0.016	0.23	462	726
Economic work activities	0.2408	0.2475	-0.0068	0.028	0.81	922	1527
Domestic work activities	0.7952	0.7587	0.0365	0.021	0.09	913	1521
20 hrs work (non domestic)	0.1497	0.1467	0.0030	0.020	0.88	922	1527
20 hrs work (all)	0.4544	0.4558	-0.0013	0.029	0.96	922	1527
Scholarship in last 2 years	0.0912	0.0716	0.0196	0.015	0.20	614	1047
Travel time to school (minutes)	22.3951	22.2481	0.1470	1.307	0.91	610	1040
Travel costs to school (Rp.)	566.9435	414.8885	152.0551	122.759	0.22	602	1031
Dropout rate from primary	0.2440	0.2266	0.0174	0.026	0.51	922	1527
Dropout rate from secondary	0.0705	0.0668	0.0037	0.011	0.74	922	1527
Late enrollment	0.0669	0.0640	0.0029	0.019	0.88	613	1047
Net enrolment secondary school	0.4588	0.4774	-0.0186	0.027	0.50	922	1527
Gross participation rate (age 13 to 15)	0.6649	0.6857	-0.0208	0.028	0.46	922	1527

Household Baseline Characteristics

Variable	Treatment	Control	Difference	se	P	NT	NC
Female	0.4981	0.4971	0.0011	0.004	0.79	16245	27041
Average age	22.2095	22.5776	-0.3682	0.322	0.25	14862	24423
Household size	5.1868	5.2294	-0.0426	0.093	0.65	3132	5171
Rural	0.2267	0.2733	-0.0466	0.051	0.36	3132	5171
Educational degree obtained (age>0)							
None	0.3526	0.3392	0.0134	0.016	0.40	11089	18772
Primary	0.4685	0.4612	0.0073	0.013	0.56	11089	18772
Junior secondary	0.1339	0.1456	-0.0117	0.008	0.16	11089	18772
Senior secondary	0.0444	0.0517	-0.0073	0.005	0.16	11089	18772
Higher	0.0006	0.0023	-0.0017	0.000	0.00	11089	18772
Number of outpatient care							
Public	0.1339	0.1259	0.0081	0.006	0.21	16245	27041
Private	0.0315	0.0366	-0.0051	0.003	0.12	16245	27041
Traditional	0.0041	0.0044	-0.0003	0.001	0.78	16245	27041
Public & private	0.1655	0.1625	0.0029	0.007	0.68	16245	27041
Puskesmas/Pustu	0.0524	0.0541	-0.0017	0.004	0.68	16245	27041
Contact rate							
Public	0.1114	0.1021	0.0094	0.005	0.06	16245	27041
Private	0.0262	0.0302	-0.0040	0.003	0.13	16245	27041
Traditional	0.0033	0.0037	-0.0004	0.001	0.56	16245	27041
Public & private	0.1327	0.1271	0.0056	0.005	0.28	16245	27041
Puskesmas/Pustu	0.0439	0.0438	0.0001	0.003	0.97	16245	27041
Social program/insurance							
Askes	0.0265	0.0242	0.0023	0.006	0.70	3132	5171
Askeskin	0.5182	0.5047	0.0135	0.024	0.57	3132	5171
BLT/SLT	0.9527	0.9213	0.0315	0.008	0.00	3132	5171
Raskin	0.9476	0.9346	0.0130	0.011	0.23	3132	5171
Head of household							
Female	0.0926	0.0781	0.0145	0.008	0.08	3132	5171
No education degree	0.3549	0.3307	0.0242	0.020	0.22	3128	5165
Primary	0.4926	0.4966	-0.0040	0.018	0.83	3128	5165
Junior secondary	0.1068	0.1160	-0.0092	0.010	0.35	3128	5165

Senior secondary	0.0451	0.0534	-0.0084	0.007	0.20	3128	5165
Higher	0.0006	0.0033	-0.0027	0.001	0.01	3128	5165
Rice and secondary crops main profession	0.6893	0.6651	0.0243	0.030	0.42	3132	5171
Per capita monthly expenditure							
Total (Rp.)	183848.0227	196468.1522	-12620.1296	5211.537	0.02	3132	5171
Food (Rp.)	57115.4264	63247.0142	-6131.5878	3655.862	0.09	3132	5171
Non food (Rp.)	8646.4549	8262.4053	384.0496	891.316	0.67	3132	5171
Education (Rp.)	4169.7468	4620.1244	-450.3776	464.086	0.33	3132	5171
Health (Rp.)	126732.5963	133221.1381	-6488.5418	2936.801	0.03	3132	5171
Living conditions							
Tiles roof	0.6638	0.7335	-0.0697	0.050	0.17	3132	5171
Bamboo walls	0.4365	0.3549	0.0816	0.035	0.02	3132	5171
Earth floor	0.4132	0.3493	0.0639	0.034	0.06	3132	5171
Clean drinking water (PAM/pump)	0.2494	0.3274	-0.0780	0.028	0.00	3132	5171
Private drinking water facility (PAM/pump/well)	0.7452	0.7471	-0.0018	0.035	0.96	3132	5171
PLN electricity	0.8014	0.8366	-0.0352	0.036	0.33	3132	5171
Private toilet facility	0.3621	0.4471	-0.0850	0.029	0.00	3132	5171
Squatting latrine (<i>kloset leher angsa</i>)	0.1967	0.2680	-0.0714	0.021	0.00	3132	5171
Septic tank disposal	0.1849	0.2632	-0.0783	0.020	0.00	3132	5171
Wood/charcoal cooking fuel	0.1526	0.2017	-0.0491	0.024	0.04	3132	5171
Kerosene cooking fuel	0.8436	0.7952	0.0483	0.024	0.05	3132	5171
Assets							
Own irrigated rice field	0.0581	0.0909	-0.0328	0.011	0.00	3132	5171
Own rain-fed rice field	0.0840	0.0752	0.0087	0.018	0.63	3132	5171
Own dry land	0.2551	0.2605	-0.0054	0.038	0.89	3132	5171
Own land for housing	0.8662	0.8873	-0.0210	0.017	0.20	3132	5171
Own other land	0.0201	0.0286	-0.0085	0.005	0.09	3132	5171
Size of land owned (ha)	0.2682	0.5202	-0.2520	0.155	0.10	3132	5171
Own radio/tape recorder	0.3391	0.3877	-0.0487	0.020	0.02	3132	5171
Own television	0.4444	0.5163	-0.0719	0.033	0.03	3132	5171
Own parabola antenna	0.0054	0.0095	-0.0040	0.002	0.06	3132	5171
Own showcase/sideboard	0.3764	0.4450	-0.0685	0.025	0.01	3132	5171
Own refrigerator	0.0134	0.0263	-0.0129	0.004	0.00	3132	5171
Own bicycle/skiff	0.4250	0.4722	-0.0473	0.041	0.24	3132	5171
Own motorcycle/outboard motor	0.1050	0.1626	-0.0576	0.015	0.00	3132	5171
Own car/motor boat	0.0013	0.0035	-0.0022	0.001	0.03	3132	5171
Own hand phone	0.0594	0.0882	-0.0288	0.009	0.00	3132	5171

Own chicken/duck	0.4601	0.4902	-0.0301	0.024	0.21	3132	5171
Own pig	0.1070	0.1155	-0.0085	0.030	0.78	3132	5171
Own goat	0.1264	0.1400	-0.0136	0.016	0.40	3132	5171
Own cow/buffalo	0.0728	0.1066	-0.0338	0.015	0.02	3132	5171
Own horse	0.0057	0.0087	-0.0030	0.005	0.53	3132	5171
Community participation							
Participation in social service group	0.2360	0.2533	-0.0174	0.019	0.36	3132	5171
Participation in production group	0.0683	0.0694	-0.0011	0.016	0.94	3132	5171
Participation in workers group	0.0511	0.0487	0.0024	0.013	0.85	3132	5171
Participation in nat. resource management group	0.0080	0.0110	-0.0030	0.003	0.37	3132	5171
Participation in credit/finance group	0.2912	0.3137	-0.0225	0.028	0.42	3132	5171
Participation in governmental group	0.0597	0.0679	-0.0082	0.011	0.44	3132	5171
Participation in religious/ traditional group	0.5910	0.5960	-0.0050	0.025	0.84	3132	5171
Participation in recreational group	0.0176	0.0166	0.0009	0.004	0.81	3132	5171
Participation in mass/political organization	0.0064	0.0081	-0.0017	0.002	0.45	3132	5171

Children Mortality 0-3 year Baseline Characteristics

Variable	Treatment	Control	Difference	se	P	NT	NC
Mortality 0-28 days	0.0280	0.0262	0.0019	0.006	0.75	1499	2447
Mortality 1-2 months	0.0085	0.0057	0.0028	0.003	0.36	1413	2292
Mortality 3-5 months	0.0054	0.0061	-0.0007	0.003	0.78	1296	2117
Mortality 6-11 months	0.0102	0.0133	-0.0031	0.004	0.44	1182	1880
Mortality 0-11 months	0.0532	0.0513	0.0019	0.007	0.80	1523	2474

Married Women 16-49 year Baseline Characteristics

Variable	Treatment	Control	Difference	se	P	NT	NC
Nr. of antenatal visits	6.5004	6.7253	-0.2249	0.256	0.38	1309	2166
At least 4 antenatal visits	0.6837	0.6934	-0.0097	0.025	0.69	1309	2166
At least 90 iron pills given	0.1358	0.1388	-0.0030	0.019	0.87	1075	1722

Delivery assisted by doctor or midwife	0.6037	0.6023	0.0013	0.038	0.97	1085	1793
Nr. of postnatal visits	3.8498	3.9972	-0.1474	0.484	0.76	1085	1793
At least 2 postnatal visits	0.4581	0.4635	-0.0054	0.030	0.86	1085	1793
Family planning acceptor	0.5820	0.5710	0.0110	0.021	0.60	3335	5471

Baseline Balance Test Results - uncontaminated kecamatanonly (L=1, K=1 and L=0, K=0)	All households in PKH <i>kecamatan</i> (T) and Common Support households in control areas (C)							PKH beneficiaries (T) and non-beneficiaries in treatment <i>kecamatan</i> (C)						
	means		Diff. in means	diff. std err	std err p-value	N		means		Diff. in means	diff. std err	std err p-value	N	
	T	C				T	C	T	C				T	C
Female	0.497	0.497	0.000	0.003	0.940	33,286	27,041	0.498	0.497	0.002	0.004	0.700	16,245	17,041
Average age	22.850	22.578	0.273	0.305	0.370	30,522	24,423	22.210	23.459	-1.249	0.204	0.000	14,862	15,660
Educational degree obtained (age>0)														
None	0.325	0.339	-0.014	0.014	0.310	23,180	18,772	0.353	0.299	0.053	0.011	0.000	11,089	12,091
Primary	0.459	0.461	-0.002	0.011	0.820	23,180	18,772	0.469	0.450	0.019	0.010	0.060	11,089	12,091
Junior secondary	0.152	0.146	0.007	0.008	0.410	23,180	18,772	0.134	0.169	-0.035	0.006	0.000	11,089	12,091
Senior secondary	0.062	0.052	0.010	0.005	0.070	23,180	18,772	0.044	0.077	-0.033	0.005	0.000	11,089	12,091
Higher	0.003	0.002	0.000	0.001	0.550	23,180	18,772	0.001	0.005	-0.004	0.001	0.000	11,089	12,091
Household size	5.157	5.229	-0.073	0.089	0.410	6,455	5,171	5.187	5.128	0.059	0.070	0.400	3,132	3,323
Rural	0.225	0.273	-0.049	0.050	0.330	6,455	5,171	0.227	0.223	0.004	0.021	0.860	3,132	3,323
Number of outpatient care														
Public	0.132	0.126	0.006	0.006	0.320	33,286	27,041	0.134	0.130	0.004	0.005	0.400	16,245	17,041
Private	0.037	0.037	0.001	0.003	0.800	33,286	27,041	0.032	0.043	-0.012	0.003	0.000	16,245	17,041
Traditional	0.004	0.004	0.000	0.001	0.960	33,286	27,041	0.004	0.005	-0.001	0.001	0.550	16,245	17,041
Public & private	0.169	0.163	0.007	0.007	0.310	33,286	27,041	0.166	0.173	-0.007	0.006	0.220	16,245	17,041
Puskesmas/pustu	0.052	0.054	-0.002	0.004	0.620	33,286	27,041	0.052	0.052	0.001	0.003	0.890	16,245	17,041
Contact rate														
Public	0.109	0.102	0.007	0.004	0.110	33,286	27,041	0.111	0.107	0.004	0.004	0.270	16,245	17,041
Private	0.032	0.030	0.002	0.003	0.540	33,286	27,041	0.026	0.037	-0.011	0.003	0.000	16,245	17,041
Traditional	0.003	0.004	0.000	0.001	0.590	33,286	27,041	0.003	0.004	0.000	0.001	0.820	16,245	17,041
Public & private	0.136	0.127	0.009	0.005	0.070	33,286	27,041	0.133	0.138	-0.006	0.004	0.190	16,245	17,041
Puskesmas/pustu	0.044	0.044	0.000	0.003	0.980	33,286	27,041	0.044	0.044	0.000	0.003	0.890	16,245	17,041
Social program/insurance														
Askes	0.026	0.024	0.002	0.005	0.770	6,455	5,171	0.027	0.025	0.002	0.005	0.770	3,132	3,323
Askeskin	0.481	0.505	-0.024	0.022	0.280	6,455	5,171	0.518	0.446	0.073	0.018	0.000	3,132	3,323
BLT/SLT	0.941	0.921	0.019	0.008	0.010	6,455	5,171	0.953	0.929	0.024	0.006	0.000	3,132	3,323
Raskin	0.937	0.935	0.002	0.011	0.840	6,455	5,171	0.948	0.927	0.021	0.007	0.000	3,132	3,323
Head of household														
Female	0.083	0.078	0.004	0.007	0.500	6,455	5,171	0.093	0.073	0.020	0.008	0.020	3,132	3,323
No education degree	0.328	0.331	-0.003	0.018	0.880	6,449	5,165	0.355	0.303	0.052	0.015	0.000	3,128	3,321
Primary	0.493	0.497	-0.003	0.016	0.830	6,449	5,165	0.493	0.494	-0.001	0.015	0.940	3,128	3,321
Junior secondary	0.119	0.116	0.003	0.009	0.780	6,449	5,165	0.107	0.130	-0.023	0.008	0.000	3,128	3,321
Senior secondary	0.058	0.053	0.005	0.007	0.490	6,449	5,165	0.045	0.070	-0.025	0.008	0.000	3,128	3,321
Higher	0.002	0.003	-0.001	0.001	0.280	6,449	5,165	0.001	0.004	-0.003	0.001	0.010	3,128	3,321
Rice and secondary crops main profession	0.669	0.665	0.004	0.029	0.900	6,455	5,171	0.689	0.649	0.040	0.017	0.020	3,132	3,323

Baseline Balance Test Results - uncontaminated kecamatanonly (L=1, K=1 and L=0, K=0)	All households in PKH <i>kecamatan</i> (T) and Common Support households in control areas (C)							PKH beneficiaries (T) and non-beneficiaries in treatment <i>kecamatan</i> (C)						
	means		Diff. in means	diff. std err	std err p-value	N		means		Diff. in means	diff. std err	std err p-value	N	
	T	C				T	C	T	C				T	C
Variable	T	C				T	C	T	C				T	C
Community participation														
Participation in social service group	0.236	0.253	-0.018	0.018	0.320	6,455	5,171	0.236	0.235	0.001	0.013	0.960	3,132	3,323
Participation in production group	0.066	0.069	-0.003	0.014	0.810	6,455	5,171	0.068	0.064	0.005	0.008	0.580	3,132	3,323
Participation in workers group	0.042	0.049	-0.006	0.011	0.540	6,455	5,171	0.051	0.034	0.017	0.008	0.030	3,132	3,323
Participation in nat. resource management group	0.007	0.011	-0.004	0.003	0.210	6,455	5,171	0.008	0.007	0.001	0.003	0.710	3,132	3,323
Participation in credit/finance group	0.308	0.314	-0.006	0.027	0.820	6,455	5,171	0.291	0.323	-0.032	0.016	0.050	3,132	3,323
Participation in governmental group	0.063	0.068	-0.005	0.010	0.630	6,455	5,171	0.060	0.066	-0.007	0.007	0.380	3,132	3,323
Participation in religious/traditional group	0.603	0.596	0.007	0.023	0.770	6,455	5,171	0.591	0.614	-0.023	0.017	0.170	3,132	3,323
Participation in recreational group	0.019	0.017	0.003	0.003	0.460	6,455	5,171	0.018	0.021	-0.003	0.003	0.350	3,132	3,323
Participation in mass/political organization	0.008	0.008	0.000	0.002	0.910	6,455	5,171	0.006	0.010	-0.004	0.003	0.130	3,132	3,323

Variable	PKH beneficiaries (T) and Common Support households in control areas (C)							Non-beneficiaries in treatment <i>kecamatan</i> (T) and Common Support households in control areas (C)						
	means		Diff. in means	diff. std err	std err p-value	N		means		Diff. in means	diff. std err	std err p-value	N	
	T	C				T	C	T	C					
Baseline Balance Test Results - uncontaminated kecamatanonly (L=1, K=1 and L=0, K=0)														
Female	0.498	0.497	0.001	0.004	0.790	16,245	27,041	0.497	0.497	-0.001	0.004	0.900	17,041	27,041
Average age	22.210	22.578	-0.368	0.322	0.250	14,862	24,423	23.459	22.578	0.881	0.319	0.010	15,660	24,423
Educational degree obtained (age>0)														
None	0.353	0.339	0.013	0.016	0.400	11,089	18,772	0.299	0.339	-0.040	0.014	0.010	12,091	18,772
Primary	0.469	0.461	0.007	0.013	0.560	11,089	18,772	0.450	0.461	-0.011	0.011	0.320	12,091	18,772
Junior secondary	0.134	0.146	-0.012	0.008	0.160	11,089	18,772	0.169	0.146	0.023	0.008	0.010	12,091	18,772
Senior secondary	0.044	0.052	-0.007	0.005	0.160	11,089	18,772	0.077	0.052	0.026	0.007	0.000	12,091	18,772
Higher	0.001	0.002	-0.002	0.000	0.000	11,089	18,772	0.005	0.002	0.002	0.001	0.010	12,091	18,772
Household size	5.187	5.229	-0.043	0.093	0.650	3,132	5,171	5.128	5.229	-0.101	0.099	0.310	3,323	5,171
Rural	0.227	0.273	-0.047	0.051	0.360	3,132	5,171	0.223	0.273	-0.050	0.050	0.320	3,323	5,171
Number of outpatient care														
Public	0.134	0.126	0.008	0.006	0.210	16,245	27,041	0.130	0.126	0.004	0.006	0.560	17,041	27,041
Private	0.032	0.037	-0.005	0.003	0.120	16,245	27,041	0.043	0.037	0.006	0.004	0.070	17,041	27,041
Traditional	0.004	0.004	0.000	0.001	0.780	16,245	27,041	0.005	0.004	0.000	0.001	0.710	17,041	27,041
Public & private	0.166	0.163	0.003	0.007	0.680	16,245	27,041	0.173	0.163	0.010	0.007	0.160	17,041	27,041
Puskesmas/pustu	0.052	0.054	-0.002	0.004	0.680	16,245	27,041	0.052	0.054	-0.002	0.004	0.610	17,041	27,041
Contact rate														
Public	0.111	0.102	0.009	0.005	0.060	16,245	27,041	0.107	0.102	0.005	0.005	0.300	17,041	27,041
Private	0.026	0.030	-0.004	0.003	0.130	16,245	27,041	0.037	0.030	0.007	0.003	0.020	17,041	27,041
Traditional	0.003	0.004	0.000	0.001	0.560	16,245	27,041	0.004	0.004	0.000	0.001	0.710	17,041	27,041
Public & private	0.133	0.127	0.006	0.005	0.280	16,245	27,041	0.138	0.127	0.011	0.005	0.030	17,041	27,041
Puskesmas/pustu	0.044	0.044	0.000	0.003	0.970	16,245	27,041	0.044	0.044	0.000	0.003	0.940	17,041	27,041
Social program/insurance														
Askes	0.027	0.024	0.002	0.006	0.700	3,132	5,171	0.025	0.024	0.001	0.006	0.890	3,323	5,171
Askeskin	0.518	0.505	0.014	0.024	0.570	3,132	5,171	0.446	0.505	-0.059	0.023	0.010	3,323	5,171
BLT/SLT	0.953	0.921	0.032	0.008	0.000	3,132	5,171	0.929	0.921	0.008	0.008	0.360	3,323	5,171
Raskin	0.948	0.935	0.013	0.011	0.230	3,132	5,171	0.927	0.935	-0.008	0.012	0.480	3,323	5,171
Head of household														
Female	0.093	0.078	0.015	0.008	0.080	3,132	5,171	0.073	0.078	-0.005	0.007	0.500	3,323	5,171
No education degree	0.355	0.331	0.024	0.020	0.220	3,128	5,165	0.303	0.331	-0.028	0.019	0.140	3,321	5,165
Primary	0.493	0.497	-0.004	0.018	0.830	3,128	5,165	0.494	0.497	-0.003	0.017	0.870	3,321	5,165
Junior secondary	0.107	0.116	-0.009	0.010	0.350	3,128	5,165	0.130	0.116	0.014	0.010	0.170	3,321	5,165
Senior secondary	0.045	0.053	-0.008	0.007	0.200	3,128	5,165	0.070	0.053	0.017	0.008	0.050	3,321	5,165
Higher	0.001	0.003	-0.003	0.001	0.010	3,128	5,165	0.004	0.003	0.000	0.001	0.820	3,321	5,165
Rice and secondary crops main profession	0.689	0.665	0.024	0.030	0.420	3,132	5,171	0.649	0.665	-0.016	0.031	0.600	3,323	5,171

Variable	Baseline Balance Test Results - uncontaminated kecamatanonly (L=1, K=1 and L=0, K=0)		PKH beneficiaries (T) and Common Support households in control areas (C)					Non-beneficiaries in treatment <i>kecamatan</i> (T) and Common Support households in control areas (C)						
	means		Diff. in means	diff. std err	std err p-value	N		means		Diff. in means	diff. std err	std err p-value	N	
	T	C				T	C	T	C				T	C
Head of household														
Female	0.093	0.078	0.015	0.008	0.080	3,132	5,171	0.073	0.078	-0.005	0.007	0.500	3,323	5,171
No education degree	0.355	0.331	0.024	0.020	0.220	3,128	5,165	0.303	0.331	-0.028	0.019	0.140	3,321	5,165
Primary	0.493	0.497	-0.004	0.018	0.830	3,128	5,165	0.494	0.497	-0.003	0.017	0.870	3,321	5,165
Junior secondary	0.107	0.116	-0.009	0.010	0.350	3,128	5,165	0.130	0.116	0.014	0.010	0.170	3,321	5,165
Senior secondary	0.045	0.053	-0.008	0.007	0.200	3,128	5,165	0.070	0.053	0.017	0.008	0.050	3,321	5,165
Higher	0.001	0.003	-0.003	0.001	0.010	3,128	5,165	0.004	0.003	0.000	0.001	0.820	3,321	5,165
Rice and secondary crops main profession	0.689	0.665	0.024	0.030	0.420	3,132	5,171	0.649	0.665	-0.016	0.031	0.600	3,323	5,171
Per capita monthly expenditure														
Total (Rp.)	183,848	196,468	-12620	5212	0.020	3,132	5,171	210,476	196,468	14007	6542	0.030	3,323	5,171
Food (Rp.)	57,115	63,247	-6132	3656	0.090	3,132	5,171	75,990	63,247	12743	5550	0.020	3,323	5,171
Non food (Rp.)	8,646	8,262	384	891	0.670	3,132	5,171	10,164	8,262	1901	973	0.050	3,323	5,171
Education (Rp.)	4,170	4,620	-450	464	0.330	3,132	5,171	5,301	4,620	681	567	0.230	3,323	5,171
Health (Rp.)	126,733	133,221	-6489	2937	0.030	3,132	5,171	134,486	133,221	1265	2805	0.650	3,323	5,171
Living conditions														
Tiles roof	0.664	0.734	-0.070	0.050	0.170	3,132	5,171	0.696	0.734	-0.038	0.049	0.450	3,323	5,171
Bamboo walls	0.437	0.355	0.082	0.035	0.020	3,132	5,171	0.261	0.355	-0.094	0.032	0.000	3,323	5,171
Earth floor	0.413	0.349	0.064	0.034	0.060	3,132	5,171	0.298	0.349	-0.051	0.032	0.110	3,323	5,171
Clean drinking water (PAM/pump)	0.249	0.327	-0.078	0.028	0.000	3,132	5,171	0.338	0.327	0.011	0.029	0.720	3,323	5,171
Private drinking water facility (PAM/pump/well)	0.745	0.747	-0.002	0.035	0.960	3,132	5,171	0.815	0.747	0.068	0.031	0.030	3,323	5,171
PLN electricity	0.801	0.837	-0.035	0.036	0.330	3,132	5,171	0.884	0.837	0.048	0.031	0.120	3,323	5,171
Private toilet facility	0.362	0.447	-0.085	0.029	0.000	3,132	5,171	0.441	0.447	-0.006	0.029	0.830	3,323	5,171
Squatting latrine (<i>kloset leher angsa</i>)	0.197	0.268	-0.071	0.021	0.000	3,132	5,171	0.308	0.268	0.040	0.023	0.080	3,323	5,171
Septic tank disposal	0.185	0.263	-0.078	0.020	0.000	3,132	5,171	0.272	0.263	0.009	0.022	0.690	3,323	5,171
Wood/charcoal cooking fuel	0.153	0.202	-0.049	0.024	0.040	3,132	5,171	0.210	0.202	0.009	0.025	0.730	3,323	5,171
Kerosene cooking fuel	0.844	0.795	0.048	0.024	0.050	3,132	5,171	0.786	0.795	-0.010	0.025	0.700	3,323	5,171
Assets														
Own irrigated rice field	0.058	0.091	-0.033	0.011	0.000	3,132	5,171	0.082	0.091	-0.009	0.012	0.450	3,323	5,171
Own rain-fed rice field	0.084	0.075	0.009	0.018	0.630	3,132	5,171	0.081	0.075	0.006	0.016	0.710	3,323	5,171
Own dry land	0.255	0.261	-0.005	0.038	0.890	3,132	5,171	0.219	0.261	-0.042	0.033	0.210	3,323	5,171
Own land for housing	0.866	0.887	-0.021	0.017	0.200	3,132	5,171	0.884	0.887	-0.003	0.017	0.840	3,323	5,171
Own other land	0.020	0.029	-0.009	0.005	0.090	3,132	5,171	0.026	0.029	-0.003	0.005	0.570	3,323	5,171
Size of land owned (ha)	0.268	0.520	-0.252	0.155	0.100	3,132	5,171	0.286	0.520	-0.235	0.155	0.130	3,323	5,171
Own radio/tape recorder	0.339	0.388	-0.049	0.020	0.020	3,132	5,171	0.394	0.388	0.006	0.019	0.750	3,323	5,171
Own television	0.444	0.516	-0.072	0.033	0.030	3,132	5,171	0.572	0.516	0.056	0.031	0.070	3,323	5,171
Own parabola antenna	0.005	0.010	-0.004	0.002	0.060	3,132	5,171	0.014	0.010	0.004	0.003	0.180	3,323	5,171
Own showcase/sideboard	0.376	0.445	-0.069	0.025	0.010	3,132	5,171	0.452	0.445	0.007	0.023	0.760	3,323	5,171
Own refrigerator	0.013	0.026	-0.013	0.004	0.000	3,132	5,171	0.036	0.026	0.010	0.005	0.060	3,323	5,171
Own bicycle/skiff	0.425	0.472	-0.047	0.041	0.240	3,132	5,171	0.492	0.472	0.020	0.040	0.620	3,323	5,171
Own motorcycle/outboard motor	0.105	0.163	-0.058	0.015	0.000	3,132	5,171	0.209	0.163	0.046	0.017	0.010	3,323	5,171
Own car/motor boat	0.001	0.004	-0.002	0.001	0.030	3,132	5,171	0.005	0.004	0.001	0.001	0.450	3,323	5,171
Own hand phone	0.059	0.088	-0.029	0.009	0.000	3,132	5,171	0.129	0.088	0.041	0.011	0.000	3,323	5,171
Own chicken/duck	0.460	0.490	-0.030	0.024	0.210	3,132	5,171	0.491	0.490	0.001	0.024	0.980	3,323	5,171
Own pig	0.107	0.116	-0.009	0.030	0.780	3,132	5,171	0.077	0.116	-0.038	0.027	0.160	3,323	5,171
Own goat	0.126	0.140	-0.014	0.016	0.400	3,132	5,171	0.117	0.140	-0.023	0.015	0.130	3,323	5,171
Own cow/buffalo	0.073	0.107	-0.034	0.015	0.020	3,132	5,171	0.099	0.107	-0.008	0.016	0.650	3,323	5,171
Own horse	0.006	0.009	-0.003	0.005	0.530	3,132	5,171	0.005	0.009	-0.004	0.004	0.390	3,323	5,171

Variable	Baseline Balance Test Results - uncontaminated kecamatan only (L=1, K=1 and L=0, K=0)		PKH beneficiaries (T) and Common Support households in control areas (C)					Non-beneficiaries in treatment <i>kecamatan</i> (T) and Common Support households in control areas (C)						
	means		Diff. in means	diff. std err	std err p-value	N		means		Diff. in means	diff. std err	std err p-value	N	
	T	C				T	C	T	C				T	C
Community participation														
Participation in social service group	0.236	0.253	-0.017	0.019	0.360	3,132	5,171	0.235	0.253	-0.018	0.019	0.350	3,323	5,171
Participation in production group	0.068	0.069	-0.001	0.016	0.940	3,132	5,171	0.064	0.069	-0.006	0.014	0.680	3,323	5,171
Participation in workers group	0.051	0.049	0.002	0.013	0.850	3,132	5,171	0.034	0.049	-0.015	0.010	0.130	3,323	5,171
Participation in nat. resource management group	0.008	0.011	-0.003	0.003	0.370	3,132	5,171	0.007	0.011	-0.004	0.003	0.170	3,323	5,171
Participation in credit/finance group	0.291	0.314	-0.023	0.028	0.420	3,132	5,171	0.323	0.314	0.009	0.028	0.740	3,323	5,171
Participation in governmental group	0.060	0.068	-0.008	0.011	0.440	3,132	5,171	0.066	0.068	-0.002	0.011	0.880	3,323	5,171
Participation in religious/ traditional group	0.591	0.596	-0.005	0.025	0.840	3,132	5,171	0.614	0.596	0.018	0.023	0.440	3,323	5,171
Participation in recreational group	0.018	0.017	0.001	0.004	0.810	3,132	5,171	0.021	0.017	0.004	0.004	0.280	3,323	5,171
Participation in mass/political organization	0.006	0.008	-0.002	0.002	0.450	3,132	5,171	0.010	0.008	0.002	0.003	0.460	3,323	5,171

Annex C Propensity Score Matching

Below are the variables used in the propensity scoring exercise carried out in PKH *kecamatan* and described in Chapter 4. The first variable listed, “pkh”, is a dummy variable that equals 1 when a household is a PKH beneficiary household. It is the left-hand-side variable in the propensity score equation, which estimates a non-linear probit function of pkh on the rest of the variables listed below. The resulting score describes for every household the likelihood, conditional upon the listed variables, that it would become a PKH beneficiary household.

Variable name	Variable	Unit
pkh	Receive PKH	dummy
predictpce	Percapita expenditure prediction	Rp.
age_yearsR	Age of household head	year
hhsiz	Household size	persons
femaleh	Female headed household	dummy
y0t2r	Proportion number of household member 0-2 years old	share
y3t6r	Proportion number of household member 3-6 years old	share
y7t15r	Proportion number of household member 7-15 years old	share
agrihh	Household head working in agriculture	dummy
atthh1	Household head education attainment: SD incomplete/never in school	dummy
atthh2	Household head education attainment: SD/MI	dummy
atthh3	Household head education attainment: SMP/MTs	dummy
asset_2	Assets: having television	dummy
asset_3	Assets: having Parabolic antenna	dummy
asset_5	Assets: having Refrigerator	dummy
asset_7	Assets: having Motorcycle/outboard motor	dummy
asset_8	Assets: having Car/motor boat	dummy
asset_11	Assets: having Pig	dummy
asset_12	Assets: having Goat	dummy
asset_13	Assets: having Cow/buffalo	dummy
asset_14	Assets: having Horse	dummy
olig1	Oligarchy: familiar with the village head/village head's wife/husband	dummy
olig2	Oligarchy: familiar with village secretary/village secretary's wife/husband	dummy
olig3	Oligarchy: familiar with the chairman/member of BPD/chairman's wife/husband	dummy
olig4	Oligarchy: familiar with the dusun head/dusun head's wife/husband	dummy
olig5	Oligarchy: familiar with the RT head/RT head's wife/husband	dummy
comm_part_a	Community participation: participate in social service group	dummy
comm_part_b	Community participation: participate in production group	dummy
comm_part_c	Community participation: participate in workers group	dummy
comm_part_d	Community participation: participate in natural resources management group	dummy
comm_part_e	Community participation: participate in credit/financial group	dummy
comm_part_f	Community participation: participate in governmental group	dummy
comm_part_g	Community participation: participate in religious/traditional group	dummy
comm_part_h	Community participation: participate in recreational/traditional group	dummy
comm_part_i	Community participation: participate in mass/pollitical organization	dummy
sltblt	Ever received unconditional/conditional cash transfer	dummy
askeskin	Having Askeskin (Health insurance for the poor)	dummy

As described in Chapter 3, we impute or fit a propensity score for all households in *kecamatan* that did not receive PKH. We do this by applying the estimated probit coefficients (detailed in the table below) to the observed values of all variables in the list above in all these households. The values resulting from applying estimated propensity score coefficients to observed household characteristics (in a probit equation) are called propensity scores for households in *kecamatan* without PKH. They represent individual household likelihoods of receiving PKH had PKH been allocated to their *kecamatan*.

Propensity score regression in all PKH <i>kecamatan</i>			
depvar: Household PKH status (0/1)	coeff	std err	p- value
predictpce	0.000	0.000	0.248
age_yearsR	-0.003	0.002	0.082
hhsiz	0.024	0.009	0.008
femaleh	0.129	0.058	0.026
y0t2r	0.597	0.163	0.000
y3t6r	0.660	0.144	0.000
y7t15r	0.400	0.116	0.001
agrihh	0.126	0.034	0.000
atthh1	0.343	0.066	0.000
atthh2	0.254	0.062	0.000
atthh3	0.119	0.070	0.092
asset_2	-0.178	0.033	0.000
asset_3	-0.219	0.161	0.175
asset_5	-0.313	0.103	0.002
asset_7	-0.289	0.044	0.000
asset_8	-0.421	0.288	0.144
asset_11	0.036	0.062	0.557
asset_12	0.060	0.049	0.215
asset_13	-0.200	0.058	0.001
asset_14	-0.017	0.237	0.944
olig1	0.014	0.040	0.734
olig2	0.041	0.041	0.321
olig3	-0.107	0.038	0.005
olig4	0.062	0.042	0.141
olig5	-0.016	0.040	0.696
comm_part_a	0.032	0.036	0.370
comm_part_b	-0.067	0.068	0.324
comm_part_c	0.205	0.085	0.016
comm_part_d	0.004	0.184	0.983
comm_part_e	0.002	0.033	0.962
comm_part_f	-0.136	0.065	0.036
comm_part_g	-0.005	0.031	0.882
comm_part_h	0.117	0.111	0.295
comm_part_i	-0.119	0.168	0.479
sltblt	0.222	0.069	0.001
askeskin	0.142	0.030	0.000
constant	-0.782	0.133	0.000

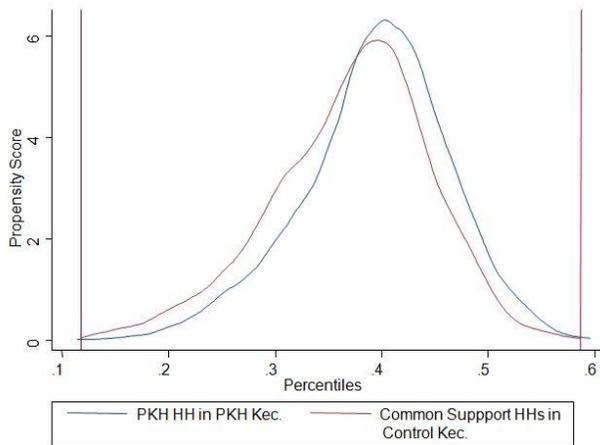
From the table above it is clear that, as described in Chapter 4, PKH households are distinguishable from non-beneficiaries in PKH *kecamatan* in the following ways: they are a bit younger, with more members, are more often female-headed, are more often working in agriculture, are less educated, have fewer assets, and are more often recipients of other nationally-available social assistance programs like BLT and Askeskin/Jamkesmas (a health fee waiver). All of this implies that households selected to be PKH recipients are poorer, larger and less well-educated and more often exhibit characteristics that are non-income correlates of poverty.

Figures C.1 through C.3 on the following page present detailed distributions of the estimated or imputed propensity score in different populations. Figure C.1 presents propensity scores for PKH households and all common-support households from non-PKH *kecamatan* within the uncontaminated *kecamatan* (L=1, K=1 and L=0, K=0) only. Figure C.2 presents the scores, again in uncontaminated *kecamatan* only, for PKH-exposed non-beneficiary households in PKH *kecamatan* and all common support households in non-PKH *kecamatan*. Figure C.3 presents estimated propensity scores in all *kecamatan* for the three groups of households: PKH beneficiaries, PKH-exposed but non-beneficiary households in PKH *kecamatan*, and finally all households in non-PKH *kecamatan*.

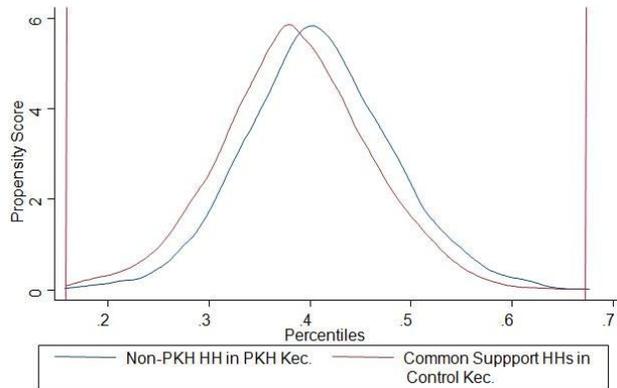
Vertical red lines delineate the limits of the common support. Beyond the upper (lower) limit, one or more households from one or the other group of households have estimated or imputed propensity scores larger (smaller) than the largest (smallest) estimated propensity score in the other group of households.

The figures demonstrate that for all the specifications we have estimated (A, B1 and B2), the area of common support for the groups included in the estimation sample is substantial and generally covers the means, medians, and modes for all groups as well as a sizeable portion of the tails of each group's distribution.

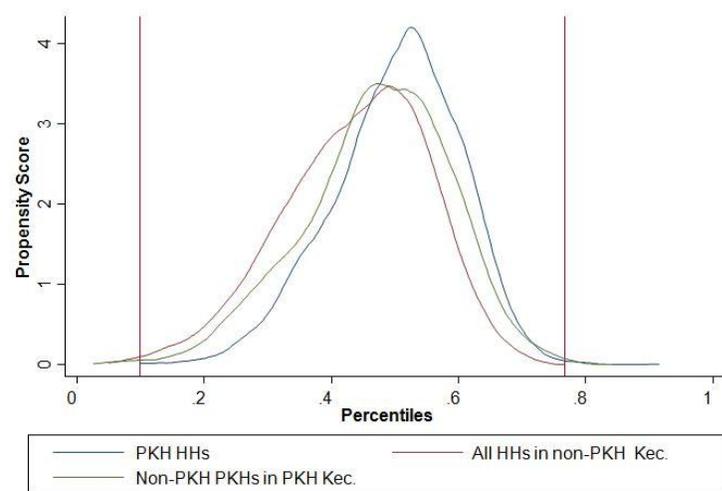
C.1. Propensity Score in Uncontaminated Kecamatan



C.2. Propensity Score in Uncontaminated Kecamatan



C.3. Propensity Score in All Kecamatan



Source: World Bank Calculation

Annex D - Methodology

1. Introduction

For the purposes of impact evaluation, while we are interested in what happens to an individual or a household once they receive the program, we are also interested in knowing or estimating *what would have happened* to that same unit if it had not received the program. In other words, if Y is the outcome and P the program, we are interested in knowing, for all households who receive treatment, what the average treatment effect on the treated (ATT) or expected difference in Y is across two states:

$$\text{Impact} = E[Y_1 - Y_0 | P=1],$$

where Y_1 and Y_0 represent the value of the outcome variable in the case where the household receives the program and the counterfactual value of the outcome variable in the case where the same household does not receive the program, respectively.⁶⁵ A simple average of these differences for all households receiving the program would give a valid estimate of the effect of the program on those who were treated by the program.

However, for any household we cannot observe both outcomes Y_1 and Y_0 because the same household cannot occupy two states at the same time. Therefore, in order to measure the impact of any particular event, initiative, or program, a valid counterfactual for the population that ends up with treatment is necessary.

A straightforward way around this problem is a randomized allocation of the program to eligible beneficiaries. In such a setting, the probability of receiving the program is equal across all households in the eligible pool; therefore, receipt of the program must be orthogonal to any expected outcomes. In that case, eligible individuals who do not receive the program can provide a valid counterfactual for those that do, and the estimated impact becomes:

$$\text{Impact Estimate with random allocation among eligibles} = E[Y_1 | P=1] - E[Y_0 | P=0].⁶⁶$$

As discussed above, the allocation of PKH to *kecamatan* was random. We show that the group of eligible households in *kecamatan* originally scheduled to receive PKH (lottery $L=1$) and the group of eligible households in *kecamatan* originally scheduled not to receive PKH ($L=0$) are balanced at baseline on observable characteristics (Annex B).⁶⁷ Potentially, then, we can use households in $L=0$ as valid counterfactual households for $L=1$ households.

However, three issues complicate the PKH evaluation and make simple comparison of average outcomes in $L=1$ and $L=0$ unsatisfying. First, there was “contamination” of the original random allocation, meaning some areas received or did not receive PKH in contradiction to their original lottery allocation L . If $K=1$ denotes PKH *kecamatan*, all *kecamatan* were meant to have only two possible statuses, either $L=1$, $K=1$

⁶⁵ For a general and practical introduction to these and other issues in impact evaluation, see Impact Evaluation in Practice, World Bank (2011).

⁶⁶ A truly random allocation should produce the same distribution of pre-program Y values in both the $Y_{i,1}$ and $Y_{j \neq i,0}$ groups. In practice it is common to locate the $Y_{i,1}$ and $Y_{j \neq i,0}$ in non-adjacent districts, states, or cities where pre-program levels of Y may differ even though the randomization within these areas succeeded. With this sort of stratified random allocation, it is necessary to identify any program’s estimate as the difference in Y conditional on both program status and pre-program levels. This means that the impact estimate with stratified random allocation among eligibles = $E[Y_{i,1} | P=1, Y_{i,pre-program}] - E[Y_{j \neq i,0} | P=0, Y_{j \neq i,pre-program}]$.

⁶⁷ See also Sparrow et al., World Bank 2008.

or L=0, K=0, but in practice L=1, K=0 and L=0, K=1 were also possible.⁶⁸ When there is contamination we can no longer be certain that receipt of PKH is orthogonal to expected outcomes for all households. However, we do observe (and summarize in Annex B) that the K=0 and K=1 sets of *kecamatan* are also balanced at baseline on the observable characteristics recorded in the survey.

Secondly, the allocation of PKH cash transfers among eligible households within *kecamatan* was purposive, not random, and PKH benefits were rationed based on selection criteria, guidelines, manuals, quotas, and other information. From variables observable in the survey data, we see that the eventual beneficiaries had different distributions of characteristics than eventual non-beneficiaries in the same areas. For example, among eligible beneficiaries, PKH was rationed and targeted to larger households that were less well-educated, with fewer assets and lower expenditure, and more often in agriculture (among other differences). These differences are summarized in Annex C, which contains output from a propensity scoring regression of household PKH status on over 30 observable characteristics. Differences in these characteristics means that even if randomization to *kecamatan* had proceeded perfectly, it would still be the case that not all L=0 households would provide appropriate counterfactuals for the PKH-recipient households in L=1 areas.

Finally, although all households in the evaluation sample are panel households - observed in the data twice, once at baseline or pre-PKH and again at follow-up or post-PKH - not all panel households have pre- and post-program observations for every indicator because of regular household demographic changes. Nearly all of the recorded indicators are based on behaviors relevant to a particular age group or a particular mother-and-newborn combination.⁶⁹ For example, if at baseline a mother has recorded her own breastfeeding behavior for her current 6 month old, she will not be asked to record these same behaviors two years later when that child is now nearly 3 years old. She may or may not have another newborn about which breastfeeding questions could be asked again. Therefore, the evaluation dataset may sometimes be closer in spirit to a repeated cross-section within a set of true panel households.

In the methodology described directly below, we keep these complicating factors in mind and use a mix of methods to identify the effect of PKH on those households who received it. Where possible, we use all the information available in the baseline and follow-up surveys. Mixing methods and providing checks on robustness through alternative specifications gives us confidence that we have captured the unique details of the PKH program in practice. The following quote captures the issues succinctly:

*No single evaluation tool can claim to be ideal in all circumstances. The art of good evaluation is to draw carefully from the full range of tools available to deal pragmatically with the problem at hand in its specific context. The best evaluations often combine multiple methods: randomizing some aspects and using econometric methods to deal with the non-random elements, for example, or by combining score matching methods with longitudinal observations to try to eliminate matching errors with imperfect data.*⁷⁰

2. Methodology

⁶⁸ The L=0, K=1 contamination was far more frequent than L=1, K=0.

⁶⁹ The only reliable exception is per-capita household expenditure which is recorded twice for all panel households.

⁷⁰ Ravallion, Martin (2003). "Assessing the Poverty Impact of an Assigned Program", in Francois Bourguignon and Luiz Pereira da Silva eds) *The impact of economic policies on poverty and income distribution: evaluation techniques and tools*. New York: Oxford University Press.

Given the “random-to-kecamatan, rationed-and-targeted-to-households” allocation the PKH program followed, we can use the baseline and survey data to identify the impacts of PKH on three different groups. First, we can compare average outcomes in treated PKH *kecamatan* (K=1) to an expected average of what those outcomes would have been in the absence of the program. The estimates from this exercise we call “placement” effects, which makes it clear that the estimated impact is over all households who have been placed in a PKH area:

$$\text{Placement impact estimate} = E(Y_1 - Y_0 | K = 1),$$

where the expected outcomes in the absence of the program are those outcomes in the randomly-assigned *kecamatan* who did not receive the program.

Within PKH *kecamatan*, there were eligible beneficiaries who received PKH (PKH=1) and eligible beneficiaries who did not receive PKH (PKH=0). Comparing outcomes in the former group (K=1, PKH=1) to a *similar* group of households from control *kecamatan* (K=0) gives us a direct or “participation” effect, so called because it is the estimated effect on outcomes for those households actually participating in the program (i.e., receiving PKH funds):

$$\text{Participation impact estimate} = E(Y_1 - Y_0 | K = 1, PKH = 1),$$

Comparing outcomes in the latter group (K=1, PKH=0) to a *similar* group of households from control *kecamatan* gives a within-*kecamatan* “spillover” or externality effect. Spillover effects are estimated over those households who have been exposed to the program but who are not receiving PKH funds:

$$\text{Spillover impact estimate} = E(Y_1 - Y_0 | K = 1, PKH = 0),$$

Obviously, PKH=0 automatically for all households in K=0 areas, so for both participation and spillover impact estimates we find *similar* households in K=0 areas that become designated counterfactual households. This is described in more detail directly below. A weighted average of the participation and within-*kecamatan* spillover effects should be roughly equivalent (depending on sampling error) to the participation effect.

A Instrumental Variables for Placement Impacts

In order control for the potential bias we are introducing by including the contaminated *kecamatan* (described above) in our estimation sample, we use the known random assignment L as an instrument for actual or *de facto* receipt of PKH by *kecamatan* K. In practice the instrument L allows us to weight all observations, whether they are in original L=1 or L=0 areas, according to the probability with which they came from *kecamatan* that received PKH treatment *de facto*. With this strategy we preserve and take estimates of Y_{T1} over the entire balanced-at-baseline sample that the original random assignment L generated.

To measure PKH participation impacts, we estimate the following linear specification:

$$Y_{iht1} = \alpha + \beta K_s + \lambda X_{iht0} + \sigma Y_{iht0} + \varepsilon_{ihts}. \quad (1)$$

Y_{ihs} is the health, education, child labor, or consumption indicator of interest for individual i in household h in kecamatan s .⁷¹ $T1$ ($T0$) is the survey follow-up (baseline) period, K is a dummy for kecamatan-level receipt of the PKH program (in any or all years), and X_{ihs} is a vector of household- and individual-level characteristics.⁷²

We instrument for K_s with the lottery assignment L . In a two-stage least-squares instrumental variables (IV) estimation, this produces fitted values of K_s that are essentially the likelihood that an observation came from a PKH kecamatan. Therefore the coefficient β is essentially a weighted average of all $L=1$ and $L=0$ outcomes (of Y_{T1}) with weights corresponding to the probability that a particular outcome came from a PKH kecamatan.

IV estimation is known to produce what are called local average treatment effects (LATE). Estimated impacts are “local” in the sense that they are particular to the groups affected by the observed changes in the *instrument*, not a general population. In the PKH case, this means that IV estimates will be local to the group of people who were affected by changes in the lottery variable (L). The estimates will not necessarily tell us anything about populations who were unaffected by lottery decisions; for example, the estimates will not necessarily be expectations of behavior in households from regions determined to be ineligible at the outset.⁷³

For the PKH program, we are comparing households in lottery-eligible regions both before and after the PKH program was introduced. There were essentially no households who, when assigned the treatment, opted against receiving PKH. In other words, “compliance” given selection was nearly 100 percent. Therefore, conditional upon a region having been identified as eligible there are very few or no households who we would expect to have been unaffected by the treatment had it been offered. Therefore, in the PKH program, the IV estimates are local to the regions initially selected to be eligible, but applicable to the general populations (and therefore not local) of eligible households within such regions.

The participation coefficients β from equation (1) above tell us whether and by how much post-PKH outcome values are higher in PKH kecamatan relative to non-PKH kecamatan. As mentioned above, the coefficient is a combination of the direct participation effects of PKH on those households who received PKH and a within-kecamatan spillover effect on eligible households living in PKH areas who did not actually receive PKH cash transfers.

If the baseline value of an indicator Y_{ihsT0} is available, we use it.⁷⁴ When baseline values are not available, we impute them in the following way. We carry out a propensity-scoring exercise in all actual PKH kecamatan ($K=1$). The scores describe, as a non-linear function of the approximately 35 variables described in Annex C, the conditional probability a household was purposively selected from the set of eligible beneficiaries to be a PKH recipient. We then use these estimated propensity score coefficients to generate propensity scores for households in actual control areas ($K=0$). In control areas, the scores represent the conditional likelihood that a particular household would have been selected (from among the set of eligible households) for PKH had the program been in their kecamatan. Then, for a household in a $K=1$ area ($K=0$ area) without a baseline value, we search in the set of remaining $K=1$ ($K=0$)

⁷¹ For household per-capita consumption outcomes, all i subscripts are dropped as the highest resolution data is at the household level.

⁷² Included in X are all the propensity scoring variables described in Annex C.

⁷³ See Imbens and Angrist (1994) for more on LATE in IV estimates.

⁷⁴ Both baseline and follow-up outcome values are cleaned of obvious outliers before any other operations are done. Outliers were most obvious in a few of the continuous variables describing pre- and post-natal visits and breastfeeding behavior.

households for that household's nearest neighbor by propensity score. We then use the nearest neighbor's baseline value as the imputed baseline value for that household.⁷⁵

This specification contains the vector of observables X , but we show that households in $L=1$ and $L=0$ areas are balanced across both these and other higher-level characteristics (see Annex B). With successful randomization and baseline balancing, we are not as concerned that observed post-PKH outcomes are a result of higher initial starting points, for example.⁷⁶ As a first robustness check, we present results from the same equation (1), once without covariates X and then again without baseline values Y_{T0} . Coefficients in these two additional specifications show no appreciable differences with headline coefficients from equation (1). This assures us that results are not being driven unduly by functional form or sampling errors.

B *Decomposing Placement into direct Participation and within-kecamatan Spillover effects*

Within the treated *kecamatan*, considerably less than 100 percent of eligible households were made PKH beneficiaries. The non-PKH households in PKH *kecamatan* likely benefited from the program indirectly, however, through social and economic interactions with beneficiaries. For example, PKH beneficiaries may share resources with and affect the incentives to accumulate human capital of non-treated households living in treated *kecamatan* (Angelucci and De Giorgi, 2009). Members from PKH households may form new untreated households; these new households will have been exposed directly to PKH benefits, conditionalities, and information for some period of time before becoming households who are not directly exposed. Behaviors in non-beneficiary households can also change due to new social or behavioral norms that are generated by the benefit-receiving and conditionality-compliant households – see e.g. Avitable and Di Maro (2007) who document an increase in cervical cancer screening among non-Progresa households in Progresa areas as a result of the shift in behaviors generated by the compliant Progresa households.

In a setting with spillovers to non-beneficiaries, any estimated placement effect will be composed of a direct participation effect on beneficiaries plus an indirect, within-treated-unit spillover effect. We would like to have clean estimates of both effects in order to understand the different channels through which the program might be affecting behaviors as well as the relative size of the impacts on those receiving program goods or services and those only exposed indirectly to the program.⁷⁷

The selection of PKH households in $K=1$ areas was purposive, not random.⁷⁸ The lottery variable L was randomized over a set of *kecamatan* and there was no household selection process in $K=0$ areas, so L is itself uncorrelated with the purposive selection of beneficiary households. In such a setting, a specification with a single random instrument is inappropriate for decomposing the placement impact

⁷⁵ If the nearest neighbor by propensity score is also missing baseline values, we instead impute the household's baseline value as the unweighted average of all baseline values for all households within the same propensity score quantile as the household in question. We choose 50 as the default number of quantiles. We tried different numbers of quantiles as well as radius matching on the propensity score variable with no noticeable change in average baseline values or eventual regression results. We also tried including a dummy variable indicating that a household's baseline value had been imputed in this way; results did not change.

⁷⁶ However, baseline balancing does not guarantee that unobservable characteristics and trends are also balanced.

⁷⁷ When there are within-treated-unit spillovers, it is invalid to estimate program impacts by comparing outcomes among actual beneficiaries to outcomes in the indirectly exposed group. Following such a procedure could produce a double underestimate of the program's impact because (1) the average effect on treated beneficiaries is underestimated when they are compared to exposed but untreated units who may have indirectly benefited; and (2) the effect of the program on indirectly exposed units is unnoticed if becomes the counterfactual estimate of what would have happened in households not exposed to the program.

⁷⁸ From the survey (which observes only eligible households), we note that households actually receiving PKH cash comprise approximately 45 to 50 percent of all $K=1$ survey households.

into the direct participation and within-treated-unit spillover impacts. For example, Miguel and Kremer (2004) estimate impacts of a school-based deworming program that was randomized among schools but had nonrandom participation by individual pupils within treated schools:

*Although randomization across schools makes it possible to experimentally identify...the overall program effect..., we must rely on non-experimental methods to decompose the effect on treated schools into a direct effect and within-school externality effect. ... It is not valid to use assignment to a treatment school as an instrumental variable for actual medical treatment in the presence of such externalities...since the exclusion restriction fails to hold: assignment to a treatment school affects pupil health through externalities, rather than only through the likelihood of receiving medical treatment.*⁷⁹

To see why decomposing PKH placement effects into participation and spillover effects with a single linear IV specification would be inappropriate, consider the the following specification,

$$Y_{ihtT1} = \alpha + \beta_1 K_s + \beta_2 PKH_h + \lambda X_{ihtT0} + \sigma Y_{ihtT0} + \epsilon_{ihts}, \quad (2)$$

where PKH_h is household-level PKH status and L and L^*X_{T0} are instruments for K_s and PKH_h .

First, wherever $K=0$, household PKH status equals zero automatically, so describing both K and PKH as linear functions of L and L^*X alone does not capture actual assignment rules. That is, across all *kecamatan* the true household selection process can be described as:

$$\text{household selection} = \begin{cases} PKH = 0 \text{ if } K = 0 \\ PKH = 0 \text{ if } PKH^* \leq 0 \text{ and } K = 1 \\ PKH = 1 \text{ if } PKH^* > 0 \text{ and } K = 1 \end{cases}, \quad (3)$$

where

$$PKH^* = \gamma + b_1 X_1 + b_2 X_2 + \dots + b_n X_n + \tau, \quad (4)$$

and where

$$\text{kecamatan selection} = \begin{cases} K = 0 \text{ if } K^* \leq 0 \\ K = 1 \text{ if } K^* > 0 \end{cases}, \quad (5)$$

and

$$K^* = \sigma + c^*L + v. \quad (6)$$

Here, X includes observable characteristics, and τ and v the unobservable selection technologies (embodied in the set of stakeholders who made the actual selections), that governed the selection of *kecamatan* and households. Equations (3) through (6) describe the *kecamatan* and household selection rules and their correlation through K .

⁷⁹ The quoted paragraphs refer to Angrist, Imbens, and Rubin (1996), Ravallion, Martin (2003). "Assessing the Poverty Impact of an Assigned Program", in Francois Bourguignon and Luiz Pereira da Silva eds) *The impact of economic policies on poverty and income distribution: evaluation techniques and tools*. New York: Oxford University Press.

The selection process, in particular the dependence of PKH values on K values in (3) and the independence of K values from the characteristics governing PKH values in (4), would not be well-described by the first-stage estimates corresponding to (2). An IV estimate of (2) generates two first-stage equations describing K and PKH as linear-additive combinations of L and $L \cdot X_{T0}$.

Therefore, in order to properly identify the direct participation effect (*within-kecamatan* spillover effect), we select from the data only those households who received PKH (households living in PKH *kecamatan* who did not receive PKH) and a set of similar households from *kecamatan* not receiving PKH. These latter households give us a valid counterfactual expectation for outcomes in PKH households had they not received PKH (or not been exposed indirectly to PKH). We then use IV specification (1) over these two subsets. With L as the instrument for the status of interest (either “PKH household” or “non-PKH household in a PKH *kecamatan*”), we can incorporate outcomes from contaminated *kecamatan* as discussed above. We confirm that a frequency-weighted average of direct and *within-kecamatan* spillover effects estimated this way is approximately equal to our participation coefficients. This is analogous to estimates in Miguel and Kremer (2004) that decompose the direct effect of a program into a direct and a within-treated-unit externality effect.⁸⁰

As a robustness check for these IV participation and spillover effects, we also estimate a repeated cross-section difference-in-differences between the direct participation households and similar households in K=0 areas and also between the *within-kecamatan* spillover households and similar households in K=0 areas. These non-parametric specifications, estimated over the set of uncontaminated *kecamatan*, are similar in spirit to the Behrman, Parker, and Todd (2008) evaluation of Progresya, which also has randomized allocation to the exposed group and comparison to a matched group of unexposed but eligible individuals. We check in advance that baseline characteristics are balanced in the pool of uncontaminated *kecamatan*.

B1 Instrumental variables for direct Participation and within-kecamatan Spillover impacts

By estimating our original IV specification (1) over two different samples, we can precisely decompose direct effects from *within-kecamatan* spillover effects. We use the propensity scores described earlier to determine whether each eligible household from the control areas makes an appropriate counterfactual household for spillover or direct households.

For the direct participation effect of PKH on those households who received PKH benefits, we proceed in the following manner. First, as described above for participation impacts, all households without baseline values are given imputed baseline values from their nearest neighbor in their area (either K=1 or K=0). Then we trim from our estimation sample all households from K=1 areas who did not receive PKH (K=1, H=0). We are left with a set of K=1, H=1 households each of which has an associated propensity score. In the remaining K=0 areas, we drop all households who have fitted propensity scores strictly outside the range of propensity scores produced by our previous operations. We are left with households in L=1 and L=0 areas with propensity scores in the range common to all K=1, H=1 households. We then re-run our baseline specification (1) from above on this set of households, using the lottery L as an instrument for PKH status (H=1 or H=0).

⁸⁰ For PKH beneficiaries, we do not attempt – and we do not have the data necessary – to further statistically decompose the direct participation impact of PKH into an effect of program funds, conditionalities, and other components from the impacts that are a product of social and economic interactions with and exposure to other PKH beneficiaries and their behaviors.

Within-*kecamatan* spillover effects are estimated exactly analogously except in the first step we drop from K=1 areas all households who *did* receive PKH (H=1). The identification of common support households in K=0 areas and the instrumental variables specification are then exactly similar. In the spillover estimation, L now provides an instrument for the household status “Eligible and in PKH *kecamatan* but not receiving PKH”. As in all the instrumental variable specifications, the instrument L weights the observations from L=1 and L=0 according to the probability of observing a status of interest (“Eligible and in PKH *kecamatan* but not receiving PKH”, for example) within those two areas.

We again present three different sets of results for both direct and spillover estimates. The first set contains the vector of observables X, baseline values Y_{T0} and a dummy for panel observations. The second set drops observables X; the third set adds back X while dropping baseline values Y_{T0} and the dummy for panel observations. Robustness across these three specifications assures us that functional form is not driving results.

As mentioned above, using an IV framework with the random variable L allows us to incorporate observations from contaminated *kecamatan* without worrying that our estimates will be biased because of the contamination.⁸¹ The assumption we are implicitly making to identify the impact of PKH is that the lottery L affects outcomes only through the likelihood of becoming a PKH beneficiary (for the participation IV estimates) or a non-PKH beneficiary living in a PKH area (for the spillover IV estimates). As mentioned above, we can take a weighted average of direct and spillover coefficients with weights equal to the frequency of PKH and non-PKH households (in PKH *kecamatan*) in the regression sample. We find that the placement coefficients from specification A above are on average equal to 1.00 times the weighted average of direct and spillover coefficients over all 90 coefficients estimated. For those outcomes for which all three of participation, direct, and spillover coefficients are significantly different from zero, the participation coefficient is on average 1.03 times the weighted average.

B2 *Difference-in-differences for direct Participation and within-kecamatan Spillover impacts*

As an additional robustness check, we also estimate a non-parametric⁸² difference in means that does not rely on instrumental variables. We perform this estimation over the set of households in uncontaminated *kecamatan* (areas where PKH allocation followed the lottery schedule).⁸³

We proceed as follows: first, as in A and B1 above we impute missing baseline values by propensity scoring within K=1 areas, calculating fitted propensity scores in K=0 areas, and then selecting a nearest neighbor for every household without a baseline value. This nearest neighbor’s baseline value is imputed as the baseline value for the household with a missing baseline value.

Secondly, we cleanse from the estimation sample all instances of L=1, K=0 and L=0, K=1, or all the contaminated *kecamatan*. We are left with a set of households, all from uncontaminated areas, with baseline, follow-up, and propensity score observations. To estimate the direct participation (within-*kecamatan* spillover) impacts, we first identify all H=1 (H=0) households from L=1 areas. We then

⁸¹ Additional planned analysis will examine in more detail and attempt to quantify the extent of the bias (if any) from including outcomes from contaminated *kecamatan* in either a straightforward OLS or difference-in-differences specification and/or by excluding contaminated *kecamatan* altogether.

⁸² Impacts are estimated non-parametrically by comparing mean differences in outcome in treatment and control areas for matched households. The propensity scores necessary for identifying a common support are estimated parametrically in a non-linear probit equation.

⁸³ Summaries tables for this second specification are presented in Appendix F.

identify the set of households in L=0 areas with propensity scores in the common support of these L=1, H=1 (H=0) households. The estimated direct participation (within-*kecamatan* spillover) impact is a simple comparison of average pre- to post-differences in outcomes for PKH=1 (PKH=0) households in L=1 areas with those same differences from households in the common support in L=0 areas.

This method of repeated cross-section difference-in-differences with propensity scoring to identify common support households (which become the counterfactual group) is similar in spirit to Behrman, Parker, and Todd (2008). In their impact evaluation of the Mexican conditional cash transfer program (Progresa), they use a difference-in-differences comparison between a direct participant group, an indirectly exposed but non-beneficiary group, and a matched but unexposed comparison group. The exposed group – direct participants plus those exposed but not participating – was randomly assigned. They note the advantage this non-parametric specification has in controlling for unobserved household- or individual-level characteristics or trends. As the control *kecamatan* may experience different local area labor market conditions, quality of schooling and health, and prices (*inter alia*), the ability of the difference-in-differences matching method’s ability to control for fixed locality characteristics is also advantageous. Also germane to the PKH and Progresa programs, they note that a cross-section difference-in-differences estimator is more meaningful when outcomes are recorded only for children of a particular narrowly-defined age.⁸⁴

Before comparing mean differences, we check whether the uncontaminated *kecamatan* sample we have selected is balanced on observable household and individual baseline characteristics and find that it is – see Annex B. Though this does not guarantee that household and individual baseline observable or unobservable characteristics are distributed randomly among these *kecamatan*, it at least points to a distribution balanced on observables. We can also be certain that these *kecamatan* did or did not receive PKH based on a random schedule alone so there is no *a priori* reason to suspect expected outcomes would be correlated with PKH assignment.

Unlike most of the other outcomes (which are age-dependent), for household per-capita consumption every panel household has both baseline and follow-up observations. With these observations, we alter slightly the specification described in B2 and report a nonparametric matched difference-in-difference estimator. As in all other specifications, comparison households for either direct participation or within-*kecamatan* spillover households are identified through the propensity score. Here, however, because each household is observed twice, each household from a PKH area is matched via the propensity score to a single comparison observation from the uncontaminated control *kecamatan*. Then the difference in per-capita consumption between an exposed household and its matched comparison observation is observed at baseline and follow-up. The magnitude of the average difference (between baseline and follow-up) in those differences (between exposed and matched control observation) is the impact of PKH on consumption in exposed households. For example,

$$\text{Participation impact estimate} = (1/n_{1T1}) \sum_i [Y_{1iT1}(P(X_i)) - Y_{1iT0}(P(X_i))] - [E(Y_{0iT1}|P(X_i), K = 0) - E(Y_{0iT0}|P(X_i), K = 0)] \quad (7)$$

The first term in brackets is the change in outcomes for the program participant (the first subscript on Y_{1iT1} indicates treatment status) and the second term is the matching estimate of the change in outcomes in the non-treated state based on the control group data. The spillover impact estimate is

⁸⁴ See also Todd (2008), page 6 and following, or Heckman, Ichimura, and Todd (1997) for more detail on the statistical theory behind matched panel and matched cross-section difference-in-differences estimators.

exactly the same, except a program participant is defined as a non-PKH household in a PKH *kecamatan*. As mentioned previously, we use nearest neighbor matching to identify $E(Y_{0i}|P(X_i))$ in the non-treated *kecamatan*; switching to radius, caliper, or kernel density matching does not appreciably change results.

3. Explanation of Results Annexes

First, program effects on all exposed households (whether receiving PKH benefits or not) in treatment areas are discussed; these are the specification A results. We then review the direct impacts of the PKH program on actual recipients of the PKH cash transfer in treatment areas (i.e., surveyed households that received a cash transfer according to government administrative data). Finally, the main discussion also considers the within-*kecamatan* spillover or externality effects on non-beneficiary households in eligible sub-districts (i.e., households that did not, according to administrative data, receive cash transfers through the PKH program). These last two (direct and within-*kecamatan* spillover) are estimated with both B1 and B2 specifications.

For the IV estimates from A and B1, we present two more specifications in addition to the standard specification in (1). In Annex E, columns 4 through 6 present specification (1) estimated without the covariates X and columns 7 through 9 present specification (1) without baseline values Y_{T0} . As discussed in the previous section, we include summaries of results from these alternative specifications as robustness checks; when coefficients and standard errors are roughly similar across these specifications, we can have some confidence that estimated impacts are not being driven by functional form or sampling error. A pattern of similar coefficients across these specifications provides additional proof that the random and balanced-at-baseline characteristics of our sample do indeed allow us to estimate program impacts without undue bias from idiosyncratic individual, household, or higher-level characteristics.

The B2 specifications for participation and spillover effects are also included as robustness checks. B2 estimates a non-linear, non-additive difference-in-differences specification over slightly different sets of treated or exposed households and their closest counterfactuals (by propensity score) in untreated *kecamatan*. Again, if magnitudes, standard errors, and patterns of statistical significance are roughly similar between these two different functional forms, we can be confident that impacts we are attributing to PKH are not an artifact of the assumed functional form of the impacts on outcomes.

Under a separate subheading we cover highlights of the estimations of differential impacts of PKH across different subsets of households (urban versus rural, for example). For these differential impacts, we return to specification A and estimate equation (1) separately over two samples. Comprehensive regression results are included in Annexes E, F and G.

For impacts estimated through the IV specifications A and B1, the effects of PKH on consumption are not noticeable, likely due to the mismatch between household expenditure patterns and the timing of the PKH household survey. Cash transfers to poor households in Indonesia, such as the unconditional cash transfer BLT, are typically spent within a week or less on basic foodstuffs, clothing, other comestibles, or on larger one-time expenditures that happen to be falling due very soon after funds are distributed to households. In order to observe the increased expenditure that PKH makes possible, survey enumerators would have to visit soon after households received their PKH funds from the post office.

A conceptually clearer estimate of the consumption impacts of PKH would compare each household's spending relative to its own previous levels (when they weren't receiving PKH). This allows us to control

for all the idiosyncratic but constant factors that determine consumption across households. As mentioned previously, we observe a reliable consumption panel in the data, allowing us to calculate for each household a pre-program to post-program difference in per-capita consumption. This in turn gives us an opportunity to estimate a true matched difference-in-differences in means following method B2 and nonparametric specification (7). The results of this matched cross-section estimate are in AnnexF.

Annex E Main Results

		Covariates, baseline values, and panel dummy						No covariates; w/ baseline values and panel dummy					
		A		B1				A		B1			
		Placement		Participation		Spill-over		Placement		Participation		Spill-over	
		coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err
		1	2	3	4	5	6						
Health Behaviors													
Iron tablets ? 90 tabs during pregnancy	% pts	0.013	0.02	0.016	0.03	0.011	0.03	0.014	0.02	0.015	0.03	0.009	0.03
Pre-natal vists	#	0.491	0.21 **	0.576	0.24 **	0.389	0.24	0.457	0.20 **	0.403	0.24 *	0.558	0.24 **
Pre-natal visits ? 4 visits	% pts	0.072	0.02 ***	0.093	0.03 ***	0.044	0.03 *	0.066	0.02 ***	0.077	0.03 ***	0.059	0.03 **
Assisted Delivery	% pts	0.020	0.03	0.037	0.03	0.000	0.03	0.035	0.03	0.020	0.03	0.018	0.03
Delivery at facility	% pts	0.040	0.03	0.051	0.03	0.022	0.03	0.028	0.03	0.029	0.03	0.038	0.03
Post-natal visits	#	0.251	0.16	0.350	0.18 *	0.087	0.18	0.316	0.15 **	0.330	0.18 *	0.145	0.18
Post-natal visits ? 2 visits	% pts	0.070	0.03 **	0.096	0.04 ***	0.029	0.03	0.077	0.03 ***	0.100	0.03 ***	0.035	0.03
Breastfeeding: yes or no	% pts	0.001	0.01	0.004	0.01	-0.002	0.01	-0.001	0.01	0.006	0.01	-0.003	0.01
Breastfeeding: hours after delivery of first breastfeeding	hours	-1.11	1.52	-1.75	1.68	-0.12	1.82	-1.10	1.43	-2.30	1.65	0.05	1.80
Breastfeeding: total months breastfeeding	mths	-0.050	0.37	0.351	0.42	-0.567	0.41	-0.109	0.35	0.250	0.41	-0.314	0.41
Weighings ? 1 weighing past month (0-11 mths)	% pts	0.010	0.04	0.065	0.04	-0.039	0.05	0.046	0.04	0.086	0.04 **	-0.035	0.04
Weighings ? 1 weighing past month (1-3 yrs)	% pts	0.097	0.03 ***	0.152	0.03 ***	0.035	0.03	0.093	0.02 ***	0.153	0.03 ***	0.032	0.03
Weighings ? 1 weighing past month (0-5 yrs)	% pts	0.147	0.02 ***	0.226	0.02 ***	0.074	0.02 ***	0.152	0.02 ***	0.237	0.02 ***	0.081	0.02 ***
Immunization complete by schedule for age	% pts	0.030	0.02	0.043	0.03	0.011	0.03	0.021	0.02	0.045	0.03 *	0.005	0.03
Immunization complete	% pts	0.017	0.02	0.033	0.02 *	0.002	0.02	0.009	0.02	0.030	0.02	-0.008	0.02
Vitamin A times received	#	0.065	0.07	0.056	0.07	0.061	0.08	0.068	0.06	0.028	0.07	0.102	0.08
Vitamin A received ? 2 times during past year	% pts	0.022	0.02	0.021	0.03	0.017	0.03	0.024	0.02	0.021	0.03	0.023	0.03
Vitamin A received on schedule	% pts	0.023	0.02	0.015	0.02	0.029	0.03	0.027	0.02	0.015	0.02	0.032	0.03
Traditional health facility outpatient visits	#	0.001	0.00	0.002	0.00	0.001	0.00	0.001	0.00	0.002	0.00	0.001	0.00
Traditional health facility outpatient visits (all HH members)	#	0.003	0.00	0.003	0.00	0.004	0.00	0.002	0.00	0.003	0.00	0.004	0.00
Traditional health facility outpatient visits (all HH members)	% pts	0.000	0.00	0.001	0.00 *	0.000	0.00	0.000	0.00	0.001	0.00	0.000	0.00
Public health facility outpatient visits	#	0.008	0.00 *	0.009	0.01 *	0.006	0.00	0.008	0.00 *	0.009	0.00 *	0.005	0.00
Public health facility outpatient visits (all HH members)	#	0.028	0.01 ***	0.030	0.01 ***	0.023	0.01 **	0.028	0.01 ***	0.028	0.01 ***	0.024	0.01 **
Public health facility outpatient visits (all HH members)	% pts	0.005	0.00 ***	0.005	0.00 ***	0.004	0.00 ***	0.005	0.00 ***	0.005	0.00 ***	0.004	0.00 ***
Private health facility outpatient visits	#	0.002	0.00	0.001	0.00	0.003	0.00	0.001	0.00	0.000	0.00	0.004	0.00
Private health facility outpatient visits (all HH members)	#	0.017	0.01 ***	0.018	0.01 **	0.019	0.01 **	0.016	0.01 ***	0.014	0.01 *	0.021	0.01 ***
Private health facility outpatient visits (all HH members)	% pts	0.002	0.00 **	0.002	0.00	0.002	0.00 **	0.002	0.00 **	0.001	0.00	0.003	0.00 **

		Covariates, baseline values, and panel dummy						No covariates; w/ baseline values and panel dummy					
		A		B1				A		B1			
		Placement		Participation		Spill-over		Placement		Participation		Spill-over	
		coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err
		1		2		3		4		5		6	
Health Outcomes													
Weight	kg	-0.197	0.11 *	-0.073	0.12	-0.256	0.12 **	-0.160	0.10	-0.155	0.12	-0.165	0.12
Weight-for-age	Zscore	-0.041	0.06	-0.065	0.07	0.025	0.07	0.002	0.06	-0.079	0.07	0.091	0.07
Malnutrition (according to weight-for-age zscore)	% pts	-0.001	0.02	0.004	0.02	-0.010	0.02	-0.011	0.02	0.013	0.02	-0.027	0.02
Severe Malnutrition (according to weight-for-age zscore)	% pts	0.010	0.01	0.002	0.01	0.013	0.01	0.007	0.01	0.007	0.01	0.004	0.01
Height-for-age	Zscore	0.057	0.14	0.071	0.15	0.055	0.16	0.060	0.13	0.062	0.15	0.075	0.15
Weight-for-height	Zscore	-0.118	0.12	-0.187	0.13	0.027	0.14	-0.048	0.11	-0.199	0.13	0.087	0.13
Diarrhea	% pts	0.017	0.01	0.030	0.01 **	0.003	0.01	0.022	0.01 **	0.032	0.01 **	0.009	0.01
Treated diarrhea	% pts	0.034	0.03	0.071	0.04 *	0.018	0.04	0.062	0.03 **	0.065	0.04 *	0.023	0.04
Diarrhea number of episodes	#	-0.139	0.15	-0.053	0.18	-0.214	0.16	-0.135	0.15	-0.032	0.18	-0.220	0.16
Diarrhea length of last episode	days	0.173	0.20	0.013	0.21	0.203	0.25	0.211	0.19	0.081	0.20	0.193	0.25
ARI	% pts	0.008	0.01	0.010	0.01	0.003	0.01	0.012	0.01	0.010	0.01	0.009	0.01
Treated ARI	% pts	0.039	0.04	0.038	0.05	0.012	0.05	0.053	0.04	0.042	0.05	0.025	0.05
Fever	% pts	0.039	0.01 ***	0.042	0.02 **	0.032	0.02 *	0.037	0.01 ***	0.039	0.02 **	0.045	0.02 ***
Cough	% pts	0.000	0.01	0.010	0.02	-0.006	0.02	0.015	0.01	0.007	0.02	0.010	0.02
Cough and rapid breath	% pts	-0.001	0.01	0.004	0.01	-0.009	0.01	0.007	0.01	0.006	0.01	-0.002	0.01
Illness	% pts	0.020	0.01	0.023	0.02	0.014	0.02	0.032	0.01 **	0.020	0.02	0.032	0.02 *
Mortality 0-28 days	% pts	-0.002	0.00	-0.002	0.00	-0.003	0.00	-0.001	0.00	-0.001	0.00	-0.002	0.00
Mortality 1-2 months	% pts	0.001	0.00	0.002	0.00	0.001	0.00	0.001	0.00	0.002	0.00	0.001	0.00
Mortality 3-5 months	% pts	0.000	0.00	0.002	0.00	-0.002	0.00	-0.001	0.00	0.002	0.00	-0.002	0.00
Mortality 6-11 months	% pts	0.003	0.00 *	0.005	0.00 **	0.001	0.00	0.001	0.00	0.004	0.00 **	0.001	0.00
Mortality 0-11 months	% pts	0.002	0.00	0.005	0.00	-0.001	0.00	0.002	0.00	0.006	0.00	-0.002	0.00
Education													
Gross Participation Rate (7-12 yrs)	% pts	0.000	0.00	-0.001	0.00	0.000	0.00	0.000	0.00	-0.001	0.00	0.000	0.00
Net Enrollment in primary school (7-12 yrs)	% pts	-0.013	0.01 *	-0.023	0.01 ***	-0.003	0.01	-0.012	0.01 *	-0.017	0.01 **	-0.008	0.01
Attendance primary school ? 85% (7-12 yrs)	% pts	-0.005	0.01	0.009	0.01	-0.013	0.01	-0.002	0.01	0.007	0.01	-0.014	0.01 *

		Covariates, baseline values, and panel dummy						No covariates; w/ baseline values and panel dummy					
		A		B1				A		B1			
		Placement		Participation		Spill-over		Placement		Participation		Spill-over	
		coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err
Education													
Hours in school last week (7-12 yrs)	hrs	0.244	0.17	0.319	0.19 *	0.246	0.20	0.233	0.16	0.137	0.19	0.318	0.20
Late enrollment rate primary school	% pts	0.000	0.00	0.001	0.00	-0.003	0.00	0.000	0.00	0.004	0.00	-0.006	0.00
Drop-out rate primary school	% pts	0.001	0.00	0.002	0.00	0.001	0.00	0.002	0.00	0.002	0.00	0.001	0.00
Gross participation rate age (13-15 yrs)	% pts	-0.007	0.00	-0.011	0.01 *	0.000	0.01	-0.008	0.00 *	-0.012	0.01 **	-0.002	0.00
Nett in enrollment secondary school (13-15 yrs)	% pts	-0.013	0.02	0.000	0.02	-0.010	0.02	-0.008	0.02	-0.002	0.02	0.014	0.02
Attendance primary school ? 85% (13-15 yrs)	% pts	0.006	0.01	0.014	0.01	-0.001	0.01	0.007	0.01	0.011	0.01	0.001	0.01
Hours in school last week (13-15 years)	hrs	0.698	0.26 ***	0.638	0.30 **	0.552	0.29 *	0.544	0.25 **	0.504	0.30 *	0.669	0.30 **
Transition rates	% pts	-0.009	0.01	-0.004	0.01	-0.008	0.01	-0.011	0.01 *	-0.009	0.01	-0.005	0.01
Child Labor													
Wage work during the last month yes/no (7-12 yrs)	% pts	-0.006	0.00	-0.005	0.00	-0.001	0.00	-0.006	0.00 *	-0.003	0.00	-0.002	0.00
Wage work during the last month yes/no (13-15 yrs)	% pts	-0.006	0.01	-0.001	0.01	-0.004	0.01	-0.006	0.01	0.001	0.01	-0.008	0.01
Wage work (7-12 yrs) last week	hrs	-0.320	2.63	-2.04	2.39	3.64	2.88	0.874	2.08	-0.854	2.48	1.50	2.32
Wage work (7-12 yrs) last month	hrs	0.106	0.12	-0.034	0.13	0.288	0.13 **	0.080	0.11	0.017	0.12	0.248	0.13 *
Wage work (13-15 yrs) last week	hrs	0.680	2.93	0.814	3.33	0.545	3.79	-1.74	2.58	-3.47	2.89	0.608	3.55
Wage work (13-15 yrs) last month	hrs	-0.362	0.44	-0.339	0.49	-0.085	0.53	-0.380	0.41	-0.423	0.48	-0.139	0.52
Family enterprise work (7-12 yrs) last week	hrs	1.10	0.67 *	1.94	0.71 ***	0.269	0.77	0.543	0.61	1.82	0.70 ***	0.090	0.75
Family enterprise work (7-12 yrs) last month	hrs	0.418	0.21 **	0.520	0.24 **	0.278	0.22	0.293	0.20	0.540	0.23 **	0.054	0.22
Family enterprise work (13-15 yrs) last week	hrs	1.85	0.88 **	2.93	1.02 ***	0.575	0.96	2.11	0.82 ***	3.03	1.01 ***	0.597	0.93
Family enterprise work (13-15 yrs) last month	hrs	1.19	0.61 *	1.18	0.73	0.709	0.62	1.28	0.60 **	1.29	0.73 *	0.135	0.62
Household work (7-12 yrs) last week	hrs	-0.211	0.15	-0.011	0.17	-0.449	0.17 ***	-0.267	0.14 *	0.064	0.16	-0.602	0.17 ***
Household work (7-12 yrs) last month	hrs	-0.252	0.40	0.259	0.46	-0.763	0.45 *	-0.473	0.39	0.502	0.46	-1.392	0.46 ***
Household work (13-15 yrs) last week	hrs	-0.286	0.27	-0.101	0.31	-0.371	0.29	-0.211	0.25	-0.132	0.31	-0.468	0.29
Household work (13-15 yrs) last month	hrs	-0.371	0.96	0.338	1.13	-1.075	1.06	-0.098	0.92	0.169	1.12	-1.306	1.05

	Covariates, baseline values, and panel dummy								No covariates; w/ baseline values and panel dummy							
	A				B1				A				B1			
	Placement		Participation		Spill-over		Placement		Participation		Spill-over					
	coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err				
Consumption																
Total expenditure, per-capita	IDR	1,754	4,733	-4,835	5,278	7,843	6,144	783	4,431	-8,032	5,314	12,282	6,206	**		
Non-food expenditure, per-capita	IDR	1,587	1,756	334	2,141	1,634	2,240	782	1,698	595	2,173	2,309	2,288			
Education expenditure, per-capita	IDR	-242	528	849	626	-496	675	-350	500	50	633	59	685			
Health expenditure, per-capita	IDR	1,747	912 *	1,556	862 *	2,172	1,140 *	1,830	911 **	1,451	848 *	2,159	1,129 *			
Food expenditure, per-capita	IDR	990	4,112	-3,647	4,433	6,595	5,380	1,228	3,781	-6,857	4,408	10,627	5,362	**		
Alcoholic beverages expenditure, per-capita	IDR	-36	80	-32	105	-20	103	-21	74	-15	104	-101	103			
Tobacco expenditure, per-capita	IDR	-664	463	-1,244	559 **	-84	599	-1,066	440 **	-1,329	555 **	226	599			
Share of food expenditure on protein	% pts	0.000	0.00	0.006	0.00 **	0.000	0.00	0.000	0.00	0.002	0.00	0.000	0.00			

	Covariates; no baseline values							
	A		B1					
	Placement		Participation			Spill-over		
	coeff	std err	coeff	std err	coeff	std err	coeff	std err
7		8			9			
Health Behaviors								
Iron tablets ? 90 tabs during pregnancy	0.013	0.02	0.016	0.03	0.013	0.03		
Pre-natal vists	0.513	0.21 **	0.605	0.24 **	0.407	0.24 *		
Pre-natal visits ? 4 visits	0.076	0.02 ***	0.096	0.03 ***	0.050	0.03 *		
Assisted Delivery	0.047	0.03 *	0.056	0.03 *	0.048	0.03		
Delivery at facility	0.064	0.03 **	0.066	0.03 **	0.076	0.03 **		
Post-natal visits	0.256	0.16	0.346	0.19 *	0.098	0.18		
Post-natal visits ? 2 visits	0.070	0.03 **	0.096	0.03 ***	0.031	0.03		
Breastfeeding: yes or no	0.002	0.01	0.004	0.01	-0.001	0.01		
Breastfeeding: hours after delivery of first breastfeeding	0.15	0.39	0.60	0.45	-0.49	0.45		
Breastfeeding: total months breastfeeding	-1.456	1.53	-2.008	1.70	-0.563	1.82		
Weighings ? 1 weighing past month (0-11 mths)	0.009	0.04	0.068	0.05	-0.024	0.04		
Weighings ? 1 weighing past month (1-3 yrs)	0.100	0.02 ***	0.154	0.03 ***	0.039	0.03		
Weighings ? 1 weighingpast month (0-5 yrs)	0.149	0.02 ***	0.226	0.02 ***	0.076	0.02 ***		
Immunization complete by schedule for age	0.029	0.02	0.042	0.03	0.011	0.03		
Immunization complete	0.016	0.02	0.033	0.02 *	0.001	0.02		
Vitamin A times received	0.074	0.07	0.070	0.07	0.049	0.08		
Vitamin A received ? 2 times during past year	0.021	0.02	0.020	0.03	0.017	0.03		
Vitamin A received on schedule	0.023	0.02	0.015	0.02	0.030	0.03		
Traditional health facility outpatient visits	0.001	0.00	0.002	0.00	0.001	0.00		
Traditional health facility outpatient visits (all HH members)	0.003	0.00	0.003	0.00	0.004	0.00		
Traditional health facility outpatient visits (all HH members)	0.000	0.00	0.001	0.00 *	0.000	0.00		
Public health facility outpatient visits	0.008	0.00 **	0.009	0.01 *	0.006	0.00		
Public health facility outpatient visits (all HH members)	0.029	0.01 ***	0.030	0.01 ***	0.023	0.01 **		
Public health facility outpatient visits (all HH members)	0.005	0.00 ***	0.006	0.00 ***	0.004	0.00 ***		
Private health facility outpatient visits	0.002	0.00	0.001	0.00	0.003	0.00		
Private health facility outpatient visits (all HH members)	0.002	0.00 **	0.001	0.00	0.003	0.00 **		
Private health facility outpatient visits (all HH members)	0.018	0.01 ***	0.017	0.01 **	0.020	0.01 ***		

	Covariates; no baseline values							
	A		B1					
	Placement		Participation		Spill-over			
	coeff	std err	coeff	std err	coeff	std err		
	7		8		9			
Health Outcomes								
Weight	-0.126	0.11	0.007	0.12	-0.206	0.13	*	
Weight-for-age	-0.041	0.06	-0.065	0.07	0.022	0.07		
Malnutrition (according to weight-for-age zscore)	-0.001	0.02	0.005	0.02	-0.012	0.02		
Severe Malnutrition (according to weight-for-age zscore)	0.009	0.01	0.002	0.01	0.010	0.01		
Height-for-age	0.063	0.14	0.079	0.15	0.065	0.16		
Weight-for-height	-0.121	0.12	-0.187	0.13	0.017	0.13		
Diarrhea	0.018	0.01	0.032	0.01	**	0.004	0.01	
Treated diarrhea	0.043	0.03	0.074	0.04	**	0.043	0.04	
Diarrhea number of episodes	-0.142	0.15	-0.052	0.18	-0.215	0.16		
Diarrhea length of last episode	0.168	0.20	0.010	0.21	0.207	0.25		
ARI	0.008	0.01	0.010	0.01	0.003	0.01		
Treated ARI	0.040	0.04	0.043	0.05	0.011	0.05		
Fever	0.041	0.01	***	0.042	0.02	**	0.035	0.02
Cough	0.001	0.01	0.010	0.02	-0.004	0.02		
Cough and rapid breath	-0.001	0.01	0.004	0.01	-0.008	0.01		
Illness	0.021	0.01	0.023	0.02	0.016	0.02		
Mortality 0-28 days	-0.005	0.00	-0.006	0.00	-0.005	0.00		
Mortality 1-2 months	0.001	0.00	0.002	0.00	0.000	0.00		
Mortality 3-5 months	0.000	0.00	0.001	0.00	-0.001	0.00		
Mortality 6-11 months	0.003	0.00	0.004	0.00	*	0.001	0.00	
Mortality 0-11 months	-0.002	0.00	0.000	0.01	-0.004	0.01		
Education								
Gross Participation Rate (7-12 yrs)	0.000	0.00	0.000	0.00	0.000	0.00		
Net Enrollment in primary school (7-12 yrs)	-0.013	0.01	*	-0.023	0.01	***	-0.002	0.01
Attendance primary school ? 85% (7-12 yrs)	-0.005	0.01		0.009	0.01		-0.013	0.01

Covariates; no baseline values					
A		B1			
Placement		Participation		Spill-over	
coeff	std err	coeff	std err	coeff	std err
7		8		9	

Education						
Hours in school last week (7-12 yrs)	0.275	0.17	0.348	0.19 *	0.281	0.20
Late enrollment rate primary school	-0.001	0.00	0.001	0.00	-0.005	0.00
Drop-out rate primary school	0.002	0.00	0.002	0.00	0.001	0.00
Gross participation rate age (13-15 yrs)	-0.007	0.00	-0.011	0.01 **	0.000	0.01
Nett in enrollment secondary school (13-15 yrs)	-0.015	0.02	0.000	0.02	-0.017	0.02
Attendance primary school ≥85% (13-15 yrs)	0.006	0.01	0.014	0.01	-0.001	0.01
Hours in school last week (13-15 years)	0.730	0.26 ***	0.649	0.30 **	0.604	0.30 **
Transition rates	-0.009	0.01	-0.004	0.01	-0.011	0.01
Child Labor						
Wage work during the last month yes/no (7-12 yrs)	-0.005	0.00	-0.004	0.00	0.000	0.00
Wage work during the last month yes/no (13-15 yrs)	-0.005	0.01	-0.001	0.01	-0.004	0.01
Wage work (7-12 yrs) last week	-0.314	2.66	-2.437	2.41	3.45	2.90
Wage work (7-12 yrs) last month	0.107	0.12	-0.033	0.13	0.288	0.13 **
Wage work (13-15 yrs) last week	0.765	2.95	0.823	3.34	1.31	3.84
Wage work (13-15 yrs) last month	-0.334	0.45	-0.348	0.49	-0.048	0.53
Family enterprise work (7-12 yrs) last week	1.10	0.67 *	1.93	0.71 ***	0.275	0.77
Family enterprise work (7-12 yrs) last month	0.419	0.21 **	0.523	0.24 **	0.275	0.22
Family enterprise work (13-15 yrs) last week	1.79	0.88 **	2.72	1.02 ***	0.541	0.96
Family enterprise work (13-15 yrs) last month	1.23	0.61 **	1.25	0.73 *	0.704	0.62
Household work (7-12 yrs) last week	-0.225	0.15	-0.016	0.17	-0.478	0.17 ***
Household work (7-12 yrs) last month	-0.176	0.40	0.401	0.47	-0.749	0.46
Household work (13-15 yrs) last week	-0.273	0.27	-0.083	0.31	-0.370	0.30
Household work (13-15 yrs) last month	-0.172	0.97	0.545	1.14	-0.888	1.07
Consumption						
Total expenditure, per-capita	2,375	4,741	-4,706	5,299	9,025	6,154
Non-food expenditure, per-capita	1,273	1,808	-1,224	2,205	2,234	2,304
Education expenditure, per-capita	-204	528	879	626	-462	675

Covariates; no baseline values							
A			B1				
Placement			Participation		Spill-over		
coeff	std err		coeff	std err	coeff	std err	
Consumption							
Health expenditure, per-capita	1,737	912 *	1,547	862 *	2,176	1,141 *	
Food expenditure, per-capita	1,102	4,112	-3,482	4,437	6,791	5,381	
Alcoholic beverages expenditure, per-capita	-20	81	-19	106	15	104	
Tobacco expenditure, per-capita	-818	479 *	-1,400	581 **	-116	618	
Share of food expenditure on protein	0.000	0.00	0.005	0.00	0.001	0.00	

Annex F Robustness Check

		B2 - Difference - in - Differences							
		common support, imputed baseline				nearest neighbor match, true panel			
		Participation		Spillover		Participation		Spillover	
		coeff	std err	coeff	std err	coeff	std err	coeff	std err
Health Behaviors									
Iron tablets ≥90 tabs during pregnancy	% pts	0.018	[0.025]	0.002	[0.026]				
Pre-natal vists	#	0.630	[0.311]**	0.128	[0.331]				
Pre-natal visits ≥4 visits	% pts	0.080	[0.029]**	0.005	[0.030]				
Assisted Delivery	% pts	0.045	[0.035]	0.033	[0.035]				
Delivery at facility	% pts	0.073	[0.036]**	0.082	[0.037]**				
Post-natal visits	#	0.781	[0.523]	0.223	[0.590]				
Post-natal visits ≥2 visits	% pts	0.097	[0.036]**	0.008	[0.037]				
Breastfeeding: yes or no	% pts	0.002	[0.009]	0.015	[0.014]				
Breastfeeding: hours after delivery of first breastfeeding	hours	-5.611	[5.438]	-4.614	[7.923]				
Breastfeeding: total months breastfeeding	mths	-0.122	[0.481]	-0.249	[0.653]				
Weighings ≥1 weighing past month (0-11 mths)	% pts	0.201	[0.023]**	0.071	[0.026]***				
Weighings ≥1 weighing past month (1-3 yrs)	% pts	0.043	[0.044]	-0.005	[0.297]				
Weighings ≥1 weighingpast month (0-5 yrs)	% pts	0.104	[0.033]**	0.050	[0.041]				
Immunization complete by schedule for age	% pts	0.040	[0.028]	-0.015	[0.040]				
Immunization complete	% pts	0.019	[0.023]	-0.008	[0.026]				
Vitamin A times received	#	0.066	[0.081]	0.088	[0.114]				
Vitamin A received ≥2 times during past year	% pts	0.035	[0.030]	0.039	[0.040]				
Vitamin A received on schedule	% pts	0.037	[0.026]	0.015	[0.035]				
Traditional health facility outpatient visits	#	0.000	[0.002]	-0.005	[0.003]*				
Traditional health facility outpatient visits (all HH members)	#	0.001	[0.001]	0.000	[0.001]				
Traditional health facility outpatient visits (all HH members)	% pts	0.001	[0.001]	0.000	[0.001]				
Public health facility outpatient visits	#	-0.057	[0.022]**	-0.010	[0.026]				
Public health facility outpatient visits (all HH members)	#	-0.004	[0.004]	0.001	[0.004]				
Public health facility outpatient visits (all HH members)	% pts	-0.005	[0.003]	-0.001	[0.003]				
Private health facility outpatient visits	#	0.014	[0.011]	-0.008	[0.013]				
Private health facility outpatient visits (all HH members)	#	0.006	[0.002]**	-0.003	[0.002]				
Private health facility outpatient visits (all HH members)	% pts	0.005	[0.002]**	-0.004	[0.002]**				

B2 - Difference - in - Differences							
common support, imputed baseline				nearest neighbor match, true panel			
Participation		Spillover		Participation		Spillover	
coeff	std err	coeff	std err	coeff	std err	coeff	std err

Health Outcomes

Weight	kg	-0.066	[0.140]	0.019	[0.188]		
Weight-for-age	Zscore	0.005	[0.077]	-0.002	[0.107]		
Malnutrition (according to weight-for-age zscore)	% pts	-0.008	[0.024]	0.021	[0.033]		
Severe Malnutrition (according to weight-for-age zscore)	% pts	0.017	[0.015]	0.033	[0.020]		
Height-for-age	Zscore	-0.245	[0.161]	-0.877	[0.218]***		
Weight-for-height	Zscore	0.301	[0.152]**	0.506	[0.205]**		
Diarrhea	% pts	0.003	[0.019]	0.008	[0.020]		
Treated diarrhea	% pts	0.087	[0.046]*	0.018	[0.055]		
Diarrhea number of episodes	#	0.190	[0.276]	0.224	[0.283]		
Diarrhea length of last episode	days	0.349	[0.293]	0.845	[0.358]**		
ARI	% pts	-0.007	[0.016]	0.016	[0.018]		
Treated ARI	% pts	0.122	[0.056]**	0.039	[0.064]		
Fever	% pts	0.014	[0.022]	0.004	[0.025]		
Cough	% pts	-0.011	[0.022]	-0.009	[0.025]		
Cough and rapid breath	% pts	-0.009	[0.018]	0.018	[0.020]		
Illness	% pts	0.013	[0.022]	0.016	[0.024]		
Mortality 0-28 days	% pts	-0.006	[0.006]	-0.014	[0.006]**		
Mortality 1-2 months	% pts	-0.003	[0.003]	0.002	[0.003]		
Mortality 3-5 months	% pts	0.001	[0.003]	-0.004	[0.003]		
Mortality 6-11 months	% pts	0.005	[0.004]	0.003	[0.003]		
Mortality 0-11 months	% pts	-0.005	[0.008]	-0.012	[0.008]		

B2 - Difference - in - Differences							
common support, imputed baseline				nearest neighbor match, true panel			
Participation		Spillover		Participation		Spillover	
coeff	std err	coeff	std err	coeff	std err	coeff	std err

Education

Gross Participation Rate (7-12 yrs)	% pts	-0.013	[0.007]*	-0.010	[0.007]		
Net Enrollment in primary school (7-12 yrs)	% pts	-0.023	[0.011]**	-0.003	[0.011]		
Attendance primary school ≥ 85% (7-12 yrs)	% pts	0.009	[0.010]	0.002	[0.011]		
Hours in school last week (7-12 yrs)	hrs	-0.188	[0.272]	0.041	[0.288]		
Late enrollment rate primary school	% pts	0.005	[0.007]	0.005	[0.007]		
Drop-out rate primary school	% pts	0.006	[0.006]	0.014	[0.006]**		
Gross participation rate age (13-15 yrs)	% pts	0.005	[0.020]	-0.022	[0.019]		
Nett in enrollment secondary school (13-15 yrs)	% pts	0.019	[0.028]	-0.036	[0.029]		
Attendance primary school ≥ 85% (13-15 yrs)	% pts	-0.011	[0.019]	-0.008	[0.020]		
Hours in school last week (13-15 years)	hrs	-0.167	[0.522]	-0.358	[0.550]		
Transition rates	% pts	-0.002	[0.031]	-0.084	[0.030]***		

Child Labor

Wage work during the last month yes/no (7-12 yrs)	% pts	-0.009	[0.005]*	-0.004	[0.005]		
Wage work during the last month yes/no (13-15 yrs)	% pts	0.008	[0.015]	-0.010	[0.016]		
Wage work (7-12 yrs) last week	hrs	2.966	[2.659]	-0.798	[3.067]		
Wage work (7-12 yrs) last month	hrs	17.462	[8.313]**	4.306	[9.782]		
Wage work (13-15 yrs) last week	hrs	-4.425	[3.975]	-1.606	[4.424]		
Wage work (13-15 yrs) last month	hrs	-8.593	[15.415]	-4.421	[17.222]		
Family enterprise work (7-12 yrs) last week	hrs	0.826	[1.221]	-0.781	[1.286]		
Family enterprise work (7-12 yrs) last month	hrs	1.244	[4.413]	-2.061	[4.587]		
Family enterprise work (13-15 yrs) last week	hrs	2.320	[1.617]	1.214	[1.688]		
Family enterprise work (13-15 yrs) last month	hrs	1.850	[5.880]	4.712	[5.913]		
Household work (7-12 yrs) last week	hrs	-0.224	[0.215]	-0.574	[0.216]***		
Household work (7-12 yrs) last month	hrs	-0.970	[0.932]	-2.489	[0.937]***		
Household work (13-15 yrs) last week	hrs	0.626	[0.450]	-0.287	[0.437]		
Household work (13-15 yrs) last month	hrs	2.713	[1.948]	-1.243	[1.894]		

		B2 - Difference - in - Differences							
		common support, imputed baseline				nearest neighbor match, true panel			
		Participation		Spillover		Participation		Spillover	
		coeff	std err	coeff	std err	coeff	std err	coeff	std err
Consumption									
Total expenditure, per-capita	IDR	8026	[6134]	-4992	[7892]	18988	[7310]***	-7983	[10438]**
Non-food expenditure, per-capita	IDR	1871	[5044]	-5426	[7060]	13436	[6055]**	-7990	[9571]**
Education expenditure, per-capita	IDR	-477	[897]	-1897	[978]*	-838	[1213]	-1509	[1353]
Health expenditure, per-capita	IDR	1899	[989]*	1923	[1144]*	3099	[1117]***	2009	[1403]***
Food expenditure, per-capita	IDR	6155	[2687]**	434	[2674]	5551	[3144]*	7	[3188]*
Alcoholic beverages expenditure, per-capita	IDR	9	[91]	-84	[82]	13	[116]	-62	[145]
Tobacco expenditure, per-capita	IDR	-1555	[479]***	-213	[498]	-735	[657]	-1106	[668]
Share of food expenditure on protein	% pts	0.012	[0.003]**	0.002	[0.003]	0.007	[0.004]*	0.000	[0.004]*

Annex G Disaggregated Results

		B1		Rural - Urban				Java			
		participation		Rural (18%)		Urban (82%)		Java (68%)		Not Java (32%)	
		coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err
Health Behaviors											
Iron tablets ≥ 90 tabs during pregnancy	% pts	0.016	0.026	-0.005	0.05	0.021	0.03	-0.003	0.03	0.062	0.05
Pre-natal visits	#	0.576	0.242 **	0.559	0.49	0.566	0.28 **	0.697	0.29 **	0.297	0.42
Pre-natal visits ≥ 4 visits	% pts	0.093	0.028 ***	0.069	0.05	0.091	0.03 ***	0.105	0.03 ***	0.073	0.05
Assisted Delivery	% pts	0.037	0.031	0.077	0.06	0.036	0.04	0.053	0.04	0.038	0.05
Delivery at facility	% pts	0.051	0.032	0.084	0.06	0.045	0.04	0.100	0.04 **	-0.010	0.05
Post-natal visits	#	0.350	0.185 *	0.329	0.40	0.346	0.21	0.336	0.24	0.423	0.29
Post-natal visits ≥ 2 visits	% pts	0.096	0.035 ***	0.133	0.07 **	0.080	0.04 *	0.126	0.04 ***	0.048	0.06
Breastfeeding: yes or no	% pts	0.004	0.006	-0.013	0.02	0.012	0.01 *	0.006	0.01	0.000	0.01
Breastfeeding: hours after delivery of first breastfeeding	hours	-1.753	1.681	-3.00	3.66	-1.69	1.93	-0.59	2.29	-5.29	2.10 **
Breastfeeding: total months breastfeeding	mths	0.351	0.418	-0.170	0.88	0.911	0.52 *	0.227	0.54	1.31	0.76 *
Weighings ≥ 1 weighing past month (0-11 mths)	% pts	0.065	0.045	0.123	0.09	0.045	0.05	0.104	0.06 *	0.027	0.07
Weighings ≥ 1 weighing past month (1-3 yrs)	% pts	0.152	0.028 ***	0.161	0.06 ***	0.159	0.03 ***	0.134	0.03 ***	0.193	0.05 ***
Weighings ≥ 1 weighing past month (0-5 yrs)	% pts	0.226	0.021 ***	0.201	0.04 ***	0.236	0.02 ***	0.206	0.02 ***	0.246	0.04 ***
Immunization complete by schedule for age	% pts	0.043	0.026	0.008	0.05	0.063	0.03 **	0.025	0.03	0.076	0.05
Immunization complete	% pts	0.033	0.019 *	0.024	0.04	0.040	0.02 *	0.022	0.02	0.050	0.03
Vitamin A times received	#	0.056	0.073	0.070	0.14	0.089	0.09	0.059	0.09	0.096	0.14
Vitamin A received ≥ 2 times during past year	% pts	0.021	0.026	0.061	0.05	0.021	0.03	0.043	0.03	-0.021	0.05
Vitamin A received on schedule	% pts	0.015	0.023	0.054	0.04	0.010	0.03	0.026	0.02	0.012	0.05
Traditional health facility outpatient visits	#	0.002	0.002	0.002	0.00	0.002	0.00	0.002	0.00	0.003	0.00
Traditional health facility outpatient visits (all HH members)	#	0.003	0.004	0.008	0.01	0.003	0.00	0.004	0.00	0.002	0.01
Traditional health facility outpatient visits (all HH members)	% pts	0.001	0.000 *	0.001	0.00	0.001	0.00	0.001	0.00 **	0.000	0.00
Public health facility outpatient visits	#	0.009	0.005 *	0.004	0.01	0.009	0.01	0.009	0.01	0.007	0.01
Public health facility outpatient visits (all HH members)	#	0.030	0.009 ***	0.018	0.02	0.035	0.01 ***	0.035	0.01 ***	0.018	0.02
Public health facility outpatient visits (all HH members)	% pts	0.005	0.001 ***	0.004	0.00	0.006	0.00 ***	0.007	0.00 ***	0.003	0.00
Private health facility outpatient visits	#	0.001	0.003	0.000	0.01	0.002	0.00	0.003	0.00	-0.001	0.00
Private health facility outpatient visits (all HH members)	#	0.018	0.008 **	0.007	0.01	0.020	0.01 **	0.018	0.01 *	0.014	0.01
Private health facility outpatient visits (all HH members)	% pts	0.002	0.001	0.001	0.00	0.001	0.00	0.001	0.00	0.004	0.00 **

		B1		Rural - Urban				Java			
		participation		Rural (18%)		Urban (82%)		Java (68%)		Not Java (32%)	
		coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err
Health Outcomes											
Weight	kg	-0.073	0.119	-0.007	0.23	0.006	0.15	-0.013	0.14	-0.064	0.23
Weight-for-age	Zscore	-0.065	0.070	-0.071	0.12	-0.068	0.09	-0.052	0.08	-0.136	0.14
Malnutrition (according to weight-for-age zscore)	% pts	0.004	0.022	0.012	0.04	0.002	0.03	-0.002	0.03	0.028	0.04
Severe Malnutrition (according to weight-for-age zscore)	% pts	0.002	0.015	0.019	0.03	-0.004	0.02	0.002	0.02	0.018	0.03
Height-for-age	Zscore	0.071	0.151	0.209	0.27	-0.015	0.18	0.261	0.18	-0.302	0.29
Weight-for-height	Zscore	-0.187	0.132	-0.285	0.21	-0.137	0.16	-0.269	0.16 *	-0.080	0.25
Diarrhea	% pts	0.030	0.014 **	0.032	0.03	0.031	0.02 *	0.011	0.02	0.081	0.02 ***
Treated diarrhea	% pts	0.071	0.037 *	0.055	0.07	0.086	0.04 **	0.042	0.04	0.156	0.07 **
Diarrhea number of episodes	#	-0.053	0.178	-0.209	0.38	-0.004	0.20	0.106	0.24	-0.376	0.19 *
Diarrhea length of last episode	days	0.013	0.207	-0.415	0.53	0.165	0.22	-0.145	0.26	0.520	0.29 *
ARI	% pts	0.010	0.011	-0.005	0.02	0.012	0.01	0.008	0.01	0.014	0.02
Treated ARI	% pts	0.038	0.045	0.162	0.08 *	0.011	0.05	0.030	0.05	0.073	0.10
Fever	% pts	0.042	0.017 **	0.062	0.03 *	0.035	0.02 *	0.055	0.02 ***	0.019	0.03
Cough	% pts	0.010	0.017	-0.017	0.03	0.015	0.02	0.007	0.02	0.022	0.03
Cough and rapid breath	% pts	0.004	0.013	-0.010	0.03	0.004	0.01	0.003	0.02	0.011	0.02
Illness	% pts	0.023	0.017	0.025	0.03	0.022	0.02	0.021	0.02	0.037	0.03
Mortality 0-28 days	% pts	-0.002	0.004	-0.018	0.01 **	-0.002	0.00	-0.008	0.01	-0.002	0.01
Mortality 1-2 months	% pts	0.002	0.002	0.000	0.00	0.002	0.00	0.001	0.00	0.002	0.00
Mortality 3-5 months	% pts	0.002	0.002	0.003	0.00	0.001	0.00	0.001	0.00	0.001	0.00
Mortality 6-11 months	% pts	0.005	0.002 **	0.004	0.00	0.004	0.00	0.005	0.00 **	0.002	0.01
Mortality 0-11 months	% pts	0.005	0.005	-0.012	0.01	0.005	0.01	0.001	0.01	-0.002	0.01
Education											
Gross Participation Rate (7-12 yrs)	% pts	-0.001	0.001	-0.001	0.00	0.000	0.00				
Net Enrollment in primary school (7-12 yrs)	% pts	-0.023	0.008 ***	-0.012	0.02	-0.026	0.01 ***	-0.017	0.01 *	-0.036	0.01 ***
Attendance primary school ≥ 85% (7-12 yrs)	% pts	0.009	0.008	0.015	0.02	0.005	0.01	0.007	0.01	0.004	0.02
Hours in school last week (7-12 yrs)	hrs	0.319	0.187 *	0.347	0.35	0.367	0.22 *	0.163	0.22	0.513	0.37
Late enrollment rate primary school	% pts	0.001	0.005	-0.006	0.01	0.004	0.01	0.004	0.01	-0.004	0.01
Drop-out rate primary school	% pts	0.002	0.001	0.000	0.00	0.002	0.00				
Gross participation rate age (13-15 yrs)	% pts	-0.011	0.006 *	-0.015	0.02	-0.011	0.01 *	-0.013	0.01 *	-0.005	0.00
Nett in enrollment secondary school (13-15 yrs)	% pts	0.000	0.021	-0.026	0.04	0.011	0.03	-0.005	0.02	0.025	0.05
Attendance primary school ≥ 85% (13-15 yrs)	% pts	0.014	0.012	0.023	0.03	0.009	0.01	0.024	0.01 *	-0.013	0.02
Hours in school last week (13-15 years)	hrs	0.638	0.299 **	1.377	0.59 **	0.410	0.35	0.511	0.36	1.192	0.55 **
Transition rates	% pts	-0.004	0.007	0.010	0.02	-0.011	0.01				

		B1		Rural - Urban				Java			
		participation		Rural (18%)		Urban (82%)		Java (68%)		Not Java (32%)	
		coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err
Child Labor											
Wage work during the last month yes/no (7-12 yrs)	% pts	-0.005	0.004					0.002	0.00	-0.019	0.01 **
Wage work during the last month yes/no (13-15 yrs)	% pts	-0.001	0.010	-0.013	0.02	0.004	0.01	-0.003	0.01	-0.005	0.02
Wage work (7-12 yrs) last week	hrs	-2.041	2.389					-3.78	3.25	-14.1	5.08 ***
Wage work (7-12 yrs) last month	hrs	-0.034	0.126	0.008	0.15	-0.025	0.16	0.086	0.12	-0.296	0.32
Wage work (13-15 yrs) last week	hrs	0.814	3.334	-4.70	5.65	0.250	3.82	0.723	4.15	-8.02	6.10
Wage work (13-15 yrs) last month	hrs	-0.339	0.489	-1.18	1.02	-0.119	0.56	-0.075	0.49	-1.33	1.25
Family enterprise work (7-12 yrs) last week	hrs	1.943	0.707 ***	3.63	1.64 **	1.95	0.77 **	2.55	1.29 **	1.85	0.85 **
Family enterprise work (7-12 yrs) last month	hrs	0.520	0.238 **	0.290	0.33	0.629	0.30 **	0.319	0.22	1.18	0.61 *
Family enterprise work (13-15 yrs) last week	hrs	2.932	1.020 ***	0.74	1.58	2.59	1.14 **	0.92	1.49	3.47	1.41 **
Family enterprise work (13-15 yrs) last month	hrs	1.184	0.729	-0.86	0.65	2.19	0.98 **	0.34	0.72	3.84	1.90 **
Household work (7-12 yrs) last week	hrs	-0.011	0.166	-0.728	0.36 **	0.200	0.19	-0.042	0.20	0.079	0.29
Household work (7-12 yrs) last month	hrs	0.259	0.461	-1.17	0.90	1.01	0.54 *	0.321	0.49	0.947	1.06
Household work (13-15 yrs) last week	hrs	-0.101	0.311	-1.55	0.58 ***	0.458	0.37	-0.433	0.35	0.599	0.64
Household work (13-15 yrs) last month	hrs	0.338	1.133	-4.16	2.08 **	2.48	1.37 *	-0.819	1.24	3.94	2.58
Consumption											
Total expenditure, per-capita	IDR	-4835	5278	8,106	11,150	-10,795	6,018 *	-5,681	6,106	551	10,907
Non-food expenditure, per-capita	IDR	334	2141	5,442	4,121	-4,063	2,617	-79	2,393	-4,522	5,087
Education expenditure, per-capita	IDR	849	626	467	1,081	978	761	595	748	1,682	1,155
Health expenditure, per-capita	IDR	1556	862 *	5,073	2,034 **	105	921	1,413	1,083	1,720	1,269
Food expenditure, per-capita	IDR	-3647	4433	2,664	9,779	-6,731	4,932	-5,603	5,240	5,073	8,537
Alcoholic beverages expenditure, per-capita	IDR	-32	105	-136	145	33	135	-32	45	1	395
Tobacco expenditure, per-capita	IDR	-1244	559 **	-517	1,112	-2,063	683 ***	-511	685	-4,247	1,127 ***
Share of food expenditure on protein	% pts	0.006	0.003 **	-0.002	0.01	0.006	0.00 *	0.003	0.00	0.009	0.01
Per-capita grains				3340	1228 ***	-377	822	1667	632 ***	-2453	1930
Per-capita tubers				-364	228	606	290 **	96	139	870	753
Per-capita fish				2552	653 ***	-318	519	802	404 **	245	1070
Per-capita meats				-2066	736 ***	-430	520	-1296	430 ***	-299	1131
Per-capita egg milk				-164	571	703	341 **	748	340 **	13	582
Per-capita vegetables				639	485	-93	371	137	300	-90	766
Per-capita legumes				678	488	-242	288	-202	294	463	413
Per-capita fruits				541	408	-196	293	-146	251	375	603
Per-capita oil fat				87	323	-190	200	-332	187 *	606	385
Per-capita beverages				353	449	-439	304	-332	275	171	589
Per-capita spices				842	266 ***	-93	165	226	155	-55	315
Per-capita other				46	483	-341	283	-342	307	78	309
Per-capita served food				-324	1560	-658	743	-569	853	-200	1030

		B1		Agriculture				Mother's Education			
		participation		Agri (64%)		Non-Agri (36%)		Low: <SD (10%)		High: >=SD (90%)	
		coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err
Health Behaviors											
Iron tablets ≥90 tabs during pregnancy	% pts	0.016	0.026	-0.011	0.03	0.078	0.05 *	-0.050	0.09	0.020	0.03
Pre-natal visits	#	0.576	0.242 **	0.620	0.29 **	0.447	0.44	1.811	0.77 **	0.522	0.25 **
Pre-natal visits ≥ 4 visits	% pts	0.093	0.028 ***	0.106	0.03 ***	0.056	0.05	0.199	0.09 **	0.089	0.03 ***
Assisted Delivery	% pts	0.037	0.031	0.016	0.04	0.146	0.06 ***	0.178	0.09 **	0.043	0.03
Delivery at facility	% pts	0.051	0.032	0.021	0.04	0.148	0.06 **	0.081	0.11	0.069	0.03 **
Post-natal visits	#	0.350	0.185 *	0.317	0.22	0.437	0.33	-0.917	0.64	0.413	0.19 **
Post-natal visits ≥ 2 visits	% pts	0.096	0.035 ***	0.065	0.04	0.160	0.06 **	-0.033	0.12	0.097	0.04 ***
Breastfeeding: yes or no	% pts	0.004	0.006	0.008	0.01	-0.007	0.01	-0.007	0.03	0.006	0.01
Breastfeeding: hours after delivery of first breastfeeding	hours	-1.753	1.681	-0.83	1.72	-3.59	3.68	1.74	6.03	-2.51	1.78
Breastfeeding: total months breastfeeding	mths	0.351	0.418	0.642	0.54	0.525	0.78	0.722	1.53	0.649	0.47
Weighings ≥ 1 weighing past month (0-11 mths)	% pts	0.065	0.045	0.064	0.05	0.139	0.08 *	-0.280	0.21	0.085	0.05 *
Weighings ≥ 1 weighing past month (1-3 yrs)	% pts	0.152	0.028 ***	0.199	0.03 ***	0.087	0.05 *	0.094	0.09	0.160	0.03 ***
Weighings ≥ 1 weighing past month (0-5 yrs)	% pts	0.226	0.021 ***	0.215	0.03 ***	0.253	0.04 ***	0.203	0.07 ***	0.234	0.02 ***
Immunization complete by schedule for age	% pts	0.043	0.026	0.029	0.03	0.091	0.04 **	-0.155	0.08 *	0.061	0.03 **
Immunization complete	% pts	0.033	0.019 *	0.037	0.02	0.032	0.03	-0.005	0.06	0.040	0.02 **
Vitamin A times received	#	0.056	0.073	0.066	0.09	0.116	0.13	0.130	0.23	0.087	0.08
Vitamin A received ≥ 2 times during past year	% pts	0.021	0.026	-0.002	0.03	0.065	0.04	-0.081	0.09	0.035	0.03
Vitamin A received on schedule	% pts	0.015	0.023	0.008	0.03	0.035	0.04	-0.020	0.06	0.024	0.02
Traditional health facility outpatient visits	#	0.002	0.002	0.002	0.00	0.003	0.00	0.005	0.01	0.002	0.00
Traditional health facility outpatient visits (all HH members)	#	0.003	0.004	0.005	0.00	0.002	0.01	0.009	0.02	0.003	0.00
Traditional health facility outpatient visits (all HH members)	% pts	0.001	0.000 *	0.001	0.00	0.001	0.00	-0.001	0.00	0.001	0.00 **
Public health facility outpatient visits	#	0.009	0.005 *	0.005	0.01	0.018	0.01	0.000	0.02	0.010	0.01 *
Public health facility outpatient visits (all HH members)	#	0.030	0.009 ***	0.025	0.01 **	0.046	0.02 ***	0.089	0.04 **	0.026	0.01 ***
Public health facility outpatient visits (all HH members)	% pts	0.005	0.001 ***	0.004	0.00 **	0.009	0.00 ***	0.006	0.00	0.006	0.00 ***
Private health facility outpatient visits	#	0.001	0.003	0.003	0.00	-0.002	0.01	0.001	0.01	0.001	0.00
Private health facility outpatient visits (all HH members)	#	0.018	0.008 **	0.025	0.01 ***	-0.001	0.02	0.000	0.03	0.019	0.01 **
Private health facility outpatient visits (all HH members)	% pts	0.002	0.001	0.003	0.00 **	-0.001	0.00	-0.003	0.01	0.002	0.00 *

		B1		Agriculture				Mother's Education			
		participation		Agri (64%)		Non-Agri (36%)		Low: < SD (10%)		High: >= SD (90%)	
		coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err
Health Outcomes											
Weight	kg	-0.073	0.119	0.001	0.15	0.059	0.21	0.193	0.38	0.000	0.13
Weight-for-age	Zscore	-0.065	0.070	-0.067	0.09	-0.034	0.11	0.195	0.22	-0.087	0.07
Malnutrition (according to weight-for-age zscore)	% pts	0.004	0.022	0.005	0.03	-0.007	0.04	-0.080	0.07	0.012	0.02
Severe Malnutrition (according to weight-for-age zscore)	% pts	0.002	0.015	0.006	0.02	-0.003	0.02	-0.004	0.04	0.003	0.02
Height-for-age	Zscore	0.071	0.151	-0.020	0.19	0.195	0.26	-0.079	0.45	0.090	0.16
Weight-for-height	Zscore	-0.187	0.132	-0.134	0.16	-0.244	0.22	0.351	0.44	-0.231	0.14 *
Diarrhea	% pts	0.030	0.014 **	0.034	0.02 **	0.025	0.03	0.111	0.05 **	0.023	0.01
Treated diarrhea	% pts	0.071	0.037 *	0.124	0.05 ***	-0.003	0.06	-0.014	0.13	0.077	0.04 **
Diarrhea number of episodes	#	-0.053	0.178	-0.273	0.21	0.192	0.32	0.382	0.28	-0.052	0.19
Diarrhea length of last episode	days	0.013	0.207	-0.017	0.24	0.026	0.37	0.231	0.88	-0.091	0.21
ARI	% pts	0.010	0.011	0.014	0.01	0.002	0.02	-0.039	0.04	0.012	0.01
Treated ARI	% pts	0.038	0.045	0.096	0.06 *	-0.016	0.08	0.300	0.13 **	0.053	0.05
Fever	% pts	0.042	0.017 **	0.033	0.02 *	0.065	0.03 **	0.067	0.06	0.037	0.02 **
Cough	% pts	0.010	0.017	0.033	0.02	-0.029	0.03	0.021	0.06	0.005	0.02
Cough and rapid breath	% pts	0.004	0.013	0.019	0.02	-0.024	0.02	-0.004	0.04	0.002	0.01
Illness	% pts	0.023	0.017	0.037	0.02 *	0.002	0.03	0.028	0.06	0.018	0.02
Mortality 0-28 days	% pts	-0.002	0.004	-0.003	0.01	-0.015	0.01 **	0.006	0.01	-0.007	0.00
Mortality 1-2 months	% pts	0.002	0.002	0.000	0.00	0.005	0.00				
Mortality 3-5 months	% pts	0.002	0.002	-0.001	0.00	0.006	0.00	0.007	0.01	0.001	0.00
Mortality 6-11 months	% pts	0.005	0.002 **	0.003	0.00	0.007	0.00 *	0.010	0.01	0.004	0.00 *
Mortality 0-11 months	% pts	0.005	0.005	0.000	0.01	0.002	0.01	0.016	0.01	0.000	0.01
Education											
Gross Participation Rate (7-12 yrs)	% pts	-0.001	0.001	-0.002	0.00	0.002	0.00	0.002	0.00	-0.001	0.00
Net Enrollment in primary school (7-12 yrs)	% pts	-0.023	0.008 ***	-0.021	0.01 **	-0.027	0.01 *	-0.034	0.03	-0.023	0.01 ***
Attendance primary school ≥ 85% (7-12 yrs)	% pts	0.009	0.008	0.014	0.01	-0.004	0.01	-0.050	0.03 *	0.014	0.01 *
Hours in school last week (7-12 yrs)	hrs	0.319	0.187 *	0.648	0.23 ***	-0.294	0.33	-0.152	0.65	0.408	0.20 **
Late enrollment rate primary school	% pts	0.001	0.005	-0.006	0.01	0.014	0.01 *	-0.015	0.02	0.003	0.01
Drop-out rate primary school	% pts	0.002	0.001	0.002	0.00	0.001	0.00	0.002	0.00	0.002	0.00
Gross participation rate age (13-15 yrs)	% pts	-0.011	0.006 *	-0.005	0.01	-0.020	0.01 *	-0.020	0.02	-0.011	0.01 *
Nett in enrollment secondary school (13-15 yrs)	% pts	0.000	0.021	0.011	0.03	-0.026	0.04	-0.129	0.06 **	0.007	0.02
Attendance primary school ≥ 85% (13-15 yrs)	% pts	0.014	0.012	-0.002	0.01	0.036	0.02	-0.025	0.04	0.018	0.01
Hours in school last week (13-15 years)	hrs	0.638	0.299 **	0.706	0.36 *	0.488	0.52	0.180	0.93	0.699	0.31 **
Transition rates	% pts	-0.004	0.007	-0.001	0.01	-0.014	0.02				

B1		Agriculture				Mother's Education			
participation		Agri (64%)		Non-Agri (36%)		Low: <SD (10%)		High: >=SD (90%)	
coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err

Child Labor

Wage work during the last month yes/no (7-12 yrs)	% pts	-0.005	0.004	-0.009	0.00 **	0.006	0.01	-0.012	0.01	-0.003	0.00
Wage work during the last month yes/no (13-15 yrs)	% pts	-0.001	0.010	-0.006	0.01	0.007	0.02	0.017	0.03	-0.003	0.01
Wage work (7-12 yrs) last week	hrs	-2.041	2.389	-4.98	3.44	-7.10	1.93 ***				
Wage work (7-12 yrs) last month	hrs	-0.034	0.126	-0.029	0.17	-0.066	0.17	-0.551	0.57	0.027	0.13
Wage work (13-15 yrs) last week	hrs	0.814	3.334	-1.36	2.29	-12.3	6.85 *	22.1	0.18 ***	-0.740	3.62
Wage work (13-15 yrs) last month	hrs	-0.339	0.489	-0.424	0.46	-0.259	1.09	0.407	1.35	-0.402	0.52
Family enterprise work (7-12 yrs) last week	hrs	1.943	0.707 ***	1.20	0.72 *	7.77	1.98 ***				
Family enterprise work (7-12 yrs) last month	hrs	0.520	0.238 **	0.430	0.30	0.680	0.39 *	0.042	0.96	0.588	0.24 **
Family enterprise work (13-15 yrs) last week	hrs	2.932	1.020 ***	3.55	1.14 ***	0.811	2.25	0.97	2.27	3.40	1.10 ***
Family enterprise work (13-15 yrs) last month	hrs	1.184	0.729	2.01	0.97 **	-0.181	1.06	-1.43	2.45	1.49	0.76 **
Household work (7-12 yrs) last week	hrs	-0.011	0.166	-0.039	0.20	-0.044	0.31	0.532	0.54	-0.081	0.18
Household work (7-12 yrs) last month	hrs	0.259	0.461	0.294	0.59	0.479	0.76	1.052	1.49	0.325	0.49
Household work (13-15 yrs) last week	hrs	-0.101	0.311	-0.609	0.37	0.673	0.56	1.081	0.82	-0.197	0.33
Household work (13-15 yrs) last month	hrs	0.338	1.133	-1.767	1.39	3.622	1.95 *	4.384	3.17	0.117	1.21

Consumption

Total expenditure, per-capita	IDR	-4835	5278	-366	5,852	-14,376	10,897	6,977	15,425	-5,789	5,588
Non-food expenditure, per-capita	IDR	334	2141	-1,603	2,663	-545	3,927	-13	8,623	-1,375	2,277
Education expenditure, per-capita	IDR	849	626	1,145	733	283	1,181	3,307	2,500	616	647
Health expenditure, per-capita	IDR	1556	862 *	2,380	980 **	-121	1,704	13,389	5,469 **	719	819
Food expenditure, per-capita	IDR	-3647	4433	1,238	4,728	-13,831	9,516	6,990	10,811	-4,414	4,715
Alcoholic beverages expenditure, per-capita	IDR	-32	105	-62	150	84	88	-17	116	-21	114
Tobacco expenditure, per-capita	IDR	-1244	559 **	-1,807	659 ***	-496	1,153	1,577	2,152	-1,656	602 ***
Share of food expenditure on protein	% pts	0.006	0.003 **	0.006	0.00 *	0.001	0.01	0.013	0.01	0.004	0.00
Per-capita grains				718	884	299	1009	-754	2673	717	707
Per-capita tubers				291	310	422	203 **	-957	790	468	230 **
Per-capita fish				1011	508 **	-244	744	2444	1282 *	472	442
Per-capita meats				-1107	513 **	-710	774	-1056	1908	-1001	436 **
Per-capita egg milk				723	320 **	148	604	414	1419	533	293 *
Per-capita vegetables				-97	374	488	499	-477	1031	158	314
Per-capita legumes				237	300	-678	440	1308	969	-160	256
Per-capita fruits				-73	308	30	368	987	880	-107	250
Per-capita oil fat				-13	207	-298	295	86	664	-134	175
Per-capita beverages				-449	320	413	398	-862	985	-113	262
Per-capita spices				173	169	53	250	-39	518	159	146
Per-capita other				-304	289	-260	452	1165	1084	-388	249
Per-capita served food				-853	772	191	1371	-3832	2750	-310	705

		B1		Father's Education				Head of Household			
		participation		Low: <SD (29%)		High: >=SD (71%)		Male (92%)		Female (8%)	
		coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err
Health Behaviors											
Iron tablets ≥ 90 tabs during pregnancy	% pts	0.016	0.026	0.024	0.05	0.014	0.03	0.015	0.03	-0.008	0.12
Pre-natal visits	#	0.576	0.242 **	0.411	0.44	0.695	0.29 **	0.505	0.25 **	2.288	0.87 ***
Pre-natal visits ≥ 4 visits	% pts	0.093	0.028 ***	0.078	0.05	0.105	0.03 ***	0.090	0.03 ***	0.210	0.10 **
Assisted Delivery	% pts	0.037	0.031	0.070	0.06	0.064	0.04 *	0.042	0.03	0.253	0.11 **
Delivery at facility	% pts	0.051	0.032	-0.005	0.06	0.105	0.04 ***	0.056	0.03 *	0.230	0.13 *
Post-natal visits	#	0.350	0.185 *	0.115	0.35	0.395	0.22 *	0.382	0.19 **	-0.135	0.72
Post-natal visits ≥ 2 visits	% pts	0.096	0.035 ***	0.003	0.06	0.135	0.04 ***	0.103	0.04 ***	-0.166	0.14
Breastfeeding: yes or no	% pts	0.004	0.006	-0.017	0.01	0.009	0.01	0.003	0.01	0.029	0.02
Breastfeeding: hours after delivery of first breastfeeding	hours	-1.753	1.681	2.07	3.21	-3.41	2.01 *	-2.54	1.75	12.7	7.42 *
Breastfeeding: total months breastfeeding	mths	0.351	0.418	1.209	0.83	0.403	0.53	0.721	0.46	-0.382	1.71
Weighings ≥ 1 weighing past month (0-11 mths)	% pts	0.065	0.045	0.210	0.10 **	0.017	0.05	0.092	0.05 *	-0.127	0.21
Weighings ≥ 1 weighing past month (1-3 yrs)	% pts	0.152	0.028 ***	0.157	0.05 ***	0.166	0.03 ***	0.155	0.03 ***	0.182	0.12
Weighings ≥ 1 weighing past month (0-5 yrs)	% pts	0.226	0.021 ***	0.238	0.04 ***	0.225	0.02 ***	0.231	0.02 ***	0.216	0.09 **
Immunization complete by schedule for age	% pts	0.043	0.026	0.079	0.05	0.031	0.03	0.056	0.03 **	-0.071	0.09
Immunization complete	% pts	0.033	0.019 *	0.073	0.04 *	0.020	0.02	0.038	0.02 *	-0.023	0.07
Vitamin A times received	#	0.056	0.073	0.148	0.14	0.025	0.09	0.099	0.08	-0.072	0.23
Vitamin A received ≥ 2 times during past year	% pts	0.021	0.026	0.074	0.05	-0.002	0.03	0.030	0.03	-0.056	0.11
Vitamin A received on schedule	% pts	0.015	0.023	0.053	0.05	-0.003	0.03	0.030	0.02	-0.091	0.09
Traditional health facility outpatient visits	#	0.002	0.002	0.008	0.00 *	0.000	0.00	0.002	0.00	0.008	0.01
Traditional health facility outpatient visits (all HH members)	#	0.003	0.004	0.012	0.01 *	0.000	0.00	0.003	0.00	0.007	0.02
Traditional health facility outpatient visits (all HH members)	% pts	0.001	0.000 *	0.001	0.00 *	0.001	0.00	0.001	0.00 **	-0.001	0.00
Public health facility outpatient visits	#	0.009	0.005 *	0.021	0.01 **	0.006	0.01	0.008	0.01	0.005	0.02
Public health facility outpatient visits (all HH members)	#	0.030	0.009 ***	0.044	0.01 ***	0.025	0.01 **	0.026	0.01 ***	0.076	0.04 *
Public health facility outpatient visits (all HH members)	% pts	0.005	0.001 ***	0.008	0.00 ***	0.005	0.00 ***	0.006	0.00 ***	0.005	0.00
Private health facility outpatient visits	#	0.001	0.003	-0.005	0.01	0.003	0.00	0.002	0.00	-0.006	0.01
Private health facility outpatient visits (all HH members)	#	0.018	0.008 **	-0.008	0.02	0.026	0.01 ***	0.019	0.01 **	0.004	0.03
Private health facility outpatient visits (all HH members)	% pts	0.002	0.001	-0.002	0.00	0.003	0.00 **	0.002	0.00	0.000	0.01

		B1		Father's Education				Head of Household			
		participation		Low: <SD (29%)		High: >=SD (71%)		Male (92%)		Female (8%)	
		coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err
Health Outcomes											
Weight	kg	-0.073	0.119	0.297	0.23	-0.108	0.15	-0.009	0.13	0.309	0.44
Weight-for-age	Zscore	-0.065	0.070	0.067	0.14	-0.104	0.08	-0.094	0.07	0.363	0.24
Malnutrition (according to weight-for-age zscore)	% pts	0.004	0.022	-0.074	0.04 *	0.031	0.03	0.012	0.02	-0.136	0.09
Severe Malnutrition (according to weight-for-age zscore)	% pts	0.002	0.015	-0.021	0.03	0.009	0.02	0.005	0.02	-0.054	0.05
Height-for-age	Zscore	0.071	0.151	0.318	0.28	0.006	0.18	0.104	0.16	-0.049	0.55
Weight-for-height	Zscore	-0.187	0.132	-0.121	0.23	-0.212	0.16	-0.260	0.14 *	0.705	0.47
Diarrhea	% pts	0.030	0.014 **	0.037	0.03	0.030	0.02 *	0.029	0.01 **	0.089	0.05 *
Treated diarrhea	% pts	0.071	0.037 *	0.119	0.07 *	0.066	0.04	0.075	0.04 **	-0.001	0.15
Diarrhea number of episodes	#	-0.053	0.178	0.019	0.48	-0.204	0.16	-0.053	0.19	0.440	0.34
Diarrhea length of last episode	days	0.013	0.207	0.097	0.42	0.034	0.24	0.011	0.22	-0.146	0.44
ARI	% pts	0.010	0.011	-0.017	0.02	0.024	0.01 *	0.011	0.01	-0.013	0.04
Treated ARI	% pts	0.038	0.045	0.054	0.09	0.075	0.05	0.058	0.05	0.330	0.25
Fever	% pts	0.042	0.017 **	0.020	0.03	0.056	0.02 ***	0.045	0.02 ***	0.000	0.06
Cough	% pts	0.010	0.017	-0.040	0.03	0.032	0.02	0.007	0.02	0.063	0.07
Cough and rapid breath	% pts	0.004	0.013	-0.034	0.02	0.021	0.01	0.003	0.01	0.020	0.05
Illness	% pts	0.023	0.017	-0.010	0.03	0.040	0.02 **	0.023	0.02	0.055	0.06
Mortality 0-28 days	% pts	-0.002	0.004	-0.006	0.01	-0.006	0.00	-0.007	0.00	0.002	0.01
Mortality 1-2 months	% pts	0.002	0.002	0.000	0.00	0.002	0.00				
Mortality 3-5 months	% pts	0.002	0.002	0.006	0.01	-0.001	0.00	0.001	0.00	0.002	0.01
Mortality 6-11 months	% pts	0.005	0.002 **	0.005	0.00	0.004	0.00	0.004	0.00 *	0.011	0.01
Mortality 0-11 months	% pts	0.005	0.005	0.005	0.01	-0.001	0.01	0.000	0.01	0.014	0.02
Education											
Gross Participation Rate (7-12 yrs)	% pts	-0.001	0.001	-0.002	0.00	0.000	0.00	-0.001	0.00	0.005	0.01
Net Enrollment in primary school (7-12 yrs)	% pts	-0.023	0.008 ***	-0.022	0.01 *	-0.023	0.01 **	-0.025	0.01 ***	-0.003	0.03
Attendance primary school ≥ 85% (7-12 yrs)	% pts	0.009	0.008	0.012	0.02	0.009	0.01	0.010	0.01	-0.020	0.03
Hours in school last week (7-12 yrs)	hrs	0.319	0.187 *	0.492	0.36	0.313	0.22	0.369	0.19 *	-0.107	0.76
Late enrollment rate primary school	% pts	0.001	0.005	0.024	0.01 **	-0.007	0.01	0.003	0.00	-0.011	0.02
Drop-out rate primary school	% pts	0.002	0.001	0.008	0.00 **	-0.001	0.00	0.002	0.00	0.000	0.01
Gross participation rate age (13-15 yrs)	% pts	-0.011	0.006 *	-0.036	0.01 **	0.000	0.01	-0.010	0.01 *	-0.026	0.01 *
Nett in enrollment secondary school (13-15 yrs)	% pts	0.000	0.021	-0.023	0.04	0.007	0.02	0.005	0.02	-0.055	0.06
Attendance primary school ≥ 85% (13-15 yrs)	% pts	0.014	0.012	0.042	0.02 *	0.001	0.01	0.016	0.01	-0.003	0.03
Hours in school last week (13-15 yrs)	hrs	0.638	0.299 **	1.087	0.56 *	0.529	0.35	0.699	0.32 **	0.393	0.80
Transition rates	% pts	-0.004	0.007	0.004	0.02	-0.002	0.00	-0.002	0.01	-0.032	0.03

B1		Father's Education				Head of Household			
participation		Low: <SD (29%)		High: >=SD (71%)		Male (92%)		Female (8%)	
coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err

Child Labor

Wage work during the last month yes/no (7-12 yrs)	% pts	-0.005	0.004	-0.015	0.01 **	-0.001	0.00	-0.004	0.00	-0.015	0.01
Wage work during the last month yes/no (13-15 yrs)	% pts	-0.001	0.010	0.010	0.02	-0.004	0.01	-0.001	0.01	-0.011	0.04
Wage work (7-12 yrs) last week	hrs	-2.041	2.389	11.1	13.57	-4.61	2.38 *				
Wage work (7-12 yrs) last month	hrs	-0.034	0.126	-0.165	0.32	-0.009	0.12	0.028	0.13	-0.853	0.66
Wage work (13-15 yrs) last week	hrs	0.814	3.334	11.4	2.13 ***	0.850	4.27	-0.327	3.61	-1.27	0.17 ***
Wage work (13-15 yrs) last month	hrs	-0.339	0.489	0.134	0.87	-0.566	0.59	-0.455	0.52	0.098	1.30
Family enterprise work (7-12 yrs) last week	hrs	1.943	0.707 ***	0.54	1.47	2.12	0.79 ***				
Family enterprise work (7-12 yrs) last month	hrs	0.520	0.238 **	0.555	0.54	0.486	0.26 *	0.706	0.25 ***	-1.96	0.98 **
Family enterprise work (13-15 yrs) last week	hrs	2.932	1.020 ***	6.16	1.78 ***	1.21	1.23				
Family enterprise work (13-15 yrs) last month	hrs	1.184	0.729	1.83	1.33	0.93	0.88	1.44	0.75 *	-2.27	2.87
Household work (7-12 yrs) last week	hrs	-0.011	0.166	-0.754	0.33 **	0.212	0.19	-0.032	0.18	0.324	0.56
Household work (7-12 yrs) last month	hrs	0.259	0.461	-1.30	0.86	0.979	0.55 *	0.400	0.49	0.451	1.51
Household work (13-15 yrs) last week	hrs	-0.101	0.311	-0.579	0.62	0.022	0.36	-0.234	0.33	0.885	0.76
Household work (13-15 yrs) last month	hrs	0.338	1.133	-0.98	2.20	0.914	1.34	-0.009	1.22	4.814	2.76 *

Consumption

Total expenditure, per-capita	IDR	-4835	5278	-11,607	8,629	-2,335	6,548	-6,331	5,613	11,375	15,021
Non-food expenditure, per-capita	IDR	334	2141	-5,858	4,259	318	2,573	-1,475	2,285	112	8,260
Education expenditure, per-capita	IDR	849	626	-568	1,027	1,424	773 *	635	651	2,815	2,300
Health expenditure, per-capita	IDR	1556	862 *	-14	1,417	2,152	1,063 **	722	825	12,674	5,006 **
Food expenditure, per-capita	IDR	-3647	4433	-5,750	6,733	-2,653	5,577	-4,857	4,741	11,263	10,454
Alcoholic beverages expenditure, per-capita	IDR	-32	105	-49	242	-16	113	-16	115	-45	121
Tobacco expenditure, per-capita	IDR	-1244	559 **	-1,555	1,068	-1,381	692 **	-1,644	605 ***	1,338	2,045
Share of food expenditure on protein	% pts	0.006	0.003 **	0.002	0.01	0.006	0.00 *	0.003	0.00	0.015	0.01
Per-capita grains				-804	1198	1152	827	763	711	-1259	2499
Per-capita tubers				334	355	287	275	386	226 *	-52	917
Per-capita fish				-895	833	1196	485 **	515	443	1794	1273
Per-capita meats				-1018	828	-1003	501 **	-1052	438 **	-627	1784
Per-capita egg milk				301	470	636	361 *	507	294 *	620	1329
Per-capita vegetables				622	561	-125	356	113	315	27	1033
Per-capita legumes				-257	481	19	289	-189	257	1353	907
Per-capita fruits				-801	454 *	267	283	-118	250	1094	848
Per-capita oil fat				-312	325	-48	199	-147	176	161	629
Per-capita beverages				168	467	-325	301	-92	263	-1107	941
Per-capita spices				-272	253	304	168 *	167	146	-114	490
Per-capita other				-674	480	-102	283	-379	248	788	1074
Per-capita served food				-693	1304	-536	802	-297	709	-3857	2547

		B1		Per-capita Expenditure				Sex			
		participation		< median (53%)		> median (47%)		male (50%)		female (50%)	
		coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err
Health Behaviors											
Iron tablets ≥ 90 tabs during pregnancy	% pts	0.016	0.026	0.046	0.04	-0.009	0.04				
Pre-natal visits	#	0.576	0.242 **	0.710	0.34 **	0.455	0.35				
Pre-natal visits ≥ 4 visits	% pts	0.093	0.028 ***	0.106	0.04 ***	0.077	0.04 **				
Assisted Delivery	% pts	0.037	0.031	0.051	0.05	0.049	0.04				
Delivery at facility	% pts	0.051	0.032	0.014	0.05	0.099	0.04 **				
Post-natal visits	#	0.350	0.185 *	0.125	0.27	0.624	0.26 **				
Post-natal visits ≥ 2 visits	% pts	0.096	0.035 ***	0.036	0.05	0.157	0.05 ***				
Breastfeeding: yes or no	% pts	0.004	0.006	0.010	0.01	-0.004	0.01	0.003	0.01	0.006	0.01
Breastfeeding: hours after delivery of first breastfeeding	hours	-1.753	1.681	-4.41	2.51 *	0.78	2.29	-0.26	2.58	-3.24	2.18
Breastfeeding: total months breastfeeding	mths	0.351	0.418	1.41	0.62 **	-0.187	0.64	1.23	0.63 *	0.045	0.62
Weighings ≥ 1 weighing past month (0-11 mths)	% pts	0.065	0.045	0.053	0.07	0.067	0.06	0.015	0.06	0.063	0.06
Weighings ≥ 1 weighing past month (1-3 yrs)	% pts	0.152	0.028 ***	0.176	0.04 ***	0.133	0.04 ***	0.153	0.04 ***	0.152	0.04 ***
Weighings ≥ 1 weighing past month (0-5 yrs)	% pts	0.226	0.021 ***	0.218	0.03 ***	0.238	0.03 ***	0.207	0.03 ***	0.251	0.03 ***
Immunization complete by schedule for age	% pts	0.043	0.026	0.038	0.04	0.052	0.04	0.121	0.04 ***	-0.050	0.04
Immunization complete	% pts	0.033	0.019 *	0.045	0.03 *	0.023	0.03	0.085	0.03 ***	-0.027	0.03
Vitamin A times received	#	0.056	0.073	0.098	0.11	0.025	0.10	0.116	0.11	0.033	0.10
Vitamin A received ≥ 2 times during past year	% pts	0.021	0.026	0.016	0.04	0.019	0.04	-0.013	0.04	0.051	0.04
Vitamin A received on schedule	% pts	0.015	0.023	0.015	0.03	0.007	0.03	0.025	0.03	0.006	0.03
Traditional health facility outpatient visits	#	0.002	0.002	0.004	0.00 *	-0.001	0.00	0.004	0.00	0.000	0.00
Traditional health facility outpatient visits (all HH members)	#	0.003	0.004	0.003	0.01	0.003	0.01				
Traditional health facility outpatient visits (all HH members)	% pts	0.001	0.000 *	0.001	0.00	0.001	0.00				
Public health facility outpatient visits	#	0.009	0.005 *	0.016	0.01 **	-0.001	0.01	0.012	0.01	0.006	0.01
Public health facility outpatient visits (all HH members)	#	0.030	0.009 ***	0.032	0.01 ***	0.029	0.01 **				
Public health facility outpatient visits (all HH members)	% pts	0.005	0.001 ***	0.006	0.00 ***	0.005	0.00 **				
Private health facility outpatient visits	#	0.001	0.003	0.000	0.00	0.001	0.00	-0.002	0.00	0.004	0.00
Private health facility outpatient visits (all HH members)	#	0.018	0.008 **	0.015	0.01	0.020	0.01 *				
Private health facility outpatient visits (all HH members)	% pts	0.002	0.001	0.002	0.00	0.001	0.00				

		B1		Per-capita Expenditure				Sex			
		participation		< median (53%)		> median (47%)		male (50%)		female (50%)	
		coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err
Health Outcomes											
Weight	kg	-0.073	0.119	0.187	0.18	-0.113	0.17	0.041	0.17	-0.007	0.17
Weight-for-age	Zscore	-0.065	0.070	0.047	0.10	-0.165	0.10 *	-0.081	0.10	-0.062	0.10
Malnutrition (according to weight-for-age zscore)	% pts	0.004	0.022	-0.001	0.03	0.007	0.03	0.037	0.03	-0.022	0.03
Severe Malnutrition (according to weight-for-age zscore)	% pts	0.002	0.015	-0.007	0.02	0.010	0.02	-0.004	0.02	0.012	0.02
Height-for-age	Zscore	0.071	0.151	0.066	0.20	0.092	0.22	0.183	0.21	-0.080	0.22
Weight-for-height	Zscore	-0.187	0.132	-0.077	0.19	-0.269	0.19	-0.236	0.19	-0.104	0.18
Diarrhea	% pts	0.030	0.014 **	0.030	0.02	0.037	0.02 *	0.022	0.02	0.042	0.02 **
Treated diarrhea	% pts	0.071	0.037 *	0.137	0.05 ***	0.004	0.05	0.078	0.05	0.081	0.05
Diarrhea number of episodes	#	-0.053	0.178	-0.484	0.21 **	0.418	0.30	-0.027	0.27	-0.070	0.23
Diarrhea length of last episode	days	0.013	0.207	-0.067	0.31	-0.026	0.27	0.009	0.31	-0.030	0.27
ARI	% pts	0.010	0.011	0.009	0.01	0.009	0.02	0.010	0.02	0.011	0.02
Treated ARI	% pts	0.038	0.045	0.068	0.06	0.047	0.06	0.010	0.06	0.101	0.06
Fever	% pts	0.042	0.017 **	0.037	0.02 *	0.049	0.03 *	0.041	0.02 *	0.040	0.02 *
Cough	% pts	0.010	0.017	0.030	0.02	-0.012	0.03	0.002	0.02	0.017	0.02
Cough and rapid breath	% pts	0.004	0.013	0.006	0.02	0.001	0.02	0.006	0.02	0.003	0.02
Illness	% pts	0.023	0.017	0.045	0.02 **	0.002	0.02	0.014	0.02	0.030	0.02
Mortality 0-28 days	% pts	-0.002	0.004	-0.010	0.01 *	0.000	0.01				
Mortality 1-2 months	% pts	0.002	0.002	0.003	0.00	-0.001	0.00				
Mortality 3-5 months	% pts	0.002	0.002	0.005	0.00 *	-0.001	0.00				
Mortality 6-11 months	% pts	0.005	0.002 **	0.006	0.00 **	0.003	0.00				
Mortality 0-11 months	% pts	0.005	0.005	0.004	0.01	-0.002	0.01				
Education											
Gross Participation Rate (7-12 yrs)	% pts	-0.001	0.001	-0.001	0.00	0.000	0.00	0.000	0.00	0.000	0.00
Net Enrollment in primary school (7-12 yrs)	% pts	-0.023	0.008 ***	-0.015	0.01	-0.034	0.01 ***	-0.013	0.01	-0.036	0.01 ***
Attendance primary school ≥ 85% (7-12 yrs)	% pts	0.009	0.008	0.008	0.01	0.010	0.01	0.004	0.01	0.014	0.01
Hours in school last week (7-12 yrs)	hrs	0.319	0.187 *	0.367	0.25	0.305	0.28	0.356	0.26	0.326	0.27
Late enrollment rate primary school	% pts	0.001	0.005	-0.002	0.01	0.005	0.01	-0.002	0.01	0.006	0.01
Drop-out rate primary school	% pts	0.002	0.001	0.000	0.00	0.004	0.00 *	0.000	0.00	0.004	0.00 *
Gross participation rate age (13-15 yrs)	% pts	-0.011	0.006 *	-0.002	0.01	-0.025	0.01 ***	-0.004	0.01	-0.020	0.01 **
Nett in enrollment secondary school (13-15 yrs)	% pts	0.000	0.021	0.018	0.03	-0.025	0.03	0.027	0.03	-0.020	0.03
Attendance primary school ≥ 85% (13-15 yrs)	% pts	0.014	0.012	0.017	0.02	0.012	0.02	0.009	0.02	0.013	0.02
Hours in school last week (13-15 years)	hrs	0.638	0.299 **	0.398	0.40	0.880	0.45 *	0.907	0.42 **	0.345	0.43
Transition rates	% pts	-0.004	0.007	0.004	0.01	-0.014	0.01	-0.001	0.01	-0.010	0.01

		B1		Per-capita Expenditure				Sex			
		participation		< median (53%)		> median (47%)		male (50%)		female (50%)	
		coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err
Child Labor											
Wage work during the last month yes/no (7-12 yrs)	% pts	-0.005	0.004	0.002	0.00	-0.012	0.01 **	-0.001	0.01	-0.009	0.00 *
Wage work during the last month yes/no (13-15 yrs)	% pts	-0.001	0.010	-0.012	0.01	0.011	0.01	-0.004	0.02	0.002	0.01
Wage work (7-12 yrs) last week	hrs	-2.041	2.389	-2.24	2.15	-6.09	4.44	-6.27	3.64 *	2.08	4.88
Wage work (7-12 yrs) last month	hrs	-0.034	0.126	0.153	0.15	-0.290	0.22	0.041	0.22	-0.138	0.10
Wage work (13-15 yrs) last week	hrs	0.814	3.334	0.471	4.30	-13.9	6.52 **	1.99	4.29	-1.19	7.42
Wage work (13-15 yrs) last month	hrs	-0.339	0.489	-0.340	0.66	-0.503	0.73	-0.228	0.62	-0.534	0.78
Family enterprise work (7-12 yrs) last week	hrs	1.943	0.707 ***	2.62	1.02 ***	1.72	0.97 *	0.01	0.86	4.77	1.15 ***
Family enterprise work (7-12 yrs) last month	hrs	0.520	0.238 **	0.540	0.34	0.442	0.33	-0.080	0.30	1.190	0.38 ***
Family enterprise work (13-15 yrs) last week	hrs	2.932	1.020 ***	2.64	1.44 *	3.50	1.42 **	3.03	1.17 ***	2.14	1.75
Family enterprise work (13-15 yrs) last month	hrs	1.184	0.729	0.21	1.08	2.58	0.97 ***	1.73	0.93 *	0.39	1.14
Household work (7-12 yrs) last week	hrs	-0.011	0.166	0.068	0.22	-0.110	0.26	0.213	0.24	-0.142	0.23
Household work (7-12 yrs) last month	hrs	0.259	0.461	0.788	0.60	-0.139	0.73	0.774	0.53	0.189	0.76
Household work (13-15 yrs) last week	hrs	-0.101	0.311	-0.034	0.44	-0.151	0.45	0.477	0.39	-0.331	0.46
Household work (13-15 yrs) last month	hrs	0.338	1.133	1.18	1.58	-0.154	1.65	2.60	1.22 **	-1.103	1.90
Consumption											
Total expenditure, per-capita	IDR	-4835	5278	-140	6,760	-10,969	8,157				
Non-food expenditure, per-capita	IDR	334	2141	-2,906	2,552	-750	3,544				
Education expenditure, per-capita	IDR	849	626	943	846	812	929				
Health expenditure, per-capita	IDR	1556	862 *	2,717	1,298 **	371	1,126				
Food expenditure, per-capita	IDR	-3647	4433	2,766	5,893	-10,219	6,673				
Alcoholic beverages expenditure, per-capita	IDR	-32	105	-140	130	99	169				
Tobacco expenditure, per-capita	IDR	-1244	559 **	-2,131	661 ***	-843	952				
Share of food expenditure on protein	% pts	0.006	0.003 **	0.003	0.00	0.004	0.00				
Per-capita grains				466	929	688	1003				
Per-capita tubers				-85	294	772	332 **				
Per-capita fish				451	467	510	700				
Per-capita meats				-990	488 **	-1100	711				
Per-capita egg milk				668	303 **	224	502				
Per-capita vegetables				-102	356	218	486				
Per-capita legumes				257	329	-376	373				
Per-capita fruits				142	287	-252	388				
Per-capita oil fat				-317	219	81	259				
Per-capita beverages				-354	309	-51	400				
Per-capita spices				-60	161	322	231				
Per-capita other				-525	290 *	-65	396				
Per-capita served food				-197	817	-979	1105				