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Education Cash Transfer and High School Enrollment in Indonesia

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Abstrak

Smart Indonesia Program (Program Indonesia Pintar/PIP) is a policy made by the Indonesian government that aims to guarantee and ensure every child has access to a decent education and has the same learning opportunities at all levels of education. However, the enrollment rate at the secondary level, especially in senior high school, is still far from the government target, as stated on the National Medium-Term Development Plan of 2015-2019. This study aims to understand the PIP's impact on the probability of getting an education in Indonesia's Senior High School (Sekolah Menengah Atas/SMA). This study applied logistic regression analysis to determine PIP's effect regarding children's opportunities at the age of 16-18 years old to attend school. This study uses data from 16-18 years old children who belong to the households categorized as the 40% lowest expenditure group in Susenas 2017, to align with the PIP's target based on Integrated Database (Basis Data Terpadu /BDT). The result reveals that 16-18 years old children in households included in the lowest 40% of expenditure who receive PIP have higher and significant probabilities of attending high school level in Indonesia. Administration of PIP to 16-18 years old children from the 40% lowest expenditure group will increase their chance to participate in senior high school/equivalent by 15-25 percent. The characteristics of the beneficiaries such as gender, education level of the head of the household, and residence area can affect PIP's performance in escalating the probability of 16-18 years old children attending senior high school/equivalent.

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INTRODUCTION

Indonesia still occupies a lower position in fulfilling the need for a proper education than neighboring countries. Net enrollment rates for secondary education have increased but even cannot compete with other countries. Indonesia's secondary education net Enrollment Rate (NER) in 2017 was 78.7%, still lagging behind other ASEAN countries such as Viet Nam, Thailand, Malaysia, Brunei, and Singapore, which have a secondary education NER between 83.4% and 99.5% (The ASEAN Secretariat, 2019). It is a problem and a challenge for education development in Indonesia, where not all of its population can get decent secondary education services (Ministry of Education and Culture, 2018).

Low participation in secondary education in Indonesia is one of the forms that the quality 12-year compulsory education has not been maximally implemented yet. When the 12 Year compulsory education is set as one of the priority agendas for education development, there are still several problems in the implementation of the 9-year compulsory basic education that have not been resolved and must be resolved immediately so that all students who have completed at the junior high school level can continue to secondary education (Ministry of Education and Culture, 2018). Access to adequate secondary education has not been obtained by the entire population due to the high differences in economic capacities between communities to continue education and physical limitations such as many sub-districts that do not have secondary schools, creating dropout pockets.

Educational participation is influenced by individual's or households' socio-economic and demographic factors (Nicholas, John and Emily, 2013; Andrew and Orodho, 2014; Perdana, 2015). According to Nicholas, John and Emily (2013), the government needs to develop policies aimed at poverty alleviation that allow households to be economically empowered to access education and policies. Andrew and Orodho (2014) added that the level of parents' education is a factor that affects parents' ability to cover the school fee and inadequate physical resources also contribute to obstructing educational services in Kibera, Nairobi County, Kenya. Besides, Perdana (2015) explained that access to education for children in Indonesia is influenced by factors named gender, area of residence, mother's educational background, distance to school, age of marriage of parents, per capita household income, and the number of household members.

Providing access to education is crucial in resolving several barriers to the education system related to the government's compulsory education (Ulum and Wildana, 2019). Smart Indonesia Program (Program Indonesia Pintar/PIP) is one of Indonesia's policies to meet the need for an affordable, accessible, and decent education, especially for the poor (Setiyono and Pradoto, 2019; Ulum and Wildana, 2019).

The Ministry of Education and Culture of Indonesia provides students with Indonesia Smart Card as an identity to get the benefits of PIP based on the Integrated Database (Basis Data Terpadu/BDT), issued by The National Team for the Acceleration of Poverty Reduction (TNP2K). BDT paid more attention to the household's socio-economic conditions in the group of 40% lowest expenditure per capita in Indonesia and considered that children who deserve PIP are in this household group.

The Ministry of Education and Culture allocates a budget for PIP for each level of education. In the 2015-2019 period, the ministry of education has budgeted PIP funds of around Rp9-11 trillion annually. The development of PIP budget based on the 2015-2019 Budget Implementation List (DIPA) is presented in figure 1.

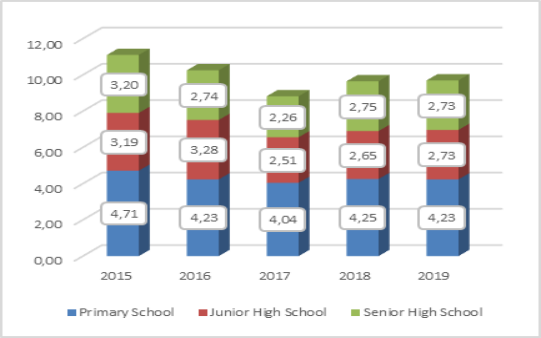

Figure 1. PIP Budget 2015-2019 (trillion).
Sources: Budget Implementation List of Ministry of Education and Culture 2015-2019

Following the target that PIP wants to achieve in the 2015-2019 National Medium-Term Development Plan (*Rencana Pembangunan Jangka Menengah Nasional/ RPJMN*), the Indonesian government has set a target of the primary and secondary education Net Enrollment Rate (NER) that needs to achieve in 2019. The NER shows the percentage of children in a specific school age group, who are currently attending the education level towards the total number of children in the relevant school age group. The PIP's presence is expected to impact children's participation from the targeted group to be more motivated to go to school.

Education development in 2015-2019 is directed at fulfilling the rights of citizens to obtain quality and equitable education services, which is taken through the implementation of the 12 Year Compulsory Education to support the Smart Indonesia Program. The implementation of the 12-year compulsory education which is carried out through the Smart Indonesia Program by providing educational assistance for underprivileged students is expected to be able to encourage the motivation of the school-age population to continue their education at least up to the secondary level. Based on the Mid-Term Evaluation of the 2015-2019 RPJMN by the National Development Planning Agency, until 2017, the implementation of education development program increased the education level of the Indonesian population which was supported by an increase in educational participation at all levels of education. However, based on the Central Statistics Bureau (Badan Pusat Statistik/BPS), the NER's achievement, which meets the target, is primary education. Meanwhile, secondary education attainment is not as expected as targeted in the RPJMN. This is due to the implementation of the Smart Indonesia Program has not been optimal in increasing the educational participation of the poor (National Development Planning Agency, 2017). The reality condition of Net Enrollment Rate (NER) based on target and realization of (NER) in 2019 is presented in table 1.

Table 1. Targets and Realization of NER in 2019

Levels of Education	Targets of NER in RPJMN (%)	Realization of NER (%)
Primary School	94,8	97,58
Junior High School	82,0	79,35
Senior High School	67,5	60,70

Sources: RPJMN 2015-2019 and BPS

The expectation is PIP's presence has an impact, especially on the children of the group of 40% lowest expenditure group in Indonesia. Hopefully, they will be motivated to go to school. The NER of this group of the population shows an increase from year to year since 2015. However, the NER for secondary education of the group is still below the target in 2015-2019 RPJMN and lower than the national average NER.

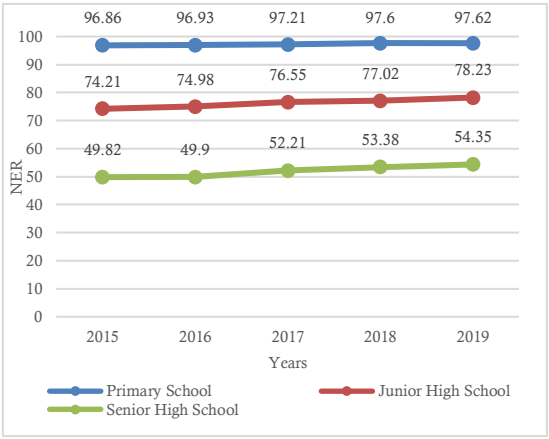

Figure.2 Development NER of the population from households in the 40% lowest expenditure group.
Source: Central Bureau of Statistics, 2020

According to Kilburn et al. (2017), developing countries' education policies regarding demand-side interventions that focus on reducing costs and other barriers to children's educational attainment are still limited. The policies mostly focus on the supply side, such as allocating buildings, teachers, or learning materials. One form of intervention on the demand side to increase educational enrollment is applying cash transfer policies to individuals or households.

Cash transfer programs are prominent because of the effectiveness of cost and massive users in developing countries. Intervention on the demand side of education in developing countries will increase education enrollment and learning outcomes (Glewwe and Muralidharan, 2015). According to Fiszbein and Schady (2009), interventions that provide direct income to support individuals or households can increase demand for schooling and lead to more significant parental investment in their children.

Previous studies proved that education cash transfer policies could rise educational participation in several developing countries. The Bolsa Escola / Familia program has increased enrollment rates and grade promotion rates and reduced Brazil's dropout rates (Glewwe and Kassouf, 2012; De Brauw et al., 2015). Programa de Educación, Salud y Alimentación (PROGRESA) known as Oportunidades in Mexico had an essential role in reducing household vulnerability and succeeded in rising educational participation household aspirations for education (Dubois, de Janvry and Sadoulet, 2012; Whetten, Fontenla and Villa, 2018). Program Familias en Acción improved the educational attainment of 7-12 years old children in rural areas and reaped a positive impact on Colombia's higher education aspirations (Garcia and Hill, 2010; García, Harker and Cuartas, 2019; Wright, 2019). Bauchet et al. (2018) suggested that gaining educational participation in Bolivia can increase the number of possible transfers or combine other payments for different participants and simplify the conditional cash transfer program's requirements.

Smart Indonesia Program (PIP) is a form of cash transfer policy for individuals enforced by the Indonesian government to increase educational enrollment. PIP is cash assistance from the government given to children whose parents can or cannot afford their education, to upgrade access to education services until completing secondary education. It prevents students from dropping out of school due to economic conditions and attracting students who have dropped out of school to return to school learning (Ministry of Education and Culture, 2016).

Researches in several regions and individual levels of education in Indonesia depict that PIP can improve educational enrollment. According to Hakim (2020), children who receive PIP in Nangro Aceh Darussalam Province have a lower probability of dropping out of school than children who do not receive PIP. Rahmawati and Satriawan (2019) mentioned that school participation in East Java Province is influenced by educational factors and the work status of the head of the household, and the Indonesia Smart Card (Kartu Indonesia Pintar / KIP). Setyadharma (2018) found that high spending on education significantly increases rural students' tendency to drop out of school, and government cash transfers significantly reduce it in Central Java province. Ahmad (2018) argued that PIP through the Smart Indonesia Card (KIP) provision is quite useful and impacts elevating student motivation based on the school enrollment rate and the Human Development Index (HDI).

Perdana (2019) analyzed the unit cost calculation for each student in terms of increasing educational enrollment. The results of the analysis (2019) capture that the unit cost needed by students is higher than the PIP provided. Thus, there is still a gap between PIP and the amount of students' unit cost. Retnaningsih (2017) found that PIP implementation in Kupang City and Palembang City has not run optimally due to local political elites' intervention in coercing students' names who must get the assistance. It needs a better mechanism to propose PIP assistance to potential recipients and suggests supervision on PIP use.

World Bank in 2017 stated that there were still several main issues related to PIP that needs to resolve, targeting PIP recipients was always a challenge where 36% of the beneficiaries/ recipients were classified as non-poor and non-vulnerable. An appropriate selection method is needed to choose PIP's target, especially for those at the senior high school level. Improve the Unified Database (UDB) system and upgrade the reach, facilities, and beneficiary support to raise awareness, especially for eligible children not in the UDB system. According to the World Bank, the main issue is PIP benefits' level is still below the school fee, so there is a gap between PIP and

school fees. This gap will hinder PIP recipients' enrollment level, especially at the senior high school level with the most significant gap.

Previous researches have been conducted by Retnaningsih (2017); Purba (2018); Setyadharma (2018); Rahmawati dan Satriawan (2019) to analyze the effect of a cash transfer policy on educational participation in Indonesia. Retnaningsih (2017) uses a qualitative approach through interviews with several stakeholders and analyzing data/documents related to PIP in Kupang and Palembang cities to analyze PIP implementation problems. According to Retnaningsih (2017), PIP can encourage educational participation, but the implementation of PIP in Kota Kupang and Kota Palembang has not been optimal due to intervention from local political elites such as forcing the names of students who must be assisted.

Purba (2018) used data from the Indonesian Family Life Survey (IFLS) to analyze the impact of Bantuan Siswa Miskin (BSM) on student achievement as measured by final school exam scores. Purba (2018) used the Propensity Score Matching (PSM) method to obtain the average effect of BSM policy treatment. Purba (2018) show that BSM helps students gain access to education, especially basic education, and students who received BSM get higher scores than students who don't receive BSM.

Setyadharma (2018) analyzed the effect of cash transfer policies on the probability of dropping out of secondary education in rural areas in Central Java Province using a probit regression model. Setyadharma (2018) used primary data from upper secondary school students and parents/guardians from all rural areas in Central Java province. Setyadharma (2018) found that higher education spending can significantly increase the probability of dropping out of school and government cash transfers can significantly reduce the likelihood of dropping out of school.

Rahmawati and Satriawan (2019) used Susenas 2017 data to analyze the effect of the Smart Indonesia Card assistance on school expectations in East Java using a logistic regression model. Rahmawati and Satriawan (2019) found that the Smart Indonesia Card (KIP) had a significant effect on increasing current school participation and school participation in the previous school year.

Previous studies related to the effect of cash transfer policies on individual-level educational participation used relatively small and limited sample data in certain regions in Indonesia such as that conducted by Retnaningsih (2017), Purba (2018), Setyadharma (2018), and Rahmawati and Satriawan (2019). Previous research has not considered the interaction between cash transfer policy variables and its beneficiaries' characteristics, so this research needs to consider the interaction between the existence of a cash transfer program and beneficiaries' characteristics in influencing school decisions. Also, previous research has not aligned with PIP targets based on the BDT, which describes the population's socio-economic conditions in the group of 40% lowest expenditure. The low net enrollment of high school education from households in 40% lowest expenditure group indicates that a study is needed regarding PIP's effect on children's probabilities in this group to attend school according to their age category. Therefore, this study will analyze the effect of cash transfer policies such as PIP on senior high school enrollment at the individual level with a larger sample from all regions in Indonesia, especially those from the lowest 40% household expenditure groups.

RESEARCH METHODS

This research utilized the National Socio-Economic Survey for Indonesia (*Susenas*) 2017 collected by the Central Bureau of Statistics (BPS). Susenas 2017 was chosen with the consideration that 2017 is the mid-term evaluation period of the 2015-2019 RPJMN. In addition, the PIP budget allocation by the Ministry of Education and Culture in 2017 is the lowest PIP budget allocation during the 2015-2019 period as seen in Figure 1.

This study's unit of analysis was 16-18 years old children who belong to households that categorized in 40% lowest expenditure per capita in Susenas 2017. The 40% lowest expenditure household group is select to align with PIP

targets obtained from the BDT. BDT is a database that shows the socio-economic conditions of the population in the lowest group in Indonesia. The unit of analysis is choosing by selecting those who answer questions thoroughly. From the reduction of raw data, 26,559 children aged 16-18 years old, part of the sample of Susenas, were used in this study.

This study applied a logistic regression model to describe the probability of 16-18 years old children attending high school level education. Logit regression models can be used to analyze categorical data or data with qualitative dependent variables with one or more independent variables on a continuous or categorical scale (Gujarati, 2004). Logit analysis is used to analyze data that describes two options (binary logistic regression) to test whether the probability of the occurrence of the dependent variable can be predicted with the independent variable used. Thus, a logistic regression model will be obtained, which shows PIP and other variables on the probability of 16-18 years old children from households in the lowest 40% expenditure group to attend senior high school.

Logistic regression does not require linear assumptions about the relationship between independent and dependent variables to handle non-linear / interaction effects and logistic regression does not require interval independent variable and does not assume that errors are normally distributed (Latan, 2014). Logistic regression analysis does not assume the dependent variable must normally distribute because it produces more stable analysis results if the predictors have a multivariate normal distribution (Latan, 2014). According to Latan (2014), the dependent variable does not require homoscedasticity for each level of the independent variable so that the assumption of variance homogeneity is not required.

The dependent variable used is net education enrollment, which means the participation of children in certain age groups who attend school at a level appropriate to their age group. In this study, the dependent variable is the enrollment of 16-18 years old children in senior high school level education. The dependent variable is defined using the dummy variable 1 if 16-18 years old children attend senior high school/equivalent and 0 if 16-18 years old children do not attend senior high school or equivalent. Independent variables used were gender (dummy variable, female = 1, male = 0), education of head of household (dummy variable, junior high school or lower = 1, senior high school or higher = 0), economic status of the household (dummy variable, if per capita expenditure below poverty line = poor household coded 1, per capita expenditure above poverty line = non-poor household coded 0), residence area (dummy variable, urban areas = 1, rural areas = 0) and PIP (dummy variable, if sample received PIP = 1, if sample did not receive PIP = 0).

One way to capture the difference in cash transfer programs' effect is by observing the interaction variables and households' socio-economic characteristics (R. Khandker, Gayatri B. and Hussain A., 2010). The difference in PIP's influence on everyone is seen by adding interaction variables between PIP and the gender, education of the head of the household, and the area of residence, and the household's economic status. The interaction variable is defined as a dummy variable. The interaction variable between PIP and gender 1 is code for females receive PIP, 0 is code for males receive PIP, or female does not receive PIP, or male does not receive PIP. The interaction variable between PIP and the educational level of the head of the household 1 is the code for the head of the household of PIP recipients that completed junior high school education and below, 0 is for the head of the household who has high school education and above or for the sample does not receive PIP. The interaction variable between PIP and residence area 1 is code for those living in urban areas, 0 code for those living in rural areas, and sample not receiving PIP residing in rural or urban areas. Interaction variable between PIP and economic status 1 is code for PIP recipients who belong to the poor household, 0 for PIP recipients belong to the non-poor household or for the sample which does not receive PIP belong to both poor and non-poor

household. The model applied in this study was adapted from the general form of the logistic regression model of Hosmer and Lemeshow (2000) and the research conducted by Mike, Nakajjo and Isoke (2008); Kainuwa and Yusuf (2013); Andrew and Orodho (2014); Perdana (2015); Hakim (2020). Referring to the general form of the logistic regression model, a combination of factors that can influence the probability of education enrollment, and accommodating the interaction between PIP and the characteristics of each sample, thus obtained a model such as the following:

$$Y = ln\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \beta_1 PIP + \beta_2 G + \beta_3 EHH + \beta_4 RA + \beta_5 ES + \beta_6 PIP * G + \beta_7 PIP * EHH + \beta_8 PIP * RA + \beta_9 PIP * ES + e \quad \text{..... (1)}$$

Where; p_i is the probability of 16-18 years old children attending senior high school or equivalent β_0 is constant, $\beta_0 - \beta_9$ are logistic regression coefficients. PIP is for *Program Indonesia Pintar*/Smart Indonesia Program, G is gender, EHH is the education level of the head of the household based on the highest education certificate held by the head of the sample household, RA is residence area, ES is the economic status of a household based on the per capita household expenditure and the provincial poverty line where the household lives. Meanwhile, PIP*G is the interaction variable between PIP and gender, PIP*EHH is the interaction variable between PIP and Education of the head of the household, PIP*RA is the interaction variable between PIP and residence area, PIP*ES is interaction variable between PIP and Household economic status, and e is the error term.

Model compatibility test (Goodness of Fit) was used to see the model's suitability with the data used in explaining the independent variables and the dependent variables. Testing the suitability of this model uses the Pearson Chi-Square test with test statistics as follows:

$$\chi^2 = \sum_i \frac{(y_i - \hat{\pi}_i)^2}{\hat{\pi}_i(1-\hat{\pi}_i)} \quad \text{..... (2)}$$

Where y_i is a dependent variable with the value of 0 or 1, $\hat{\pi}_i$ is the predictive probability for $y_i = 1$ based on a fit model.

The hypothesis used in the Pearson chi-square test is:

H0: $y = \bar{y}$: The model is sufficiently able to explain the data, Ha: $y \neq \bar{y}$: The model is not sufficiently able to explain the data.

The test criterion used is the rejected H_0, if $\chi^2_{count} > \chi^2_{table}$ or *p value* (*prob >chi2*) < significance level (α), which means that the model is not sufficiently able to explain the data. Therefore, to obtain a fit model, the expected result is not to reject H_0 when $\chi^2_{count} < \chi^2_{table}$ or *p value* (*prob >chi2*) > significance level (α).

Testing the significance of parameters partially used the Wald test with the following statistics:

$$W_j = \left(\frac{\beta_j}{SE(\beta_j)}\right) \quad \text{..... (3)}$$

The hypotheses tested using the Wald test are as follows: H_0: $\beta_j = 0$; j = 1, 2, 3, …, k; (there is no influence between the j-independent variable on the dependent variable). H_a: $\beta_j \neq 0$ j = 1, 2, 3, …, k; (there is an influence between the j independent variable on the dependent variable). The test criterion for the Wald test is the rejected H_0, if *Wald statistic* > $Z_{\alpha/2}$ or when the p-value <α.

Robust standard errors are employed in the logit regression to reduce heteroscedasticity problems. It is important to note that the interpretation of logit coefficients is not as straightforward as in the case of ordinary least square (OLS) regression coefficients. The logistic regression results are interpreted based on the odds ratio and the marginal effect value of each variable. The odds ratio is used to see how much independent variables influence dependent variables (Hosmer and Lemeshow, 2000). The odds ratio interpreted as odds for y = 1 at x = 1, are e^{β_j} times compared to the odds when x = 0. If the independent variable used is a continuous variable, the interpretation of the logistic regression coefficient is that for every 1 unit increase in the independent variable, the increase in the risk of an event y = 1 is equal to e^{β_j} e ^ or

the probability of y = 1 on a larger x is equal to $e^{\beta j}$ times when x is one unit lower.

The marginal effect functioned to determine the change in the dependent variable's probability for specific independent variable changes. In the binary independent variable the marginal effect measures discrete changes, which means how the probability of the dependent variable that is predicted to change when the independent variable changes from 0 (zero) to 1 (one) and for continuous independent variables, the marginal effect measures the instantaneous rate of change in the dependent variable due to changes in the independent variable (Williams, 2020). This study employs average marginal effects (AME) for correct interpretation of the logit model and to avoid unobserved heterogeneity. Average Marginal Effect (AME) is not affected by unobserved heterogeneity that is unrelated to the independent variables in the model, and can thus be compared across models, groups, samples, years, etc.(Mood, 2010).

RESULTS AND DISCUSSION

The composition of 16-18 years old children from households in the 40% lowest expenditure group is presented in Table 2. Most of the children in the 16-18 years age group in the 40% lowest expenditure group household dominated by boys (51.62%). However, the net enrollment rate for boys as high school students is lower than that for girls. The sample is dominated by those who live in rural areas (65.65%) who have a lower level of participation as high school students than in urban areas. The sample consists of 81.33% of 16-18 years old children who had a head of household with a maximum junior high school education. It indicates that primary education still dominates parents' level of education responsible for their children's education. Children with a less-educated head of household have a lower net enrollment rate than children with higher education heads. Based on household economic status, most of the children in this study came from non-poor households (74,51%) with higher net enrollment rate than those from poor households. Meanwhile, the net enrollment rate as high school students for children who received PIP was much higher than for children who did not get PIP. However, the percentage of 16-18 years old children who receive PIP is still low (16.6%).

The results of the compatibility test of the model using the Pearson chi-square test resulted in a Pearson chi-square value of 25.69 and prob> chi2 of 0.2654. The results of this test decided to not reject H0 because the value of prob> chi2 was higher than the significance value of α = 5%. Thus, the model above is suitable for further analysis because there is no significant difference between the units observed and the units predicted in the model.

Table 2. Sample Characteristics based on PIP, area of residence, Economic Status, education of the head of household, and gender

Characteristics		High School Student (%)		Total (%)	Sample Composition (%)
		Yes	No		
PIP	Beneficiaries	79,95	20,05	100,00	16,60
	Non beneficiaries	52,82	47,18	100,00	83,40
Residence area	Urban	62,45	37,55	100,00	34,35
	Rural	54,64	45,36	100,00	65,65
Economic Status	Poor	48,57	51,43	100,00	25,49
	Non-Poor	60,32	39,68	100,00	74,51
Head of Household's Education	≥ Senior High School	71,90	28,10	100,00	18,67
	< Senior High School	53,97	46,03	100,00	81,33
Gender	Male	54,26	45,74	100,00	51,62
	Female	60,59	39,41	100,00	48,38

Source: Raw data Susenas 2017, processed

The logistic regression results in Table 3 show that the PIP variable, PIP interaction with gender, education of the head of household, and residence area have a significant effect on the probability of 16-18 years old children attending senior high school. Meanwhile, the interaction between PIP and economic status has no significant effect on the probability of 16-18 years old children attending senior high school. Besides, other variables that significantly impact the probability of 16-18 years old children attending high school are gender, education of household heads, household economic status, and residence area.

Table 3. Results of the Wald Test

Independent Variables	Coefficient	Z
PIP	0,93	7,01***
Gender	0,24	8,88***
Head of Household's Education	-0,81	-21,89***
Economic Status	-0,46	-14,56***
Residence Area	0,22	7,43***
Interaction PIP and Gender	0,14	1,72*
Interaction PIP and Head of Household's Education	0,35	2,71***
Interaction PIP and Economic Status	0,00	0,02
Interaction PIP and Residence Area	0,20	2,13**
Constant	0,70	17,94***

Sources: Raw data Susenas 2017, processed

To determine the effect of each independent variable on the probability of attending high school, it can be explained by interpreting the odds ratio and average marginal effect of each independent variable. The results of the odds ratio and average marginal effect after logistic regression presented in Table 4.

PIP's existence significantly and positively affected the probability of 16-18 years old children attending the high school level. Children who received PIP have a higher probability of attending high school than children who do not receive PIP. PIP affected the probability of attending a high school education with an odds ratio of 2.525 and an average marginal effect of 0.200. The odds ratio value means that the probability of attending senior high school for 16-18 years old children who receive PIP is 2.525 times bigger than the probability of 16-18 years old children who do not receive PIP. The average marginal effect value shows that PIP will increase the probability of 16-18 years old children attending senior high school education by an average of 20 percent. At the 95% confidence interval, administration of PIP will increase their probability to attend senior high school or equivalent by 14.9-25.1 percent.

Table 4. Value of Odds Ratio and Average Marginal Effect (AME) Results of Logistic Regression Model probability of 16-18 years old children attending senior high school

Independent Variables	Odds ratio	Coef.	AME	AME CI 95%	
PIP	2,525	0,926	0,200	0,149	0,251
Gender	1,277	0,245	0,055	0,043	0,067
Head of Household's Education	0,445	-0,810	-0,176	-0,191	-0,162
Economic Status	0,629	-0,463	-0,106	-0,120	-0,092
Residence Area	1,244	0,218	0,049	0,036	0,062
Interaction PIP and Gender	1,150	0,140	0,031	-0,004	0,067
Interaction PIP and Head of Household's Education	1,416	0,348	0,078	0,022	0,133
Interaction PIP and Economic Status	1,002	0,002	0,000	-0,038	0,039
Interaction PIP and Residence Area	1,218	0,197	0,044	0,004	0,084
Constant	2,010	0,698			

Source: raw data Susenas 2017 (processed)

Generally, the average marginal effect of the enrollment of children who receive PIP is higher than children who do not receive PIP. When controlled with gender variable, the average marginal effect of PIP on girls is higher than the average marginal effect of PIP on boys where both show positive and significant effects on the probability of attending senior high school education (Table 5). Each addition of 16-18 years old girls who receive PIP will increase the probability of 16-18 years old girls getting a high school education by an average of 24.6%.

Meanwhile, each addition of 16-18 years old boys who receive PIP will increase the probability of 16-18 years old boys getting a high school education by an average of 17.7%. Thus, it can be said that for 16-18 years old children from households in the 40% lowest expenditure group, PIP works more dominant for the girls than the boys on the probability of attending high school.

This result is not entirely in line with previous research conducted by de Brauw et al., (2015) which found that education cash transfer policies elevated girls' educational participation and had no impact on boy's educational participation. This study shows that PIP has a significant effect on enlarging the participation of high school education both for girls and boys when the impact of PIP is more dominant on the probability of attending high school for girls compared to the probability for boys.

Table 5. Average Marginal Effect of probability 16-18 years old children attending senior high school by Gender.

Independent variables	Gender	
	Female (1)	Male (0)
PIP	0,246***	0,177***
Head of Household's Education	-0,152***	-0,2***
Economic Status	-0,113***	-0,098***
Residence Area	0,054***	0,044***
Interaction PIP and Head of Household's Education	0,033	0,117***
Interaction PIP and Economic Status	0,017	-0,015
Interaction PIP and Residence Area	0,027	0,059**

Note: * p value 5%-10%, ** p value 1%-5%, *** p value <1%

Sources: Raw data Susenas 2017, processed

When it is controlled by residence area variable, the average marginal effect of PIP on 16-18 years old children living in rural areas is higher than the average marginal effect of PIP on 16-18 years old children living in urban areas where both show a positive and significant effect on the probability of attending senior high school education (Table 6). Each addition of 16-18 years old children living in urban areas who receive PIP will increase their probability of attending senior high school by an average of 19.5 percent while the addition of 16-18 years old children who live in rural areas receiving PIP will increase their probability of attending senior high school by an average of 22.7 percent. Thus, for 16-18 years old children from households in the 40% lowest expenditure group, the effect of PIP is more dominant on the probability of attending senior high school for children living in rural areas than those living in urban areas.

Table 6. Average Marginal Effect of probability 16-18 years old children attending senior high school by Residence Area.

Independent variables	Residence Area	
	Urban (1)	Rural(0)
PIP	0,195***	0,227***
Gender	0,059***	0,053***
Head of Household's Education	-0,165***	-0,184***
Economic Status	-0,09***	-0,113***
Interaction PIP and Gender	0,011	0,039*
Interaction PIP and Head of Household's Education	0,112***	0,054
Interaction PIP and Economic Status	0,013	-0,002

Note: * p value 5%-10%, ** p value 1%-5%, *** p value <1%

Source: BPS. Raw data Susenas 2017 (processed)

According to De Brauw (2015), the cash transfer policy can reduce dropout rates in rural areas but statistically does not have any significant effect. Garcia and Hill (2010) found that cash transfer policies improved the educational attainment of 7-12 years old children in rural areas. Meanwhile, according to Setyadarma (2018) the cash transfer policy can reduce the probability of dropping out of school in rural areas of Central Java Province. The results of research in broader national coverage revealed that the PIP has a significant effect in boosting the probability of attending senior high school education in rural areas. The results of this study also indicated that the cash transfer policy significantly increases the probability of attending high school in urban areas in Indonesia. The impact of PIP is more dominant on the probability of attending high school for children living in rural areas compared to those

living in urban areas. It happened because of the condition of people in rural areas who tend to have a lower level of economic welfare and more vulnerable compared to people in urban areas. Thus, the presence of PIP for children living in rural areas has a higher impact and greatly influences the decision to attend senior high school.

The effect of PIP on the probability of attending an equivalent senior high school based on the education of the head of the household is more dominant in children who have a head of household with a maximum junior high school education compared to children who have a head of household with a senior high school or higher. The average marginal effect of PIP on children whose head of household only reaches junior high school education is higher than the average marginal effect on children whose head of household reaches senior high school or higher education (Table 7). Each addition of 16-18 years old children whose heads of household education are below senior high school and take in PIP, will lift their probability of attending senior high school education by an average of 28.3%. Meanwhile, each addition of 16-18 years old children who have a head of household in the level of senior high school or higher and receive PIP will increase their probability of attending senior high school education by an average of 14.5%.

Table 7. Average Marginal Effect of probability 16-18 years old children attending senior high school by Head of Household's Education.

Independent variables	Head of Household's Education	
	< Senior High School (1)	≥ Senior High School (0)
PIP	0,283***	0,145***
Gender	0,063***	0,023*
Economic Status	-0,102***	-0,128***
Residence Area	0,053***	0,032**
Interaction PIP and Gender	0,022	0,077*
Interaction PIP and Economic Status	-0,006	0,029
Interaction PIP and Residence Area	0,055**	-0,013

Note: * p value 5%-10%, ** p value 1%-5%, *** p value <1%

Source: BPS. Raw data Susenas 2017 (processed)

This difference came up because the child's decision to go to school can be indirectly influenced by the level of parent's education, where parents who have higher education will highly support their children to go to school (Mike, Nakajjo and Isoke, 2008; Kainuwa and Yusuf, 2013; Nicholas, John and Emily, 2013; Andrew and Orodho, 2014; Huisman and Smits, 2015; Perdana, 2015). Parents with lower education levels indirectly do not encourage and appreciate their children's education. Without PIP, parents with higher education will encourage their children to go to school more than parents with lower education. The existence of PIP will influence their decision to send their children to higher education. Therefore, the influence of PIP tends to be greater in encouraging the decision to send their children to school for children who have parents with less education than children who have parents with higher education.

Table 8. Average Marginal Effect of probability 16-18 years old children attending senior high school by Economic Status.

Independent variables	Economic Status	
	Poor (1)	Non-Poor (0)
PIP	0,239***	0,227***
Gender	0,045***	0,053***
Head of Household's Education	-0,155***	-0,184***
Residence Area	0,068***	-0,113***
Interaction PIP and Gender	0,053	0,039
Interaction PIP and Head of Household's Education	0,045	0,054***
Interaction PIP and Residence Area	0,054	-0,002

Note: * p value 5%-10%, ** p value 1%-5%, *** p value <1%

Source: BPS. Raw data Susenas 2017 (processed)

Based on the economic status of the household in table 8, average the marginal effect of PIP on 16-18 years old children from poor and non-poor households, points out a significant effect on the probability of attending senior high school or equivalent. The average marginal effect of PIP on 16-18 years old children on the probability of attending high school or equivalent is higher for children from poor households than for children from non-poor households. Each

addition of 16-18 years old children from poor households obtaining PIP will increase their probability of attending senior high school by an average of 23.9%. For 16-18 years old children from non-poor households, each additional child who gets PIP will increase their probability of attending senior high school by an average of 22.7%. Briefly, for 16-18 years old children, the influence of PIP on the probability of attending senior high school or equivalent based on household economic status is more dominant for children coming from poor households than children coming from non-poor households.

The cash transfer policy aims to help poor and disadvantaged families to break the legacy of inter-generational poverty (Molina-Millan et al., 2016; Araujo, Bossh and Schady, 2017). Limited access to education is one of the problems caused by poverty. Poor households generally have a lower ability to pay for their children's education. In this study, PIP has a significant effect in gaining the probability of attending high school both for children who come from poor and non-poor households where the impact of PIP is more dominant on children who come from poor households. The significant effect of PIP on the probability of children both from poor and non-poor families attending senior high school is related to the PIP target based on an integrated database, namely the population in the household group with the lowest 40% welfare level is not only limited to poor households.

For 16-18 years old children who come from households in the lowest level of 40% expenditure, the gender variable provides a substantial effect on the probability of attending senior high school or equivalent with an odds ratio of 1.277 and the average marginal effect of 0.055 (Table 4). The probability of 16-18 years old children attending senior high school or equivalent is exactly filled by girls than boys which the probability of girls attending senior high school is 1.277 times the probability of boys. Each addition of 16-18 years old girls will rise the probability of 16-18 years old children attending high school or equivalent by an average of 5.5%.

These results detect that in the lowest 40% expenditure group households, there is a difference in the tendency to attend senior high school or equivalent due to gender factor. The results of this study in accordance with the results of Perdana's (2015) study which found that the probability of girls getting an education is larger than boys. Large participation of girls than boys at the secondary education level may occur because the male population, especially those living in rural areas, tends to leave school when they are old enough to work and girls are more likely to attend school at the level of education in accordance with respective age groups (Rachmawati et al., 2017). This condition is supported by data from the Central Statistics Bureau which shows the NER ratio of girls to boys at the primary level which has not reached 100 percent in 2017, meanwhile the NER ratio of girls to boys at the junior and senior high school has exceeded more than 100 percent.

The interaction between PIP and gender at the significant level of 5% indicates an insignificant effect on the probability of 16-18 years old children from households in the level of 40% lowest expenditure in obtaining senior high school or equivalent (Table 3). Thus, at the 5% significance level there is no difference on probability of attending senior high school due to differences in the influence of PIP and gender simultaneously. However, at the 90 percent confidence interval, the interaction between PIP and gender creates significant effect on the probability of 16-18 years old children who come from households in the 40% lowest expenditure group in attending high school education. The logistic estimate in table 4 produces an odds ratio of 1.150 and average marginal effect of 0.031. This odds ratio value interprets that the probability of going to high school level for 16-18 years old girls who get PIP is 1,150 times the probability of 16-18 years old children in another category, namely boys getting PIP and boys or girls who do not get PIP. Average marginal effect mentions that each addition of 16-18 years old girls who get PIP will increase he probability of 16-18 years old children attending senior high school or equivalent by an average of 3.1 percent.

Based on the area of residence, the interaction of PIP and gender figures out that the influence of PIP on girls who live in rural areas is more dominant than the influence of PIP on girls who live in urban areas. Based on Table 6, the average marginal effect of PIP on girls living in

rural areas is bigger than the average marginal effect of PIP on girls living in urban areas. Each addition of girls who obtain PIP escalates the probability of 16-18 years old children living in rural areas attending senior high school or equivalent by an average of 3.9%, while the addition of girls who receive PIP living in urban areas lift up the probability of 16-18 years old children living in urban areas attending senior high school but the effect isn't really significant.

Referring to the education of the head of the household, the influence of PIP on girls who have a head of household with senior high school or higher education is more dominant than girls who have a head of household with lower than senior high school level. Based on Table 7, the interaction between PIP and gender shows the average marginal effect of PIP on girls with head of household graduated from senior high school or higher education which is higher than the average marginal effect of PIP on girls who have a head of household with lower school level. Each addition of girl receiving PIP will gain the probability of 16-18 years old children having head of household with senior high school or higher education to attend high school by 7.7%. Meanwhile, the addition of girls receiving PIP will enlarge the probability of attending high school for 16-18 years old children have a head of household with lower than senior high school level by 2.2% but it does not have a significant effect.

Based on household economic status, the interaction between PIP and gender has a positive influence on the probability of attending high school for girls who come from poor and non-poor households. Table 8 indicates that the influence of PIP has a tendency on girls from poor households, but neither of them has a significant effect. Therefore, it can be concluded that there is no significant difference in the effect of PIP on girls from poor and non-poor households on the probability of attending high school.

The education of the head of the household makes a substantial effect on the probability of 16-18 years old children attending senior high school or equivalent (Table 3). The education of the head of the household affects the probability of attending senior high school or equivalent with an odds ratio of 0.445 and average marginal effect of -0.176 (Table 4). This value means that the probability of 16-18 years old children having a head of household with a maximum education of junior high school is 0.445 times than children who have a head of household with a minimum education of senior high school or equivalent. Each addition of children aged 16-18 years who have a head of household with lower education than senior high school will reduce the probability of children aged 6-18 years to attend senior high school by an average of 17.6 percent.

The results of this study point out that 16-18 years old children from households in 40% lowest expenditure group with a head of household having higher education create a greater probability of attending high school. The probability of attending senior high school for children who have a head of household with a minimum education of senior high school is higher than for children with a head of household having a maximum education of junior high school.

An educated household head is influential in increasing the probability of a child enrolling in school and reducing the risk of dropping out (Mike, Nakajjo and Isoke, 2008; Kainuwa and Yusuf, 2013; Nicholas, John and Emily, 2013; Andrew and Orodho, 2014; Huisman and Smits, 2015; Perdana, 2015). The influence of parental education on children's education can be seen from the support and aspiration given by high educated parents for their children's education (Kainuwa and Yusuf, 2013). Parents with higher education tend to encourage their children to learn, so that children who have parents with higher education are more likely attending the school.

The logistic regression results prove that the probability of children who received PIP was higher than those who did not receive PIP. In addition, the probability of children having a head of household with a maximum education up to junior high school was lower than the children who have a head of household with a minimum education of senior high school. Simultaneously, the interaction between PIP and the education of the head of the household has a positive and significant effect on the probability

of 16-18 years old children attending an equivalent high school (Table 3).

The logistic regression estimation results produce the interaction of PIP and the education of the head of the household with an odds ratio of 1.416 and average marginal effect of 0.078 (Table 4). This value implies that the probability of attending senior high school or equivalent for 16-18 years old children with a head of household having lower education than senior high school and get hold of PIP is 1.416 times the probability of 16-18 years old children of other categories (not receiving PIP, receiving PIP and have a head of household with a senior high school or higher education). Each addition of children aged 16-18 years who receive PIP who has a head of household with education below senior high school will enhance the probability of 16-18 years old children of attending senior high school by an average of 7.8 percent. Thus, the probability of going to school for children who have a head of household with a maximum education up to junior high school is smaller than that of children who have a head of household with a minimum education of high school level. With the existence of PIP, children who have a head of household with a maximum education of junior high school, can be motivated to have a higher probability of being able to attend senior high school or equivalent.

When gender factor is considered, the interaction between PIP and the education of the head of the household also generates an impact, that the PIP on 16-18 years old children who have a head of household with a maximum junior high school education is quite dominant in boys rather than girls (Table 5). Based on Table 5, the average marginal effect of the interaction between PIP and the education of the head of the household is higher and more significant for boys, while for girls this variable does not have a significant effect on the probability of attending senior high school or equivalent. Each addition of 16-18 years old children who have a head of household with a maximum education of junior high school receiving PIP will boost the probability of boys attending senior high school or equivalent by an average of 11.7%, while the addition of c16-18 years old children who have a head of household with a minimum education of senior high school or higher will increase girls' probability of attending senior high school or equivalent by 3.3%, but the effect is not significant.

Regarding to the area of residence, the interaction between PIP and the education of the head of the household generates a positive effect on the probability of children aged 16-18 years attending high school, both in urban and rural areas. However, the interaction effect of PIP and the education of the head of household is more dominant in urban areas and not significant in rural areas. Based on Table 6, the average marginal effect of the interaction between PIP and the education of the head of the household is higher and significant on the probability of attending senior high school or equivalent in urban areas than rural areas. Each addition of 16-18 years old children who receive PIP with parents with a maximum junior high school education will raise the probability of 16-18 years old children living in urban areas attending senior high school or equivalent by an average of 11.2%. Meanwhile, each addition of 16-18 years old children who receive PIP with a maximum junior high school parent education will also extend the probability of children aged 16-18 years living in rural areas to attend senior high school or equivalent, but with a lower and insignificant increase.

According to economic status of the household, the interaction between PIP and the education of the head of the household resulting a positive effect on the probability of 16-18 years old children attending senior high school, both in the poor and non-poor categories. The effect of the interaction between PIP and the education of the head of the household on the probability of 16-18 years old children attending high school is more dominant in children in the non-poor households' category and does not have a significant effect on children in poor household's category. Based on Table 8, the average marginal effect of PIP interactions with the education of the head of the household is higher and more significant for 16-18 years old children from non-poor households compared to 16-18 years old children from poor households. Each addition of children aged 16-18 years who have a head of household with a maximum junior high school

education and receive PIP, will enhance the probability of attending senior high school or equivalent from non-poor households by 5.4%. Meanwhile, each addition of 16-18 years old children who have a head of household with a maximum junior high school education and received PIP, will also increase the probability of 16-18 years old children from poor households but statistically insignificant.

The logistic regression results capture a difference in the tendency for 16-18 years old children to attend senior high school or equivalent due to household economic status factor. Household economic status leads a significant effect on the probability of 16-18 years old children to attend senior high school or equivalent with an odds ratio of 0.629 and average marginal effect of -0.106 (Table 4). This value implies that the probability of attending high school for 16-18 years old children who come from poor households is 0.629 times the probability of 6-18 years old children who come from non-poor households. Each addition of 16-18 years old children from poor households will reduce the probability of 16-18 years old children attending senior high school or equivalent by an average of 10.6 percent.

These results represent that for 16-18 years old children from the 40% lowest expenditure group households, those in the poor category have a lower probability of attending senior high school or equivalent compared to children who are in the non-poor category. This result is in line with Kamanda, Madise and Schnepf (2016); Hakim, (2020) who stated that children who come from poor households have a lower chance of going to school compared to children who come from more prosperous families.

Many poor households are constrained by liquidity and wrong perceptions of return on investment in children so that they do not invest in their children's human capital, even though the returns on this investment are high (Araujo, Bossh and Schady, 2017). Children from poor households have lower access to education which might be caused by the limited ability of parents to afford education and poor households are more vulnerable to crises, so that children in junior and senior high school tend to drop out of school and work to help their parents (Suryadarma, Suryahadi and Sumarto, 2006; Izzaty, 2009; Rachmawati et al., 2017).

Each of PIP and household economic status have a significant effect on the probability of attending a senior high school or equivalent for 16-18 years old children who come from households in the group of 40% lowest per capita expenditure (Table 3). Children who received PIP have a higher probability of attending senior high school or equivalent than those who did not receive PIP. Children from poor households have a lower probability of attending high school than children from non-poor households. The interaction variable between PIP and economic status in the logistic estimation results in table 4 reveals that the probability of attending high school for 16-18 years old children who receive PIP in the poor category is 1.002 times the probability of children in other categories (not receiving PIP in the poor / not poor category and receiving PIP in the non-poor category). The Interaction variable between PIP and economic status in table 3 statistically insignificant on probability attending senior high school. This means that there is no significant difference between the effect of PIP on children from poor households and the effect of PIP on other categories of children.

As written in logistic regression results, there are differences in the tendency to attend senior high school or equivalent due to the area of residence. The area of residence influences the probability of 16-18 years old children attending senior high school with an odds ratio of 1.244 and average marginal effect of 0.049 (Table 4). This value means that the probability of 16-18 years old children living in urban areas to attend senior high school is 1.244 times the probability of 16-18 years old children living in rural areas. The probability of attending senior high school or equivalent will tend to increase by an average of 4.9 percent for each additional 16-18 years old children living in urban areas.

These results conclude that for children who come from households in the 40% lowest expenditure group, the area of residence affects the probability of being able to attend senior high school. The probability of children living in urban areas to attend senior high school is higher than that of children living in rural areas. These

results are consistent with the research of Mike, Nakajjo and Isoke (2008) and Perdana (2015) which argued that the area of residence influences the decision to send children to school where children living in urban areas have a higher chance of obtaining access to school than children living in rural areas. In addition, according to Hakim (2020) there is a higher tendency to drop out of school for children living in rural areas compared to children living in urban areas. This case occurs due to different regional developments between rural and urban areas. The gap in education participation in rural and urban areas is caused by several factors, including the large number of teaching staff in urban areas, the low interest of teachers to work in rural areas, and there are better teaching facilities in urban areas (Vito, Krisnani and Resnawati, 2015).

Children who receive PIP have higher probability to attend senior high school and children who live in urban areas have higher probability to attend senior high school than children who live in rural areas. The interaction between PIP and the area of residence has a significant effect on the probability of 16-18 years old children attending senior high school or equivalent (Table 3). The logistic estimation in table 4 produces an odds ratio of 1.218 and average marginal effect of 0.044. This value represents that the probability of attending senior high school for 16-18 years old children living in urban areas and get PIP is 1.218 times that for 16-18 years old children in other categories (not receive PIP living in urban/rural areas and receive PIP living in rural areas). Each addition of 16-18 years old children living in urban areas and receive PIP will increase the probability of 16-18 years old children to attend senior high school or equivalent by an average of 4.4 percent.

Based on gender, the interaction between PIP and the area of residence points out that the influence of PIP on the probability of attending senior high school or equivalent for 16-18 years old children who live in urban areas is quite dominant in boys than girls (Table 5). Based on table 5, the average marginal effect of PIP on male children living in urban areas is higher than average marginal effect of PIP on female children living in urban areas. Each additional 16-18 years old children living in urban areas receiving PIP will increase the probability of 16-18 years old boys of enrolling in senior high school by 5.9%. Meanwhile, the addition of children living in urban areas and receive PIP also increases the probability of 16-18 years old girls attending high school, but the effect is not significant.

Referring to the education of the head of the household, the interaction between PIP and the area of residence explains that the influence of PIP on children living in urban areas who have a head of household with a maximum education of junior high school is more dominant than the influence of PIP on children living in urban areas who have a head of household with a minimum education in senior high school or higher. Based on Table 7, it shows the average marginal effect of the PIP interaction with the area of residence for 16-18 years old children who have a head of household with a maximum junior high school education is higher than 16-18 years old children who have a head of household with senior high school minimum education. Increasing in 16-18 years old children who receive PIP in urban areas will widen the probability of 16-18 years old children who have head of household with maximum education of junior high school by 5.5%. Meanwhile, the addition of children who get PIP living in urban areas does not have a significant effect on the probability of attending senior high school for 16-18 years old children who have a head of household with senior high school minimum education.

Based on economic status of the household, the interaction between PIP and the area of residence shows that PIP for children living in urban areas does not have a significant effect on the probability of attending senior high school for 16-18 years old children who are categorized as poor or non-poor household (Table 8). However, the influence of PIP on children living in urban areas is more dominant in 16-18 years old children who are included in the poor category. Based on Table 8, the average marginal effect of the interaction of PIP and the area of residence is higher for children from poor households than for children from non-poor households. However, neither of them has significant effect.

The impact of PIP on educational participation in Indonesia is in line with the results of previous studies related to the effect of similar cash transfer programs in developing countries such as Brazil, Colombia, Mexico and Bolivia. The results of this study generally indicate that cash transfer policies can increase the probability of an individual for being able to get an education services (Garcia and Hill, 2010; Dubois, de Janvry and Sadoulet, 2012; Glewwe and Kassouf, 2012; De Brauw et al., 2015; Bauchet et al., 2018; Whetten, Fontenla and Villa, 2018; García, Harker and Cuartas, 2019; Wright, 2019).

The focus of the results in this study shows that children who come from households in the 40% lowest expenditure group who receive PIP will have a higher probability of obtaining high school education according to their respective age groups. The presence of PIP can help ease the burden of spending on education costs and encourage 16-18 years old children from households in the lowest 40% expenditure group to stay in school. According to Setyadharma (2018) and Hakim (2020) the presence of PIP can also reduce the probability of children dropping out of school and indirectly increase educational participation. Cash and voucher assistance for education successfully remove economic barriers which prevent children from being affected by the crisis from accessing education, leading to increased enrollment and attendance (Cross, Canales and Shaleva, 2018). Cash assistance encourages increased demand for education by reducing financial constraints for individuals or households, thereby increasing enrollment rates and reducing dropout rates (Kilburn et al., 2017).

The presence of PIP increases the probability of 16-18 years old children from the 40% lowest household group to attend senior high school. However, the development of the Net Enrollment Rate did not reach the targeted level. The low or coverage acquired by PIP beneficiaries lead the development of net enrollment rates to not reaching the targeted number. Based on Table 2, it is known that 16-18 years old children who receive PIP are only 17 percent of all 16-18 years old children who come from households in the lowest 40% expenditure group.

Differences in individual or household characteristics affect the impact of PIP on the probability to attend senior high school. According to Uchiyama (2019), household characteristics can be used as a sensitivity parameter to see the vulnerability of changes in household consumption and changes in income as a result of the cash transfer program. The interaction treatment of cash transfer programs with the socio-economic characteristics of individuals or households can capture the difference on the impact of cash transfer policies (R. Khandker, Gayatri B. and Hussain A., 2010). This study produces interaction variables between PIP and gender, PIP and the education of the head of the household, and PIP with the area of residence have significant effect on the probability of attending senior high school. Then, to see the increase in the probability of attending high school as a result of PIP policy, it is not limited to whether individuals receive PIP or not, but also influences by the impact of PIP and the characteristics of PIP beneficiaries simultaneously.

PIP relieves the burden of student education costs by being used to buy school supplies, stationery, transportation costs and other necessities that are not included in the School Operational Assistance component. However, PIP beneficiaries cannot fully hold on the PIP assistance. Referring to Perdana (2019), there was a gap found between the amount of PIP obtained and the overall unit cost of students needed. Therefore, to increase education participation, the government should increase the amount of assistance, especially for children who come from the lowest welfare level and are vulnerable to dropping out of school or by combining it with assistance or scholarships from other parties. Increasing the number of transfers and combining other payments for different participants and by simplifying the requirements in cash transfer programs can increase educational participation (Bauchet et al., 2018).

CONCLUSION

For 16-18 years old children who are belong to households in 40% lowest expenditure group, children who receive PIP have bigger chance to attend senior high school or equivalent

than those who do not receive PIP. Administration of PIP will increase their probability to attend senior high school or equivalent by 15-25 percent. PIP has different impacts on the probability of attending senior high school depending on the characteristics of PIP beneficiaries. PIP creates several impacts on the probability of 16-18 years old children attending senior high school to girls than boys, children living in rural areas than children living in urban areas, children who have a head of household with a maximum education in junior high school than those who have a head of household with a minimum education of senior high school, and children belonging to poor households compared to children who are not categorized as poor.

The interaction between PIP and beneficiaries' characteristics affects PIP's performance in increasing the probability of 16-18 years old children to attend senior high school or equivalent. Interaction variables that significantly affect the probability of attending senior high school are PIP interaction with gender, education of household head, and the area of residence.

The interaction of PIP and gender shows that girls who receive PIP have a higher probability of attending high school than boys/girls who do not get PIP and boys who receive PIP. Based on the area of residence, the impact of PIP on girls is more dominant in girls who live in urban areas than in rural areas. Based on the education of the household head, the impact of PIP on girls is more dominant in children who have a head of household with a maximum education of junior high school. Based on the economic status, the impact of PIP on girls is more dominant for children who come from poor households.

The interaction between PIP and household head education shows that children who have a head of household with a maximum education of junior high school who get PIP have higher probability to attend high school education than other children in the other categories. Based on gender, PIP's impact on children who have a head of household with a maximum junior high school education is more dominant in boys. Based on the area of residence, this influence is more dominant for children living in urban areas. Based on economic status, the effect is more dominant on children from non-poor households.

The interaction between PIP and the area of residence shows that children who receive PIP and live in urban areas have a higher probability of attending senior high school than children who do not get PIP who live in urban / rural areas and children who receive PIP live in rural areas. Based on gender, the impact of PIP on children living in urban areas is more dominant for boys than girls. Based on economic status, the impact of PIP on children living in urban areas is more dominant for children from non-poor households. Based on the education of the head of the household, this impact is more dominant in children who have a head of household with lower than high school education.

In order to increase education enrollment, especially children from households in the group of 40% lowest expenditure, the government needs to increase the amount of coverages of PIP beneficiaries according to the established criteria, to reduce the burden on education costs borne by individuals households. This is important due to the low coverage of PIP beneficiaries from households in the lowest 40% expenditure group, both in rural and urban areas. In addition, the government should further increase the equitable distribution of economic development between rural and urban areas. Equitable development is needed because an increase in the economy and the availability of equitable educational facilities will improve the welfare of the community and make it easier for people to gain access to education, especially at the secondary education level.

The results of this study show the effect of PIP and the characteristics of PIP beneficiaries on the probability of 16-18 years old children from the 40% lowest expenditure group of attending senior high school. However, there are still weaknesses in this study due to the limited availability of data, such as the analysis that does not cover other aspects that might influence the decision to get an education. Thus the estimation results might be better if we add other variables that may influence school decisions such as the interaction between government assistance and scholarships from other parties, and the socio-economic conditions of the community at the village / sub-district level so that it can further capture the factors that influence the decision to go to school.

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