Evaluating Effects of Program Keluarga Harapan (PKH) on School Attendance: Case Study of CCT in Indonesia

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ABSTRACT

Objectives: Program Keluarga Harapan (PKH) is a Conditional Cash Transfer in Indonesia which is aided by the government to improve Indonesia’s human capital quality in order to gain benefits of Indonesia’s demographic bonus in 2020-2030. The aim of this study are as follows: a) to know the size of PKH effect to school attendance. b) to know how huge the impact of children’s food nutrition, which is represented by the quantity of eating per day, to school attendance

Design: Using a cross-sectional data, the authors analyze 4th wave (2007) and 5th wave of IFLS data. While the independent variables are made up of age, children’s educational level, gender, parents’ educational level, children’s eating frequency, origin (rural and urban are), and another dummy variable, PKH which consists of the treatment group, control group and no program group. This model uses a logit estimation.

Results: PKH has different effects in 2007 and 2014. In 2007, PKH program raises the school attendance among its beneficiaries. However, in 2014, the effect of PKH was indifferent among its beneficiaries and non-beneficiaries. From the literature reviews, it can be concluded that the problem lies in monitoring and evaluating.

Keywords: Program Keluarga Harapan (PKH), Conditional Cash Transfer (CCT), Logistic Model, IFLS

1. INTRODUCTION

The demographic bonus is a condition where the population structure is beneficial for the country development. This is due to the huge number of the productive age, but the young age proportion is getting smaller while the elderly proportion is getting bigger. The demographic bonus could be very beneficial for Indonesians but with a condition that the government, from now on, are able to provide qualified human capital. The quality improvement in human capital could be channeled from education, health, employment, and investment.

According to Jati [6] Indonesia will enter the first wave of demographic bonus in 2017-2019 and the second wave of demographic bonus in 2020-2030. The number of productive age in this time span will reach its maximum point, compared to the non-productive ages of 0-14 years and the elderly. The total of the productive age will be accumulated to 60 million people, or analogically 10 people of productive age will bear 3-4 people of non-productive age. This number can boost national development and growth in all sectors.

The preparation to achieve the demographic bonus in the future is not as simple as it may seem. The government needs to make a well-developed plan on how to prepare qualified human capitals. There are also other challenges that the government needs to tackle, one of them is the awareness on the importance of education. This can be seen from the low school attendance level in Indonesia. According to Pitt, Rosenzweig & Gibbon [1993], school attendance level is a determining factor of health level and family planning. If the school attendance level is still low, it will increase the probability of dropping out from school. This is the result of school regulation which states that students must meet the attendance criteria in order to take the final exam. This will be a threat for the government to provide qualified human capital in 2020-2030.

The government cannot stand still and let this threat affect the outcome of the demographic bonus in 2020-2030. One of the government’s target is to provide an equal opportunity and improve the facility of primary and secondary education for the poor in Indonesia. One way of realizing it is by improving the quality of Indonesia’s human capital through Program Keluarga Harapan (PKH).

PKH is one of a social safety net program which is intended for the very poor household or Rumah Tangga Sangat Miskin (RTSM). This program is globally known as a Conditional Cash Transfer (CCT). To be a PKH beneficiary, the very poor households must meet the requirement of:

1. Families with pregnant or toddler (under five years old).
2. Families with children aged 5-7 years (pre-school age).
3. Families with children who are in primary school or equivalent (age 7-12 years).
4. Families with children who are in secondary school or equivalent (age 12-15 years old)
5. Families with children aged 15-18 years but have not completed basic education, including children with disabilities.

The government targeted the PKH beneficiaries accumulated to 3.2 million families. Since 2014, the PKH beneficiaries target is modified from households to families. Families are considered a very relevant group because families (father, mother, children) are the ones who are responsible to make sure that education and health are achieved. Also, families are considered to be a more promising group to break the vicious cycle of poverty rather than households.

Even though PKH is a long-term program, but the beneficiaries are not permanent. Families can be considered as beneficiaries as long as they meet the requirements, and not longer than six years. If after six years the families no longer meet the requirements, then they will undergo a natural exit.

This research aims to find out whether Program Keluarga Harapan can increase school attendance on its beneficiaries.

II. LITERATURE REVIEW

Before making the hypothesis tests, a short overview of the variables correlation from previous studies is carried out in this section.

A. School Attendance

In a study of (Attanasio, Vera-hernández, Battistin, Fitzsimons, & Mesnard, 2005) which assess the effectiveness of CCT Program in Colombia.

The CCT program, Familias The CCT Program, Familias en Acción (FA), which is inspired by Mexico’s PROGRESA is aimed to alleviate poverty and increase development through education and nutrition channel. The study found that FA succeeds to increase the rate of school attendance in Colombia for aged 12 to 17 in a Rural area 10.1% and in an Urban area 5.2%. Even though for aged 8 to 11, the impact is only 0.1% in Rural Area and 1.4% in Urban Area. Even though for aged 8 to 11, the impact is only 0.1% in Rural Area and 1.4% in Urban Area. But the result is solely because the number to start with for Aged 8-11 both in Rural and Urban Area are already high which are 93% and 95.2%. Therefore, the scope for improving the school attendance was more limited for children aged 8-11.

B. Parents Marital Status

Reid (1987) showed that school absence as a psychotologies problem resulted from incompetent parents. Besides that, Astone & McLanahan [2] found that growing in a single-parent family and a step-parent family has negative impact in High School attendance. Adding up to that, (Hoyle, 1998) also support the same conclusion that students from single-parent households tend to have lower rates of attendance than students from two-parent households.

C. Children’s Gender

Emerson, Souza&Souza [4] investigated the intra-household gender differences and the incidence of child labor and children’s school attendance in Brazil. And found that the daughters’ school attendance is higher than sons. It is also found that parents invest more education towards sons than daughters. Which is more likely because the returns to education for sons are generally higher than for daughters. Thus, parents who care about the human capital of all children will direct more resources to the children with the highest marginal returns.

D. Parents’ Educational Level

Glick & Sahn (2000) found that parents’ educational level are very low, specifically for mothers. 75 percent of the mothers taken in the sample have less than a primary education, while the level is 65 percent for fathers. Parents’ educational level is proved to have an effect on the children’s school attendance. Even though the impact differs between girls and boys. Mothers who finished primary school increases the probability of their daughter’s school attendance. While the effects on sons’ are not much larger than daughters. Similarly, Emerson et al. [5] concluded that the higher the parents’ educational level the higher the probability of their children will attend school. Even though, the probability is different between sons and daughter. A father’s education level has a higher probability to increase a son’s school attendance than daughter, while a mother’s educational level also has higher probability to increase a son’s school attendance or equally as a daughter’s. Al-samarrai & Reilly [1] found that in Tanzania, a mother’s education is a significantly important variable than a father’s for children to attend school both in the urban and rural area.
Origin

Al-samarrai & Reilly [1] explores the differences between the rural and urban area in primary school attendance in Tanzania. The study found that there is a 10 percent differences between school attendance in Urban than the rural area for the 10-15 years old group. And the effect is slightly lower for the 7-15 years old group which is 6%. The difference is due to region-specific factors like infrastructure, school availability and school quality. But, if anything else is held constant, the school attendance between those in rural and urban are could be narrowed.

Mother’s Age

In Emerson&Souza [4], a bivariate probit model of child labor and school attendance is provided. Using some important variables, one of it are, father’s and mother’s age but the result is the opposite this variable has little to no effect on children’s school attendance in Brazil.

E. DATA AND METHOD

Data

This study uses secondary panel data retrieved from Research and Development (RAND), which is Indonesian Family Life Survey (IFLS). IFLS is a six waves data survey of indonesian families, which represented 83 percent of Indonesia’s population and 30,000 individuals who lived in 13 Indonesia’s provinces. (Suryadarma & Pakpahan, 2009).

This study uses 4th wave IFLS data from 2007 and 5th wave data from 2014, the sample consists of 29032 individuals aged less than 15. The 4th wave IFLS data is made up of 67.79 percent primary school students and 18.60 percent middle school students. The 5th wave IFLS data is made up of 63.55 percent primary school students and 20.83 percent middle school students.

Method

The sample is analyzed using STATA, and estimated using logistic regression. The dependant variable is a dummy variable, if 1= child’s school attendance is more than 25 hours per week and 0= if less than 25 hours per week. While the independent variables are made up of age, children’s educational level, gender, parents’ educational level, children’s eating frequency, origin (rural and urban are), and another dummy variable, PKH which consists of the treatment group, control group and no program group.

Model

This model explains the relation between school attendance and PKH:

\[
\text{att2} = \beta_0 + \beta_1 \text{age} + \beta_2 \text{agesq} + \beta_3 \text{c}\_\text{primary} + \beta_4 \text{c}\_\text{juniorschool} + \beta_5 \text{c}\_\text{highschool} + \beta_6 \text{male} + \beta_7 \text{foodfreq} + \beta_8 \text{p}\_\text{noschool} + \beta_9 \text{p}\_\text{primary} + \beta_{10} \text{p}\_\text{juniorschool} + \beta_{11} \text{p}\_\text{highschool} + \beta_{12} \text{p}\_\text{university} + \beta_{13} \text{urban} + \beta_{14} \text{pkh\_treatment} + \beta_{15} \text{pkh\_control}
\]

F. RESULTS

The logistic regression on IFLS 5th wave data has the following results:

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<tr>
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<tr>
<td>(0.0166)</td>
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<tr>
<td>foodfreq</td>
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<tr>
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<tr>
<td>p_primary</td>
<td>0.0911**</td>
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<tr>
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</tr>
<tr>
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</tr>
<tr>
<td>(0.0447)</td>
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<tr>
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<td></td>
</tr>
<tr>
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<tr>
<td>urban</td>
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<tr>
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<tr>
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Observations 4,483
The regression result based on IFLS 5th wave can be interpreted as follows:

- The older a child gets, the higher the probability to attend school more than 25 hours per week, but eventually the chance will decrease, ceteris paribus. (Significance level 1%)
- If person A is a primary school student and B is not, the probability of A to attend school more than 25 hours per week is lower than B by 0.183 percentage points. (Significance level 1%)
- If person A is a junior school student and B is not, the probability of A to attend school more than 25 hours per week is lower than B by 0.120 percentage points. (Significance level 1%)
- If person A is a high school student and B is not, the probability of A to attend school more than 25 hours per week is higher than B by 0.273 percentage points. (Significance level 5%)
- Child’s gender has no significant contribution on child’s school attendance.
- The more frequent a child eat per day, the higher the chance of a child to attend school more than 25 hours per week by 0.00689 percentage points, ceteris paribus. (Significance level 5%)
- If person A is a child whose parent is a primary school graduate and B is not, the probability of A to attend school more than 25 hours per week is higher than B by 0.0911 percentage points. (Significance level 5%)
- If person A is a child whose parent is a junior school graduate and B is not, the probability of A to attend school more than 25 hours per week is higher than B by 0.113 percentage points.
- If person A is a child who lives in a urban area and B is not, the probability of A to attend school more than 25 hours per week is higher than B by 0.0477 percentage points. (Significance level 1%)
- PKH has no significant contribution on child’s school attendance.

From the interpretations above, we can infer that in IFLS 5th wave, PKH has no significant effect on child’s school attendance. This can be caused by a broader range of aid beneficiaries, making controlling more costly.

Children who eat more in a day are more likely to attend school. Implicitly, the nutrition intake from food is higher when children eat more.

A child’s latest education has a significant effect, but the impact can be regarded as meaningless. The government imposes more school hours to higher educational levels, making the students attend school more frequently as they move to a higher educational level.

The result shows that gender has no significance on school attendance. An argument for this remains the same as IFLS 4th wave analysis, where the disparity between male and female’s diligence is usually showed in later stages of life, like high school.

The parent’s educational level also contributes positively to child’s school attendance. The argument remains the same as IFLS 4th wave analysis.

Children who live in urban areas are more frequent to attend school than those who live in rural areas. The heart of this problem may lie in the infrastructure.

<table>
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<th>VARIABLES</th>
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<th>att2</th>
<th>mfx dydx</th>
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<tr>
<td>foodfreq</td>
<td>-0.0242***</td>
<td>(0.00815)</td>
<td></td>
</tr>
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<td>(0.0234)</td>
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</tr>
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<td>(0.0207)</td>
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</tr>
<tr>
<td>p_juniorschool</td>
<td>0.0846***</td>
<td>(0.0231)</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Marginal Effect of Regression (IFLS 4th Wave)
The regression result based on IFLS 4th wave can be interpreted as follows:

- The older a child gets, the higher the probability to attend school more than 25 hours per week, but eventually the chance will decrease, ceteris paribus. (Significance level 1%)
  - If person A is a primary school student and B is not, the probability of A to attend school more than 25 hours per week is lower than B by 0.00350 percentage points. (Significance level 1%)
  - If person A is a junior school student and B is not, the probability of A to attend school more than 25 hours per week is higher than B by 0.0275 percentage points. (Significance level 10%)
  - If person A is a male and B is not, the probability of A to attend school more than 25 hours per week is lower than B by 0.0249 percentage points. (Significance level 1%)
  - The more frequent a child eat per day, the lower the chance of a child to attend school more than 25 hours per week by 0.0242 percentage points, ceteris paribus. (Significance level 1%)
  - If person A is a child whose parent does not attend school and B is not, the probability of A to attend school more than 25 hours per week is lower than B by 0.115 percentage points. (Significance level 1%)
  - If person A is a child whose parent is a primary school graduate and B is not, the probability of A to attend school more than 25 hours per week is lower than B by 0.0414 percentage points. (Significance level 1%)
  - If person A is a child whose parent is a junior school graduate and B is not, the probability of A to attend school more than 25 hours per week is higher than B by 0.0846 percentage points. (Significance level 1%)
  - If person A is a child whose parent is a high school graduate and B is not, the probability of A to attend school more than 25 hours per week is higher than B by 0.125 percentage points. (Significance level 1%)
  - If person A is a child whose parent is a university graduate and B is not, the probability of A to attend school more than 25 hours per week is higher than B by 0.189 percentage points. (Significance level 1%)
  - If person A is a child who lives in an urban area and B is not, the probability of A to attend school more than 25 hours per week is higher than B by 0.0278 percentage points. (Significance level 1%)
  - If person A is a child who receives PKH aid and B is not, the probability of A to attend school more than 25 hours per week is lower than B by 0.0650 percentage points. (Significance level 1%)
  - If person A is a child whose parent does not attend school and B is not, the probability of A to attend school more than 25 hours per week is lower than B by 0.0623 percentage points. (Significance level 1%)
  - If person A is a child whose parent is a primary school graduate and B is not, the probability of A to attend school more than 25 hours per week is lower than B by 0.0414 percentage points. (Significance level 1%)
  - If person A is a child whose parent is a junior school graduate and B is not, the probability of A to attend school more than 25 hours per week is higher than B by 0.0846 percentage points. (Significance level 1%)
  - If person A is a child whose parent is a high school graduate and B is not, the probability of A to attend school more than 25 hours per week is higher than B by 0.125 percentage points. (Significance level 1%)

From the interpretations above, we can infer that in IFLS 4th wave, children who receive PKH aid are more likely to attend school more than 25 hours a week than those who do not receive the aid. This can be marked as the initial success of PKH program. The aid’s distribution can be concluded as effective.

Children who eat more in a day are less likely to attend school. The result is upside down from the hypothesis, simply because meal frequency is not the perfect proxy for nutrition level. Meal frequency only measures quantity, not quality of food eaten. Therefore, the regression analysis may differ from the hypothesis.

A child’s latest education has a significant effect, but the impact can be regarded as meaningless. The government imposes more school hours to higher educational levels, making the students attend school more frequently as they move to a higher educational level.

The result shows that gender has no significant effect on school attendance. This can be caused by the characteristics of the observed. This study mainly includes those whose highest educational levels are primary school and junior high school. The disparity between male and female’s diligence is usually showed in later stages of life, like high school.

The parent’s educational level also contributes positively to child’s school attendance. The connection
can be made through two ways: 1) a parent who can afford a higher education might have more ability to pay for their child’s education, 2) a parent who attends a higher education might encourage their child to attend school more frequently.

Children who live in urban areas are more frequent to attend school than those who live in rural areas. The heart of this problem may lie in the infrastructure. In rural areas, the roads are not so well-built, creating obstacles for students to reach their schools. In addition to this problem, schools in rural areas mainly focus on primary education. Therefore, if the area does not have a higher education institution, the children who live there may not attend to a higher education, which has more school hours per week.

III. CONCLUSION

It can be concluded that PKH has different effects in 2007 and 2014. In 2007, PKH program raises the school attendance among its beneficiaries. This can be marked as an effectiveness of the program. Since the program was launched in early 2007, it makes sense that the initial objectives of the program remain true to its realizations. The PKH program also increases child’s nutritional level (measured by meal frequency in a day), therefore raising children’s school attendance.

However, in 2014, the effect of PKH was indifferent among its beneficiaries and non-beneficiaries. From the literature reviews, it can be concluded that the problem lies in monitoring and evaluating.

PKH remains as a good solution for Indonesia’s educational problems. In most cases, it can increase school attendance, therefore improves the quality of Indonesia’s human capital. Further assessment is needed as a monitoring effort. The monitoring can be done by the government to ensure equality of the program, or can be done by a third party to ensure further progress and quality achievements. The authors’ recommendation is to hire a third party, since a third party can be more objective in evaluating.

REFERENCES


