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IMPACT ASSESSMENT OF SOCIAL ASSISTANCE FOR EDUCATION ON WELFARE DISTRIBUTION: A MICROSIMULATION APPROACH USING INDOMOD

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Abstract

Social assistance for education is one of several instruments in Indonesia to support poor and vulnerable people. There are two main programs which is Family Hope Program (PKH) and Smart Indonesia Program (PIP). Analyzing the distributional impact to both programs is very important to improve program's effectiveness and efficiency. INDOMOD, a tax-benefit microsimulation model for Indonesia, was used in this study to evaluate the distributional effect of these programs to poverty and inequality, using Susenas as the main data. Several results from this study showed that the revocation of the education component of PKH has a more significant impact on poor and vulnerable groups than the revocation of PIP. Further, the revocation of the education component of PKH has a more significant effect on households with children than the revocation of PKH.

Keywords: social assistance, education, microsimulation, indomod

1 Introduction

The dominance of Indonesia's productive age population currently reaches more than 60%, with one-third of the population being children (under 18 years of age). This condition is an advantage for Indonesia to increase productivity in the future and achieve the vision of becoming a developed Indonesia in 2045. However, to be able to realize this, there are several prerequisites needed, such as, among others, high quality of human resources and advancement in science and technology. Consequently, this goal can be achieved supported by increased participation in education.

Increasing participation and quality of education in Indonesia is still becoming a challenge. Based on the results of the March 2022 Susenas data processing, there are still 48.49% of households whose family members do not have an elementary school certificate and 2.9% of households whose family members are no longer in school. The average length of schooling in Indonesia in 2022 will still be at the secondary school level (8.69 years). Apart from that, Indonesia's PISA score is still below peer and OECD countries. This condition is undoubtedly quite concerning. It needs to be addressed properly because low achievement in educational participation can negatively impact future welfare, especially for poor and vulnerable groups.

One of the policies that the Government has implemented to help poor and vulnerable groups in education aspect is providing social assistance. Social assistance in the educational aspect is crucial to reduce intergenerational poverty. There are two prominent social assistance programs in Indonesia related with education sector: (1) Smart Indonesia Program (PIP), and (2) Family Hope Program (PKH). These two programs have quite different schemes, even though they target almost the same group of recipients. However, the distributional impact of the programs has not been elaborated more which can be seen from limited researches regarding that topic.

The distributional impact of the social assistance can be examined through a number of instruments or models. One of them is by utilizing INDOMOD which is a tax-benefit microsimulation model for Indonesia with EUROMOD as a basis for the software. Having INDOMOD as an evaluation tool, the distributional effect of the social assistance's benefit can be assessed together with the impact on poverty and inequality.

Correspondingly, this paper will examine the distributive impact of those two social assistance programs on social welfare by using INDOMOD. The microsimulation will use the most updated INDOMOD based on March 2020 Susenas data. The study will begin with literature review, types of social assistance in the education sector, data and methodology, discussions, and conclude with conclusions and recommendations.

2 Cross Countries Practices and Findings from The Literature

Education is a prime investment that will not only positively impact students but also society as a whole (Musgrave, et al., 2002). Stiglitz & Rosengard (2015) also mentioned that higher investment In education will boost higher productivity. Furthermore, education will create greater social justice along with fair redistribution of economic resources across people. Thus, education will support people to improve their social mobility and their welfare in the future.

However, inequality in income, education, and development access is interrelated so that these aspects have to be addressed simultaneously. For instance, education might has a substantial role to create more jobs which will be beneficial either for each individual or for the country itself. Yet, there are people who do not have access to financing resource for education. Therefore, Government has to make interventions to provide for those people who are in needs (Stiglitz & Rosengard, 2015). One of the policies is providing education by using public finance to promote equal opportunity. Providing education can be implemented by several means including (i) provisioning minimum treshold for public expenditure; or (ii) educational support for low income groups as well as poor and vulnerable children in forms of social assisstance. Hence, access to qualified education also becomes an agenda to alleviate poverty (Stiglitz & Rosengard, 2015).

Looking deeper to social assisstance especially for education, generally it can be implemented by a few approaches. There is a universal public program distributed to all of the citizen (Tanzi, 2020). This program is financed by tax and could comprises all educational levels so that people can freely access education. Aside from that, there is also categorical welfare programs which is limited only for particular demographic characteristics. Many social welfare programs use this method for targetting. Another educational support is in the form of conditional cash transfer (CCT) or contingent welfare programs (Stiglitz & Rosengard, 2015). CCT is a social welfare program which is distributing cash transfer to poor and vulnerable households. Nevertheless, the underlying motive of this program is to promote the beneficiaries prospect in improving their welfare in the future as well as to promote human capital quality. Therefore, Stiglitz & Rosengard (2015) mentioned that there are requirements for the beneficiaries of the program to become eligible of the benefit such as their children have to go to school and they also have to bring their children to healthcare service regularly.

Showcase for the educational social assisstance programs can be seen in Head Start Program and Pell Grants in USA. Head Start programs comprise varying supports consist of early learning development, health, and family well-being for free for children until age five in eligible families (Office of Head Start, 2024). Head Start preschool is one of the programs included that assist children to succeed in school and life. One of the outcomes of the program is the improvement of social, emotional, and behavioral development of children enrolled in this program. Moreover, the program also aims the economic benefit will start to occur when children become an adults,.

Meanwhile, there is also Pell Grants awarded by U.S. Department of Education. The aim of this program is to support financial aid for undergraduate students who indicate financial need or from low-income sudents (Education, 2023). Whilst the program is considered to be impactful, it will depend also by the college type enrolled. Another drawback is the amount of the benefit which is not keeping up with the educational cost.

The common practices in Indonesia are not far behind from the global practice in the context of educational support from the Government. Currently, there are at least two biggest forms of financial aid for education, namely Program Keluarga Harapan (PKH) and Program Indonesia Pintar (PIP). The PKH is an example of CCT program which one of the eligibilities criteria for the beneficiaries require children at the family to go to school. Meanwhile, PIP is more into categorical welfare programs assigned to poor and vulnerable people. Amid the pandemic, these two social assistance, among others, were effective to protect beneficiaries opposed to food insecurities, more income decline, and protect children from dropping out of school or deteriorating learning (UNICEF et al., 2022).

There are many kinds of social economic impact simulation tools which have been utilized to evaluate the social assistance and a few of them has been tailored to countries or regions urgency. For example, there is Euromod which has widely used by European Union. Euromod is the tax-benefit static microsimulation model on household incomes and work incentives (Euromod, 2024). Furthermore, this model is open source since 2020 and has gain more users across Europe and beyond. Typically, EUROMOD simulates instruments such as income taxes, social insurance contributions, social assistance, and other-income related benefits.

Some of researches use EUROMOD to explore distributional effects and impact to poverty and inequality. For example, Pezer (2022) studied the possibility to reform its policies on child benefit and tax allowance and De Agostini & Tasseva (2015) simulated children’s benefit and its impact to child poverty. Meanwhile, Koutsampelas & Polycarpou (2013) provided an early assessment of distributional impacts of of austerity measures.

There are also studies regarding education aspect using Euromod. Spielauer et al. (2023) analysed the effect of aging and educational expansion on the sustainability of public and private transfers. Paulus, Sutherland, & Tsaklogou (2009) examine the estimation of size and incidence benefits from public housing subsidies, education and healthcare for a few regions in Europe. Another example is study about distributional effects of in-kind transfers of public education services to inequality (Tsakloglou, 2012).

Indonesia also has been developing INDOMOD by using EUROMOD software as an engine for the model. The endeavour to build INDOMOD has started since 2019 for in-house use by the Government of Indonesia (GOI) especially Ministry of Finance, supported by UNICEF Indonesia and Southern African Social Policy Research Institute or SASPRI (SASPRI, 2017). Similar with EUROMOD, the model uses household datasets of Indonesia which is called SUSENAS. The model has been updated occasionally and has been used to simulated social benefits and tax adjustment in Indonesia and its impact on poverty and inequality.

Several studies using INDOMOD has been taken since a few years ago. The most regular one is country report which is always disclosed if the model has been updated. The most recent country report is for INDOMOD version 3.1 using SUSENAS 2020. Another study has also been conducted related with the impact of natural disasters due to climate change and adaptive social protection in Indonesia (Gasior et al., 2023). There is also a policy brief exploring child-sensitive social protection in Indonesia using INDOMOD as one of the tools for analyzing (UNICEF et al., 2024).

3 Social Assistance in Education

Social assistance for children in Indonesia if grouping based on the benefits received by the child, it can be divided into two groups. First, benefits directly received by the child and second group is benefits that the child does not directly receive. Social assistance that provides direct benefits to children includes that has been given to mothers (for example, care and services for pregnant women), assistance directly received by children (for example, additional food/supplements for children at school), and assistance given to families with children (example: PKH and PIP). Meanwhile, assistance whose benefits are not directly received by children includes providing services for the general public (for example, regional libraries), intermediaries (for example, teachers and pediatricians), and overhead costs (for example, office and management costs).

Regarding social assistance to children in education, there are two types of direct assistance from the Government, which are given to families with children. The two social assistance programs, namely PIP and PKH, are compared in Table 1. PKH assistance has been provided since 2007 and is in the form of a conditional cash transfer. Meanwhile, PIP assistance is relatively new because it was launched in 2014.

Based on administrative data from each relevant agency and Susenas data, the number of PKH recipients exceeds that of PIP recipients. The number of PKH recipients is 10 million households. However, based on the March 2020 Susenas data processing results, only around 79% of households received PKH with an education component. Meanwhile, based on data from the Ministry of Education and Culture, the number of PIP recipients is around 18 million students distributed yearly.

Table 1. Comparation of PKH and PIP

Social Assistance	PIP	PKH
Unit in Charge	Education Ministry	Social Ministry
Purpose	1. Increase access to education for children aged 6-21 years until they have completed secondary education to support 12 years of compulsory education; 2. Prevent students from the possibility of dropping out of school or not continuing their education due to economic difficulties; 3. Attract students who have dropped out of school or have not continued to return to school	1. Improving the standard of living of beneficiary families through access to education, health and social welfare services; 2. Reduce the burden of expenses and increase the income of poor and vulnerable families; 3. Create changes in behaviour and independence for beneficiaries; 4. Reducing poverty and inequality; 5. Introduce the benefits of formal financial products and services
Beneficiary	Students aged 6 (six) years to 21 (twenty-one) years who come from poor/vulnerable families or with special considerations (natural disasters, orphans, disabilities, etc.)	Poor and vulnerable families are registered in the poverty management program's integrated data and designated as PKH beneficiary families.
Benefit Amount	SD: IDR 450 thousand/year SMP: IDR 750 thousand/year SMA/SMK: IDR 1 million/year	SD: IDR 900 thousands/year SMP: IDR 1,5 million/year SMA: Rp2 million/year
Eligibility	Registered in the Integrated Social Welfare Data (DTKS) of the Ministry of Social Affairs and marked PIP Eligible in the School Basic Education Data (Dapodik) or based on proposals from the provincial/district/city Education Office, or stakeholders	Registered with the Ministry of Social Affairs' Integrated Social Welfare Data (DTKS) and fulfils the component requirements as a PKH participant, namely: 1. Health Component: pregnant/postpartum women and children 0-6 years 2. Education Component: children aged 6-21 who have not completed 12 years of compulsory education, elementary school children, middle school children and high school children 3. Severe disability and elderly categories.

Source: Regulation of the Secretary General of the Ministry of Education and Culture No. 8/2020, Regulation of the Minister of Social Affairs No. 1/2018, https://kemensos.go.id/program-keluarga-harapan-pkh

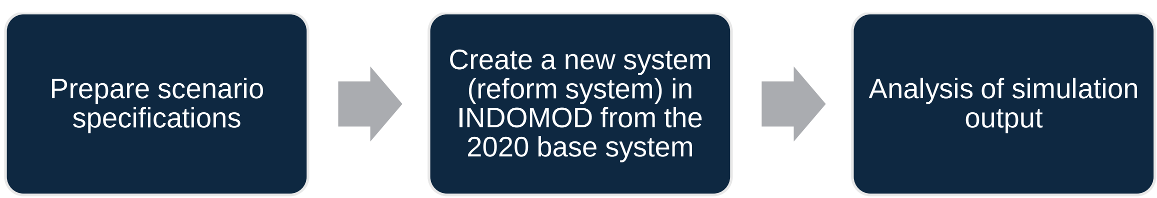
In general, the majority of PKH and PIP recipients are poor and vulnerable household groups. This fact is in line with the expected target recipients of those two social assistances. However, there are still groups of households that should not have received social assistance (inclusion error) but received social assistance. On the other hand, there are still households that should receive social assistance but do not receive assistance (exclusion error). This condition will significantly impact if the targeting data continues to be improved. Meanwhile, spatially, both PIP recipients and PKH recipients were more likely to be in rural areas in 2020.

4 Data and Methodology

The analysis will be carried out using the INDOMOD tool (Indonesia Microsimulation Model), a tax-benefit microsimulation model for Indonesia that runs on the EUROMOD software. The INDOMOD model is a collaboration between BKF-UNICEF-SASPRI-BPS. It has undergone several version updates, with the latest version currently being INDOMOD version 3.1. It is underpinned by the March 2020 Susenas data and includes 2020 and 2021 tax-benefit policy rules. INDOMOD is a static application that simulates nationwide tax-benefit policies and their impact on poverty and inequality based on information on socio-economic characteristics and market incomes in the data.

The analysis tests the distributional role of the education-specific components of the tax-benefit system focusing specifically on PIP and the education component of PKH. The stages of the analysis that will be carried out in the policy simulation are shown in Graph 2.

Graph 2. Policy Simulation Stages



Source: Author

INDOMOD allows certain characteristics of programs to be altered, programs to be abolished or new programs to be implemented. Three counterfactual policy reform scenarios are simulated to assess the distributional effect of the two social assistance programs. An overview of the counterfactual reform scenarios that will be carried out in this analysis is shown in Table 2. By abolishing PIP or the education components of PKH, the counterfactual situation without social assistance support can be compared to the actual situation when households receive the support. This comparison allows the effectiveness of the two social assistance programs to be analyzed.

The steps taken when processing data using INDOMOD are as follows:

a. Running current system/baseline of INDOMOD using the 2020 policy system which is based on taxes and benefits in place in March 2020;
b. After the first process, two reform systems were created on INDOMOD by copying the 2020 base system. The first reform system was to simulate the situation of households without PIP social assistance, and the second reform system was to simulate the situation without the education component of PKH social assistance. In both cases, the respective components are set to n/a which means that they are not included in the simulation of INDOMOD;
c. Run the three reform scenarios on INDOMOD;
d. Analyzing the impact on poverty and inequality by comparing the results of the baseline with the results of the two counterfactual reform systems using STATA or Statistics Presenter on INDOMOD.

Table 2. Policy Simulation Scenarios

No.	Scenario	Policies on INDOMOD	Variables on INDOMOD	Treatment on INDOMOD	Notes
1	Revocation of PKH	Program Keluarga Harapan (*Family Hope Program*) – bsa_id	bsa_	*Simulated*	In the reform system, all education components in PKH were made n/a
		Program Indonesia Pintar (*Smart*	bed_s	*Simulated*	Replacing the eligibility criterion relating to receipt of PKH from variable bsa_s with i_pkh_hh to anticipate overestimation of the impact of the PKH reform
2	Revocation of PIP	Program Indonesia Pintar (*Smart Indonesia Program*) – bed_id	bed_	*Simulated*	In the reform system it was made n/a
3	Revocation of PKH and PIP	Program Keluarga Harapan (*Family Hope Program*) and Program Indonesia Pintar (*Smart Indonesia Program*) – bsa_id and bed_id	bsa_s and bed_s	*Simulated*	In the reform system, all education components in PKH and bed_id were made n/a

Source: Author

Analysis was carried out on community expenditure classes comprising the poorest, vulnerable, less vulnerable and wealthiest groups grouped based on the INDOMOD database. The poorest group is those whose consumption expenditure is below the poverty line. Vulnerable groups are groups of people whose consumption expenditure is a maximum of 1.5 times above the poverty line. Less vulnerable groups are people with consumption expenditure between 1.5 - 3.5 times above the poverty line. Meanwhile, the wealthiest group is those whose consumption expenditure exceeds 3.5 times the poverty line. The poverty line used is the poverty line in March 2020, the same as the Susenas data used in INDOMOD.

Next, the analysis is carried out counterfactually, namely looking at the condition of society with and without social assistance (withdrawal) of social assistance. Based on the scenario simulation, an analysis was conducted to see the distributive impact of providing and not providing social assistance. Then, an analysis was also carried out regarding changes in poverty and inequality levels. First, the model ran the existing conditions' poverty level (%) and inequality. Second, after the simulation scenario, the model ran the poverty level (%) and inequality. The inequality level is measured using the Gini Coefficient.

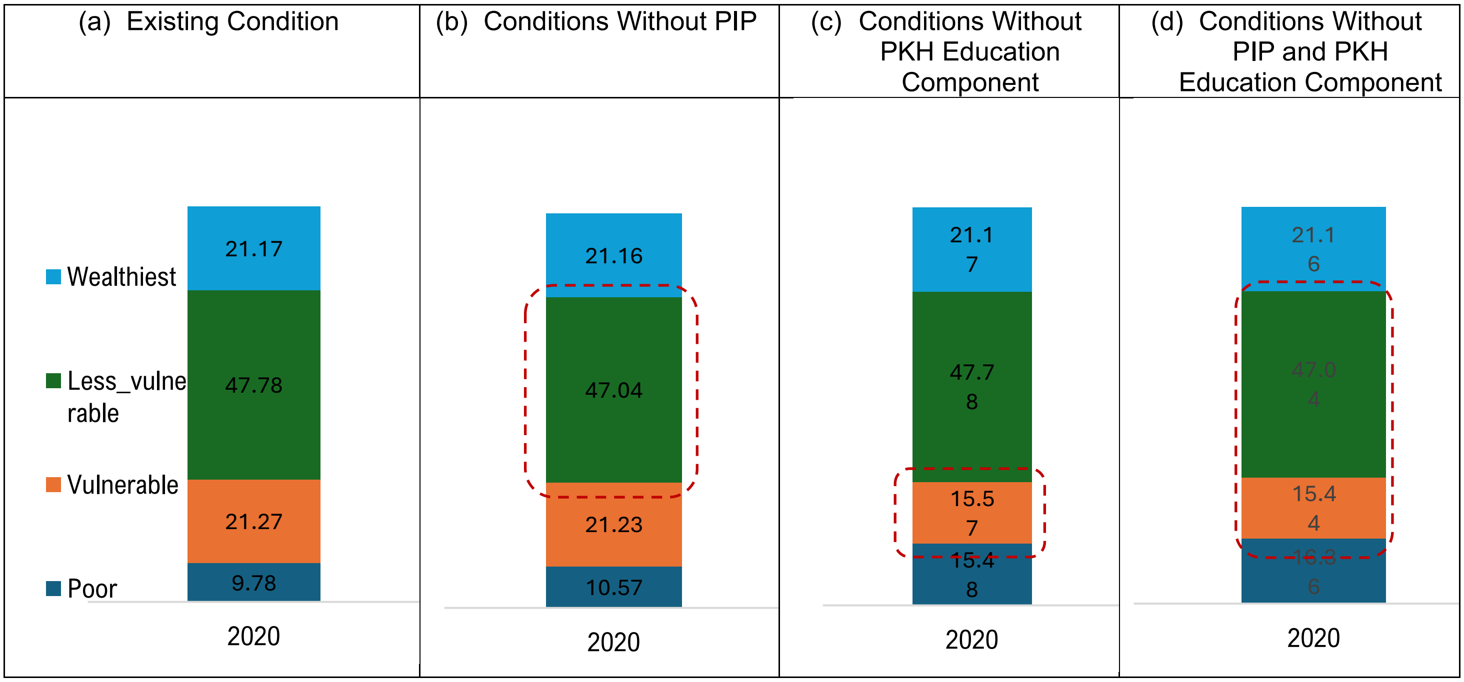
Analysis was also carried out on the impact of changes in poverty rate on each type of household. Social assistance aims to provide support to vulnerable community groups, which include, among others, women, children and the elderly. Therefore, in this study, the analysis will also be carried out at the level of household types with vulnerable groups so that the impact of the simulated policy scenarios on each type of household can be evaluated especially impact on poverty rate. In this study, the types of vulnerable households are divided into (1) households with children, (2) households with older people and (3) households with female heads of household plus households with male heads of household, as a comparator. The three vulnerable types of households are not mutually exclusive, so one household can be identified as part of several types of households.

5 Findings

The revocation of the education component of PKH has a more significant impact on poor and vulnerable groups than the revocation of PIP

The distributive impact of providing social assistance will depend significantly on the distribution of social assistance beneficiary groups. This condition is also influenced by targeting data on social assistance recipients. In Graph 3, it can be seen that the distribution of community groups changes with the withdrawal of social assistance. The poorest community groups experienced an increase in proportion either with the revocation of the education component of PKH, the revocation of PIP, or the revocation of both. However, repealing PIP or PKH has different distributive impacts on vulnerable and less vulnerable groups.

Graph 3. Distributive Impact of Social Assistance



Source: INDOMOD, processed

The most significant increase in the proportion of the poorest people occurs in the third scenario, which is simultaneously removing the education component of PKH and PIP. The proportion of poor groups increased significantly. Meanwhile, the proportion of vulnerable groups and less vulnerable groups has decreased as households are more likely of being poor without the financial support. However, the decrease in the proportion in vulnerable groups is much more significant than in less vulnerable groups. It shows that the education component of PKH and PIP together has provided economic support and reduced the vulnerability of this group. Therefore, when these two social assistances are withdrawn, vulnerable and less vulnerable groups of people will be very vulnerable of falling into poverty.

However, if simulated individually, the increase in the proportion of the poorest groups was more significant in the simulated scenario of revoking the education component of PKH compared to revoking the PIP component. Meanwhile, vulnerable groups experienced the most significant decrease in proportion in the simulation of the PKH revocation scenario for the education component compared to the simulation of the PIP revocation scenario. For less vulnerable groups, the simulation of the PIP withdrawal scenario had the most significant impact on reducing the proportion compared to the simulation of the scenario of removing the education component of PKH.

Based on the analysis of the distributive impact of the simulation of the two scenarios, the beneficiaries of the education component of PKH are more dominant in the poor and vulnerable groups. This fact can be seen from the decline in the most significant proportion due to repealing the PKH education component in vulnerable groups who moved to the poorest groups of society. Meanwhile, the proportion of less vulnerable community groups is relatively unaffected by the withdrawal of the education component of PKH.

Based on the simulation results, PKH has a more significant impact on poor and vulnerable groups. It is likely due to the greater number of beneficiaries and the amounts of benefits in PKH compared to PIP. Based on administrative data, the number of PKH beneficiaries is 10 million households. On the other hand, the number of PIP beneficiaries based on March 2020 Susenas data is 7.8 million households. Meanwhile, the benefit of PKH provided for the education component is also twice the benefits of PIP. For example, for elementary school education, the benefit provided by PKH is IDR 900 thousand per year. Meanwhile, the benefit of PIP for the elementary school level is IDR 450 thousand per year.

However, PIP provides more significant support, especially to less vulnerable groups. This fact can be seen from the impact of the repeal of PIP, which resulted in a decrease in the proportion, with the most significant being in less vulnerable community groups, which moves to lower groups, the poor and vulnerable groups. It also illustrates that PIP beneficiaries have a broader reach to almost all community groups, even though they differ in composition.

The revocation of the education component of PKH causes an increase in poverty levels and a higher level of inequality than the revocation of PIP

Simulation of the scenario of revoking the education component of PKH and PIP impacts increasing poverty and inequality. The impact is even higher if both the PKH and PIP revoke simultaneously. It can be seen in Graph 4 and from the distributive impact of policy scenarios, as discussed in the previous section. However, there are differences in the magnitude of the impact in the simulation of the two scenarios.

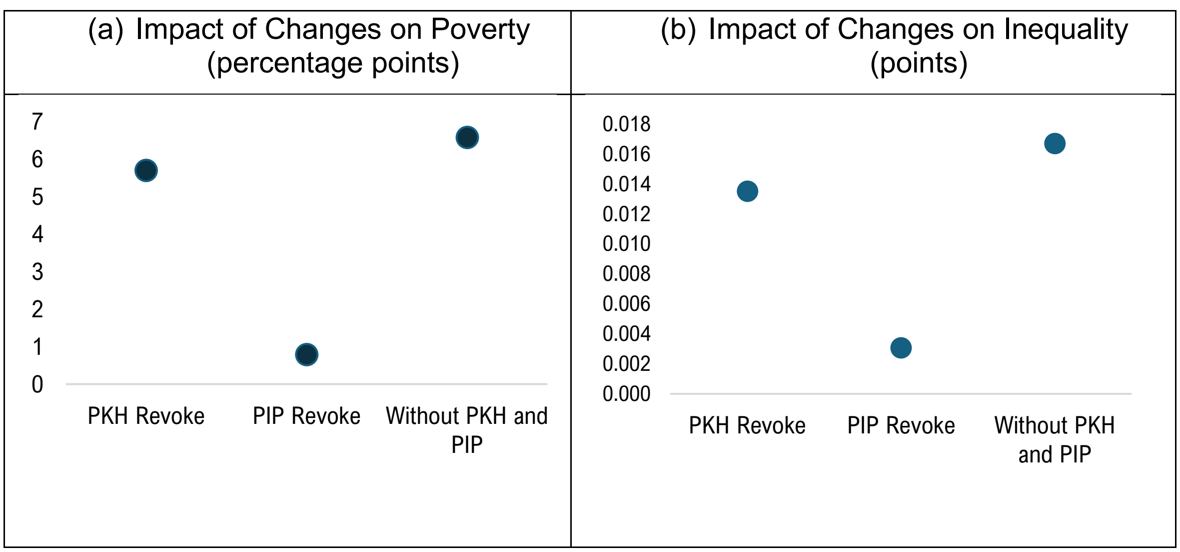
The third scenario, namely the removal of the education component of PKH and PIP, has the most significant impact on increasing poverty. The poverty level will experience a significant increase of 6.58 percentage points in the third scenario simulation. However, when simulated individually, the revocation of educational social assistance contained in PKH has a more significant impact on increasing poverty levels than the revocation of PIP social assistance. The poverty level in the PIP withdrawal scenario only increased by

0.8 pp. However, the poverty level could increase significantly by 5.71 pp in the scenario of withdrawing the education component of PKH.

The differences in the impact on poverty levels due to the two social assistance withdrawal scenarios are due to the group of recipients and the amount of assistance. The majority of beneficiaries of the education component of PKH are poor and vulnerable groups. It differs from PIP beneficiaries, whose reach is a broader community group. Apart from that, PKH benefit amounts from the education component are also more significant than PIP as stated in the previous section. Therefore, the withdrawal of both forms of education social assistance will have a significant impact on reducing the consumption level of this group, which will ultimately increase poverty levels.

A similar picture can also be seen in the impact of repealing the education component of PKH and PIP on the level of inequality. The level of inequality increases more significantly in the third scenario. namely the simultaneous revocation of the PKH education component and PIP with an increase of 0.02. However, the level of inequality increases more significantly in the scenario of withdrawing the education component of PKH social assistance compared to the scenario of withdrawing PIP. When the PKH education component is revoked, the level of inequality can increase by up to 0.01 points. Meanwhile, with the repeal of PIP, the level of inequality only increased by 0.003 points.

Graph 4. Simulation Impact of Revocation of Educational Social Assistance

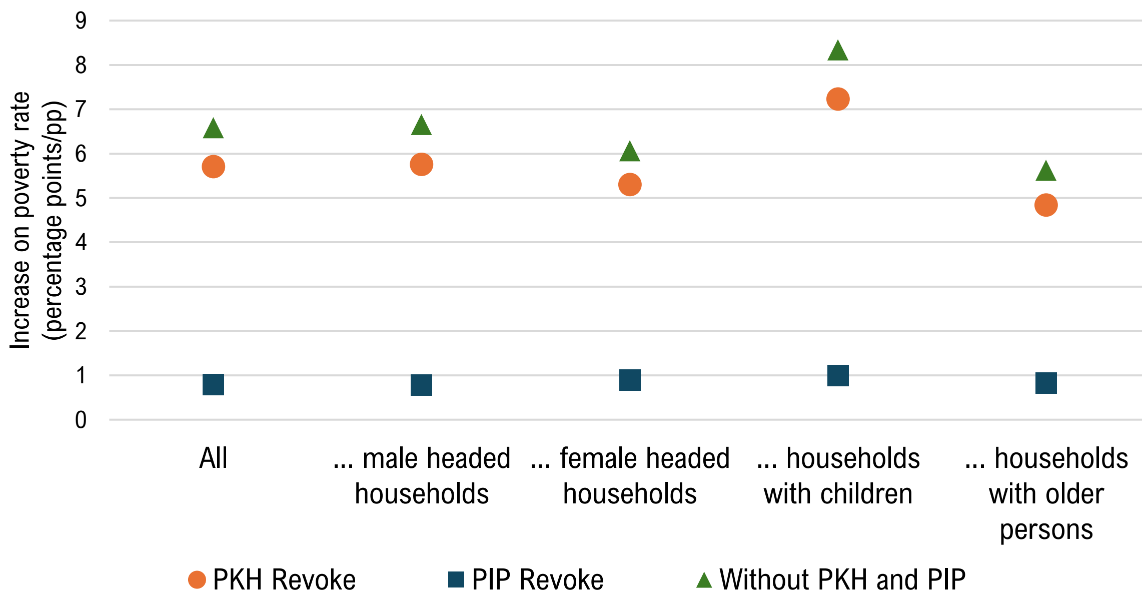


Source: INDOMOD, processed

<u>The revocation of the education component of PKH has a more significant effect on households with children than the revocation of PIP</u>

Social assistance withdrawal has a different impact on each type of household in terms of increasing poverty levels. Graph 5shows sequentially, the impact of the withdrawal of the education component of PKH on household groups starting from those experiencing the most significant impact are (1) households with children, (2) households with male heads of household, (3) households with female heads of household; and (4) households with older people. Meanwhile, the impact of revoking PIP on household groups starting from those experiencing the most significant impact are: (1) households with children, (2) households with female heads of household, (3) households with older people, and (4) households with male heads of household.

Graph 5. Impact of Scenarios on Poverty Levels per Household Type



Source: INDOMOD, processed

The increase in poverty rates in households with children is more significant than in other groups and the overall population. It is because, in households with children, the possibility of this type of household receiving PKH assistance with the education component and PIP is much greater than other groups. Therefore, when both educational social assistance is withdrawn, separately or simultaneously, it will significantly impact this type of household. It also shows that the educational, social assistance provided is well-targeted, especially for children still receiving education.

Providing social assistance for education, both PKH and PIP, significantly impact the welfare of households with children, although with different magnitudes. Graph 5 shows that the poverty level of households with children could increase by 7.2 pp if the education component of PKH were revoked. On the other hand, the impact resulting from the repeal of PIP is smaller than that of PKH. Households with children experienced an increase in poverty levels of only 1 pp with the repeal of PIP. If both social assistances were withdrawn simultaneously, the poverty rate for households with children would rise even higher, namely 8.3 pp. Therefore, based on the simulation of the two scenarios, we can conclude that both social assistance programs positively impacted the welfare of poor and vulnerable groups.

The impact of withdrawing educational social assistance on other types of households is relatively less than the impact on households with children and also the impact on the population as a whole. However, in Graph 5, vulnerable groups in Indonesia have the potential to have double challenges because they have to support several vulnerable household members. For example, in households with older people, simulating the scenario of withdrawing social assistance for education also has the potential to increase the level of poverty in these households. It means that the elderly household also has family members who are still children, either children supported by the elderly or children supported by their parents. This fact further indicates the "sandwich generation" phenomenon many productive age groups in Indonesia face. This condition will undoubtedly impact future welfare if an adequate social protection program does not support it.

6 Conclusions and Discussion

Education is one of the pillars of developing the quality of human capital. However, Indonesian people have yet to be able to enjoy educational services fully. It is partly due to the inadequate level of welfare (poor and vulnerable) to access these services. Through providing social assistance, the government is trying to overcome this challenge by distributing PKH and PIP, both of which aim to encourage people to continue their education by providing cash transfers.

Based on the simulation results, both PKH and PIP social assistance have an impact on reducing poverty. Even though PIP is directly aimed at helping with education costs, the assistance received by the community from this program also helps reduce poverty levels and influences the distribution of community welfare. It is different from PKH, which is a conditional cash transfer given according to the eligibility of the beneficiary family to help improve welfare and meet basic needs. These differences in characteristics can also be seen from the distributive impact of this assistance on community welfare groups.

Regarding the analysis of the problem topic in the study, several conclusions can be conveyed as follows:

a. Targeting data on beneficiary families need to be improved so that the social assistance provided is appropriately given to community groups who need it.
b. The distribution of targeted beneficiaries of PIP social assistance from poor and vulnerable groups needs to continue to be improved to help increase complementarity between social assistance so that it can help improve the level of community welfare

and especially access to education. In this case, it is also necessary to pay attention to simplification and ease of requirements for recipients of PIP assistance, especially for poor and vulnerable groups.

c. Spatial assessments (rural-urban) need to be carried out to determine the target beneficiaries, mainly because the poor population is still concentrated in rural areas. Also, spatial infrastructure conditions are essential in distributing social assistance and providing access to basic needs.

Comprehensive social protection programs targeting vulnerable groups in particular are urgently needed. The current "sandwich generation" phenomenon will place a heavy burden on families in vulnerable groups and have an impact on their welfare. Therefore, support from adequate and well-targeted social protection programs is essential.

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