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EFFECTS OF COVID-19 ON CHILD POVERTY AND EFFICACY OF SOCIAL PROTECTION RESPONSES IN THE PHILIPPINES

COMPONENT 1: EX-ANTE MICRO SIMULATIONS ON CHILD POVERTY AND SOCIAL AMELIORATION PROGRAMME

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Executive Summary

1.1. Background

The outbreak of coronavirus disease (COVID-19) has rapidly morphed into unprecedented health, economic, and geopolitical crisis. While the pandemic threatens to incur exceptional human costs around the world, the cost for low- and middle-income countries is expected to be even greater.

As of mid-January 2021, COVID-19 has spread throughout the Philippines, with over 600,000 confirmed cases and 12,837 deaths. In addition to the direct health effects from the transmission of COVID-19, there is growing evidence that the pandemic, and the actions taken to control the virus, have caused severe economic and social effects. According to the Asian Development Bank's estimates, GDP growth in the country is projected at -10 per cent year-on-year. The World Bank projects this to be the worst-ever recession in the Southeast Asia region, taking a disproportionate toll on informal sector workers and pushing millions into poverty.

This study assessed the effects of COVID-19 on monetary poverty and multidimensional vulnerabilities in the Philippines, with a special focus on children. The study also assessed the impact of the Social Amelioration Programme (SAP) in terms of its ability to reduce poverty and alleviate deprivations in the light of COVID-19.

1.2. Methodology and limitations

The impacts of COVID-19 presented in this study were derived through scenario-based impact modelling. Considering three different scenarios for income contraction (10 per cent, 20 per cent, and 30 per cent), the study estimated the impacts of COVID-19 on overall monetary and child poverty in the Philippines.

Furthermore, the study analysed the impacts of SAP as a response to the COVID-19 crisis and its efficiency in tackling the increase in poverty caused by the pandemic. The analysis was based on an average benefit level of Php 13,000 per household (e.g., two transfers of Php 6,500 each) for the first tranche of the programme and assumed an exclusion error of five per cent based on the DSWD SAP guidelines, stipulating a programme target of over 18 million households. The second tranche, the analysis was based on an average benefit level of Php 6,500 per household. As the SAP transfer complemented household income, new poverty headcounts for each of the three different scenarios were calculated.

To calculate multidimensional child poverty in the Philippines pre-COVID-19 and potential changes to it in the face of the pandemic, the study relied on the MODA methodology. The lack of quantitative data for many of the MODA dimensions was a limitation to creating a single multidimensional poverty index, thus the analysis was done separately for each dimension included in the index.

1.3. Findings

The main findings for each dimension included in the analysis are presented in the following.

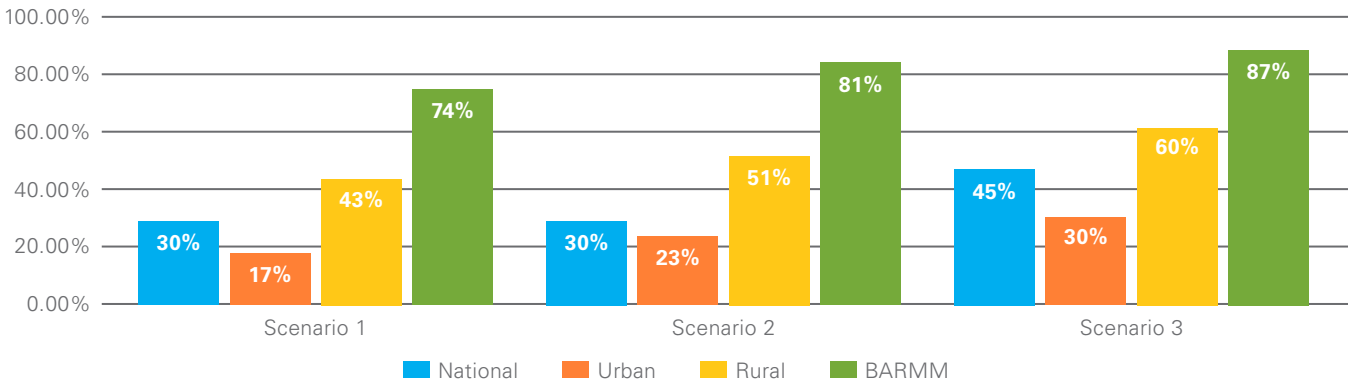
Poverty

Without the introduction of the SAP benefit, as an immediate result of the COVID-19 lockdown, **the national monetary poverty rate would have increased by between 4.6 and 17.6 percentage points,** and would be calculated to stand at 21.2 per cent for scenario 1, 27.2 per cent for scenario 2, and 34.2 per cent for scenario 3. Rural poverty rates would range between 32.2 per cent and 48.8 per cent, while urban poverty shows a range between 11.1 per cent and 20.9 per cent. Moreover, post-COVID-19 poverty rates in the **BARMM region** would have been expected to stand between 66.9 per cent (2.5 million persons) and 82.1 per cent (3.1 million persons), representing **an increase of between 8.4 and 23.6 percentage points.**

Child poverty

The COVID-19 pandemic has exacerbated the already precarious situation of Filipino children. Results show that without the SAP benefit, **child monetary poverty could have increased by between 5.9 and 21.5 percentage points –** reaching 29.9 per cent for scenario 1 and 45.5 per cent for scenario 3. There is a significant difference in child poverty between urban and rural areas; for scenario 2, the rate could reach 51.3 per cent in the rural areas against 23 per cent in urban

Figure 1. Child poverty post-COVID-19 different scenarios



locations. Children **in the BARMM region are more vulnerable than the national average, with poverty rates potentially reaching 73.7 and 87.1 per cent** for scenarios 1 and 3 – representing an increase that would vary from 8 to 21.4 percentage points in comparison to pre-COVID-19 figures.

Water, sanitation, housing

It has been observed that in the long run, an extreme economic crisis could potentially cause dislocation, forcing households to move to lodgings without access to safe drinking water, proper sanitation, or even safe facilities. However, as the crisis created by the COVID-19 pandemic is recent and ongoing, **despite the increase in the levels of monetary poverty, these indicators are not expected to change over the short term.**

Child violence

Violence against children is widespread and remains a harsh reality for millions of children in the Philippines. Studies have shown that COVID-19 increases the exposure of children to violence, including sexual violence, physical and emotional maltreatment. The Office of Cybercrime stated that **279,166 child sexual abuse cases have been reported from March 1 to May 24, 2020,** compared to 76,561 cases over the same period in 2019. **Cases of internet-based sexual exploitation of children saw an increase of up to 264 per cent.**

Education

Considering the impact which COVID-19 is anticipated to have on poverty, a surge in secondary school dropout rates throughout the next school year can be expected. **It is estimated that between 179,565 to 684,837 children drop out of secondary school due to increased poverty rates,** depending on the severity of the income drop scenario.

In the BARMM region, the situation is even more concerning, as school enrolment levels in the region are already significantly lower than the national average. Considering the projected poverty increase in the poorest region of the country, **a drop out of 2,241 to 6,280 students is estimated for BARMM children,** making a bad situation even worse.

1.4. SAP as a response to COVID-19

As a rapid response to the emergency, the government has launched the Social Amelioration Programme. This study assessed the effectiveness of the programme to contribute to the alleviation of the impacts of COVID-19 on poverty.

In terms of **monetary poverty, in scenario 1, the introduction of the SAP benefit reduces overall poverty by 4.4 percentage points** (4.8 million persons) – with 2.6 percentage points and 6.3 percentage points in urban and rural areas, respectively. For scenarios 2 and 3, an average poverty reduction of 5.57 percentage points was found. **In BARMM,** the SAP showed a poverty reduction impact **between 5.4 and 7.3 percentage points** depending on the scenario.

For scenario 1, the introduction of the **SAP benefit reduces child poverty to 24.46 per cent.** Despite the positive results, in all three scenarios, **there is still an increase in the number of children in poverty in comparison to the pre-COVID levels,** varying between 0.5 and 15 percentage points depending on the scenario. For the **BARMM region,** the SAP achieves a slightly better result, with **an average reduction in child poverty of 5.4 percentage points** depending on the scenario.

In terms of **food poverty, the introduction of the SAP benefit was found to reduce overall food poverty by 2.8 percentage points** (3 million persons) for scenario 1. For scenario 2 and scenario 3, the decrease ranges between 3.9 and 5.4 percentage points, respectively. The SAP transfer was estimated to alleviate some of the increased **poverty in BARMM, too, by an average of 10.8 percentage points.** Overall, despite the additional income provided by the SAP transfer, **there is an increase in the number of persons living below the food poverty line, compared to pre-COVID numbers.**

With the provision of the SAP benefit, the **projections for secondary school dropout reduce down to between 0.1 per cent and 5.2 per cent.** In the **BARMM region,** the reduction in secondary school dropout rates due to the SAP is more modest, likely due to lower enrolment rates, to begin with. **For scenario 1, the reduction of secondary school dropout was projected at 0.9 percentage points** or 1,949 pupils. While for scenarios 2 and 3, the average reduction due to the SAP transfer is 0.7 percentage points.

Finally, modelling results showed that the introduction of the SAP benefit contributes to a reduction in the country's GINI coefficient – reducing the inequality in the country by a maximum of 0.06 points. In all three scenarios, **the GINI coefficient after the introduction of the SAP benefit is lower than pre-COVID-19 levels standing at 0.394 in scenario 1 and 0.388 in scenario 3.**

Overall, considering that the COVID-19 crisis lasted longer than two months, and despite the SAP's benefit being relatively generous and reaching a large number of households, its impacts likely fall short of what the programme could have achieved, would it have been providing support more regularly.

Despite the additional income provided by the SAP transfer, the number of persons living below the food poverty line increased compared to pre-COVID numbers.

1.5. Policy options

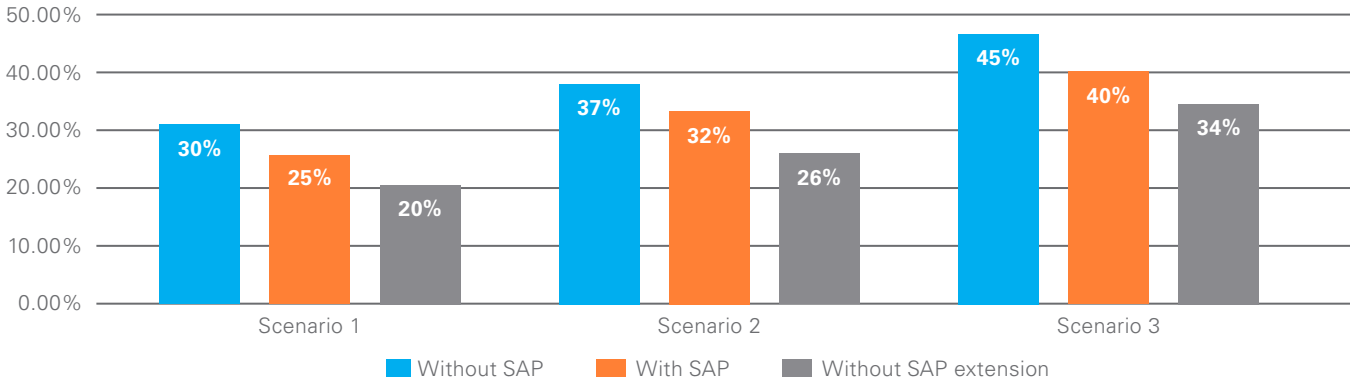
Considering that the COVID-19 crisis lasted longer than originally expected, the impacts on average household income have been severe. The two-month emergency relief provided by SAP was likely not sufficient to counter the rise in poverty. Hence, the study presents five policy options that could help increase the effects of SAP on poverty alleviation.

Extend the benefit by two months

In the case of extension for two more months, under scenario 1, **there would be an overall reduction in poverty by 11 percentage points. For scenarios 2 and 3, the reduction would be 9 and 10.1 percentage points,** respectively, with an average impact in rural areas of 12.5 percentage points. Looking into the country's poorest regions, when compared to a scenario without any emergency assistance, the impacts would be even more significant. For **BARMM, results suggest a poverty rate reduction between 11.7 and 15.6 percentage points –** with 443,179 to 591,031persons being moved out of poverty. Zooming into Bicol, Eastern Visayas, Western Mindanao, and Caraga, for scenario 1 there would be an average reduction of 12.8 percentage points – combinedly removing over 2 million people from poverty.

The extension of the SAP would also benefit the most vulnerable children. Results show that for **scenario 1 there would be a reduction in monetary child poverty by 12.3 percentage points,** reducing child poverty to 17.6 per cent – lower than the pre-COVID-19 rate. For scenarios 2 and 3 there would be an average reduction of 11.1 percentage points, with an average impact of 13.6 percentage points in rural areas. In the **BARMM region, results show an average child poverty reduction by 6.6 percentage points, compared to the regular SAP benefit.**

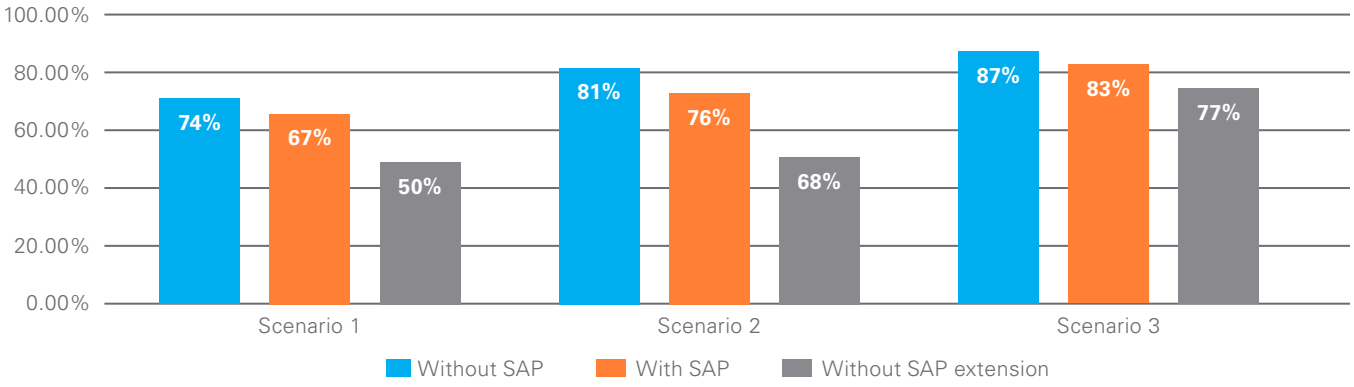
Figure 2. National child poverty post COVID-19



Extend the benefit in the BARMM region by four months

Results show that this extension would result in a further **decrease in poverty rates in BARRM by 19.5 to 23.9 percentage points,** representing 737,370 to 1,627,887 persons being moved out of poverty. In terms of monetary **child poverty, this extension would represent a reduction between 16.9 and 23.5 percentage points.**

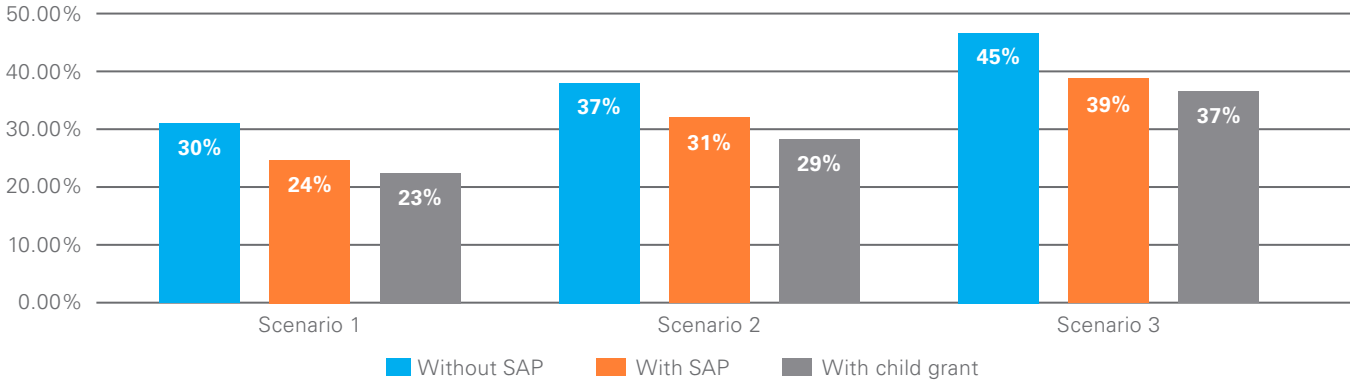
Figure 3. Child poverty post-COVID-19 in



Child grant to children from 0-2 years of age

A monthly grant of Php 500 for children under two years of age, would bring an **average reduction on overall poverty of 0.67 percentage points.** After the introduction of the grant, overall child monetary poverty in the age group 0 to 2 would decline with, on average, 14.16 percentage points compared to pre-COVID. Zooming into the poorest regions in the country , child monetary poverty in the age group 0 to 2 would have an average drop between 24.7 percentage points and 27.9 percentage points, depending on the scenario.

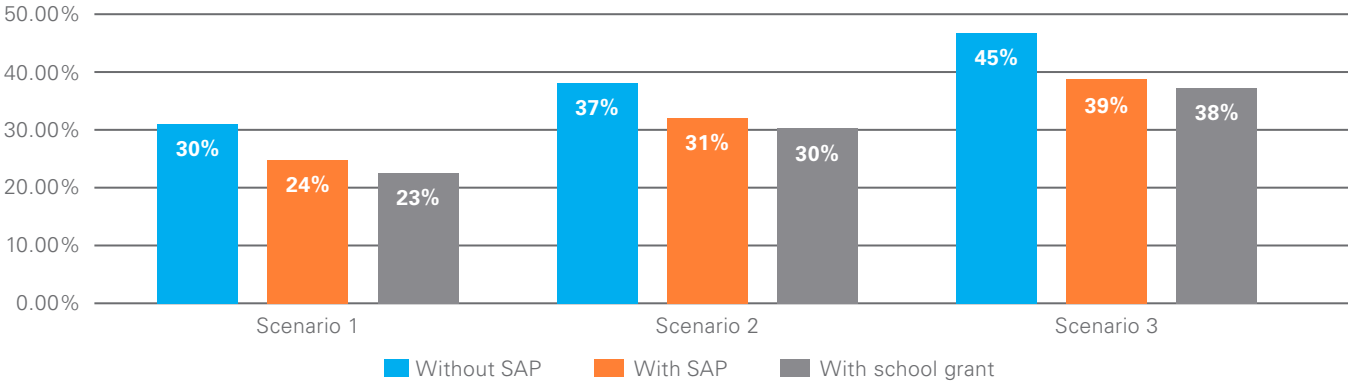
Figure 4. Child poverty post-COVID-19



Emergency school grant to children from 5-17 years of age

An emergency grant of Php 1,200 for children between 5 and 17, would bring an average reduction of **overall monetary poverty of 0.69 percentage points –** with 0.45 percentage points and 0.88 percentage points for urban and rural areas respectively. **In terms of monetary child poverty, the emergency school grant would represent an average reduction of 1.82 percentage –** pulling an average of 744,913 children out of poverty nationwide. Looking into BARMM; Bicol, Eastern Visayas; Western Mindanao, and Caraga, child monetary poverty would have an average drop between 7.9 percentage points and 9 percentage points, depending on the scenario.

Figure 5. Child poverty post-COVID-19



4P expansion

An expansion of the 4P programme to include those with income only 15% above the current poverty threshold would bring **an average reduction of 3.3 percentage points on the number of people living just above the poverty line** (Table 21). In terms of child poverty this would mean that over **22.000 children would no longer be living in a near poverty situation.**

4P expansion – lift three-child limit

Lifting the three-child limit could not only **contribute to the reduction of monetary poverty but also accelerate results in other dimensions and contribute to several desired child outcomes.** Due to data limitations, this study was unable to simulate accurate results for the impacts of this expansion in monetary poverty. Nonetheless, it is strongly advised for this policy option to be taken into consideration, as cash transfer programmes are effective policy instruments in reducing monetary child poverty, boosting school enrolment, increasing use of health services, improving dietary diversity.

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09 JUNE 2021

Introduction

The outbreak of the coronavirus disease (COVID-19) has rapidly morphed into unprecedented health, economic, and geopolitical crises. While the pandemic has wrought exceptional human costs around the world, the cost for low- and middle-income countries is expected to be greater. As of mid-January 2021, COVID-19 has spread throughout the Philippines, with over 600,000 confirmed cases and 12,837 deaths. In addition to the direct health effects from the transmission of COVID-19, there is growing evidence that the pandemic, and the actions taken to control the virus, have caused severe economic and social effects. Economic costs, resulting from the global lockdowns, will be especially high due to strongly interconnected markets around the world, affecting Southeast Asia and specifically the Philippines, severely. The Asian Development Bank (ADB) forecasts the country's GDP growth in 2020 will be -10 per cent year-on-year. The World Bank projects this to be the worst-ever recession in the Southeast Asia region, taking a disproportionate toll on informal sector workers and pushing millions into poverty.

This report is an assessment of monetary poverty and various multidimensional vulnerabilities, focusing on the impact that COVID-19 has on selected outcomes in the Philippines. In the next sections, the report will first briefly describe the study's methodology, clarifying the approach used to model the socio-economic impact of COVID-19. This is followed by an analysis of the impact of COVID-19 across several dimensions, considering three levels of severity in terms of income contraction. The Social Amelioration Programme (SAP) is also assessed in terms of how it has reduced poverty and eased sectoral deprivations. Lastly, two policy options to extend SAP beyond the current two months are recommended and costed for consideration.

Methodology and Limitations

2.1. Monetary poverty

The impact of COVID-19 presented in this report was derived from scenario-based impact modelling. The Philippines' macroeconomic indicators suggest that the pandemic has had severe consequences on the country's economy. In the first quarter of 2020, real GDP contracted by 0.2 per cent and the ADB forecasts the 2020 growth rate for the Philippine economy will exceed -10 per cent (Vera, 2020). A study from the Philippine Institute for Development Studies, using data from the 2018 Family and Income Expenditure Survey, estimates different scenarios on the impact of the economic recession on household income levels – with a medium-case scenario of 10-per cent drop in income and a worst-case scenario of 20-per cent drop in income (Albert, Abrigo, Quimba, & Vizmanos, 2020). Further studies revised the estimates and included an updated worst-case scenario of a 30-per cent decrease in household average income (Navarro, Reyes, & Francisco, 2020). This report estimated the impact of COVID-19 on overall monetary poverty in the Philippines by considering three scenarios of income contraction (10 per cent, 20 per cent, and 30 per cent).

This report also analysed the impact of SAP as a response to the COVID-19 crisis and its efficiency in tackling the increase in poverty caused by the pandemic. This analysis was based on an average benefit level of Php13,000 (e.g., two transfers of Php 6,500 each) per household and assumed an exclusion error of 5 per cent on DSWD SAP guidelines (2020). The SAP targeted over 18 million households which meant an average 70 per cent of Filipino households received the benefit. As the SAP complemented household income, new poverty headcounts for each of the three scenarios were calculated.

Lastly, this report also projects an income recovery for the next three years. This assumes conditions will be ripe for a V-shaped recovery, allowing the Philippines to get back into the economic trajectory that the country had prior to COVID-19. For a V-shaped recovery, a constant growth rate of real income per capita of 2.5 per cent per year is considered. (Albert, Abrigo, Quimba, & Vizmanos, 2020). To project the impact of this recovery on poverty rates, the national poverty line was adjusted to 2023 values based on an average inflation rate of 2.5 per cent per year (PSA, 2020), and the population weight was adjusted to 2023 based on an annual growth rate of 1.4 per cent (World Bank, 2018).

Box 1. Income contraction assumptions

Previous studies on estimating the impact of COVID-19 on household average income had to assume different impact severity rates because of the absence of robust data assessing households' incomes. In a poverty study by Albert et al, a worst-case scenario of a 20-per cent decline in incomes was assumed. In this scenario, the national poverty rate would increase by 44 per cent from almost 17 per cent to over 24 per cent. This meant almost 1 in every 4 Filipinos would be living in poverty today.

However, since the publication of that study, new data points suggest that a more severe income drop may be more realistic. The IMF has revised further downwards its growth forecast with almost 5 percentage points, from-3.6 at the time of the Albert et al study, to-8.3 per cent. Several surveys corroborated this finding. The UNDP Pulse Survey found that 25 percent of households in the National Capital Region (NCR) and Cebu had lost all income by September 2020, with many more households reporting a sustained significant reduction at that time as well. As a result, this study went beyond the worst-case scenario of earlier studies and added a more severe impact scenario of a 30-percent decline in household income.

2.2. Multidimensional poverty

The Multidimensional Overlapping Deprivation Analysis (MODA) has been developed by UNICEF to define and measure child poverty to analyse multidimensional child deprivation, taking into account the complex realities of poverty children experience at different stages of their lives (Milliano & Plavgo, 2014). The methodology adopts a child rights approach concentrating mainly on children's access to the goods and services crucial for their survival and development and acknowledges the fact that children experience poverty differently from adults due to changing needs at various stages in their lives. Taking a life cycle approach, the MODA methodology has specific indicators for children ages up to five years and a different set to calculate deprivation of children older than five years. For those younger than five, the MODA focuses on: nutrition, health, sanitation, water, housing, and domestic violence. For older children the dimensions are: education, information, water, sanitation, housing, and domestic violence (Milliano & Plavgo, 2014).

This report aims to address multidimensional child poverty in the Philippines and how child deprivation may have increased in face of the COVID-19 crisis. While the report used the MODA methodology, other multidimensional indexes were also considered, such as the Child Vulnerability Index. This measures how likely it is for children to be at risk in a particular country, using data such as Gross National Income per capita, under-5 mortality rate and other measures of living standards, schooling and orphanhood (SOS Children's Villages

International, 2015). However, due to data limitations, instead of creating one single multidimensional indicator each dimension in a MODA index was analysed separately. This study assumes that in the short term, the COVID-19 crisis would only impact education, nutrition, and domestic violence. To model and estimate the socio-economic impact of COVID-19 in these dimensions, an extensive literature review identified the links between these indicators and poverty, which, in turn, helped define the impact pathways to be modelled. The impact on domestic violence is presented as qualitative analysis, due to the absence of quantitative data. The methodology for the education and nutrition model is laid out in detail as follows.

2.3. Education

The impact of the lockdown on the education outcomes model is based on enrolment rates from 2018 and the total population in 2018. Enrolment rates in the Philippines are already higher than the regional average (World Bank, 2019). An assumption was made the 2018 rates could be extrapolated to the current scenario.

The secondary dropout rate is modelled based on findings from a study on the elasticity of school enrolment. The study reveals that "a ten per cent increase in household income leads to an increase in the probability of being enrolled of 0.73 per cent" (p.17). This finding was extrapolated and applied to secondary enrolment rate. Inequality plays a significant role in secondary schooling and less so in primary education, as reflected in enrolment rates in primary school (World Bank, 2019). Considering projections for the three scenarios and the associated poverty rates, it is possible to calculate the possible impact of higher poverty rates on secondary school enrolment in the coming years compared with enrolment before the COVID-19 crisis.

2.4. Nutrition

To model the possible impacts of COVID-19 on nutrition outcomes (underweight, wasting, and obesity), previous research findings were used. A study using data from 121 Demographic and Health Surveys from 36 countries, Vollmer et al. (2014) have found an OR of 0.989 for underweight and 0.983 for wasting for a 5-per cent increase in GDP per capita (for both, p-values are below 1 per cent). For obesity, findings from previous research show an increase of 16.26 per cent in the national obesity rate with every unit increase in the log of income (p-value highly significant and below 1 per cent). Results on wasting, underweight, and obesity were computed based on this link to income, taking into consideration the projected drop in income as a result of COVID-19. It should be noted that there may be a missing value bias when looking solely at the link between GDP per capita and nutritional outcomes, as health and nutrition knowledge may moderate the effect of income reduction on health outcomes.

To compute COVID-19's impact on food poverty, the Philippines' 2018 national food poverty line of Php1,505 per month was used, adjusted according to the country's inflation rates between 2018 and 2020. It was assumed that the pandemic had not significantly affected local agriculture's supply, thus, the increase in the food poverty line was caused mainly by inflation. Considering the income drop scenarios post-COVID-19, an updated food poverty was projected.

Findings

3.1. Monetary poverty

The Philippines' poverty rate decreased from 23.3 per cent in 2015 to 16.6 per cent in 2018; pre-COVID-19 projections also pointed to a further decline in the upcoming years (Navarro, Reyes, & Francisco, 2020). This shows that even though the economy has recently slowed, the Philippines was still making progress in poverty reduction (Albert, Abrigo, Quimba, & Vizmanos, 2020). Significant improvements were also made in terms of extreme poverty, representing the proportion of Filipinos who live in households with (per capita) incomes lower than food needs. The rate fell to 5.2 per cent in 2018, nearly half of the 9.1 per cent extremely poor Filipinos in 2015. With poverty rates rising due to COVID-19, measures need to be in place to avoid wiping out gains made in improving welfare conditions from 2015 to 2018 (Albert, Abrigo, Quimba, & Vizmanos, 2020).

3.1.1. Poverty in the Philippines pre-COVID-19

The pre-COVID-19 poverty rate in the Philippines was estimated at 16.6 per cent, or a total of 18,260,000 people living in poverty. Numbers show a big disparity in poverty rates between urban and rural communities: 8.2 per cent in urban areas and 25.7 per cent in rural. The poverty gap or the ratio showing the average shortfall of the population from the poverty line was pegged at 3.9 per cent nationally, with 1.8 per cent and 6.1 per cent in urban and rural areas, respectively. Poverty severity, which is a poverty measure sensitive to the income distribution among the poor was at 1.2 per cent overall and 0.06 per cent and 2.1 per cent in urban and rural areas respectively *(Table 1)*.

Children were found to be at higher risk of living in poverty compared to the total population. The poverty rate for children was 24 per cent. It is important to take note of regional differences when analysing poverty rates in the Philippines. The pre-COVID-19 poverty rate in the Bangsamoro Autonomous Region of Muslim Mindanao (BARMM), historically the poorest region in the country, was 58.5 per cent.

Table 1. Poverty pre-lockdown (2020)

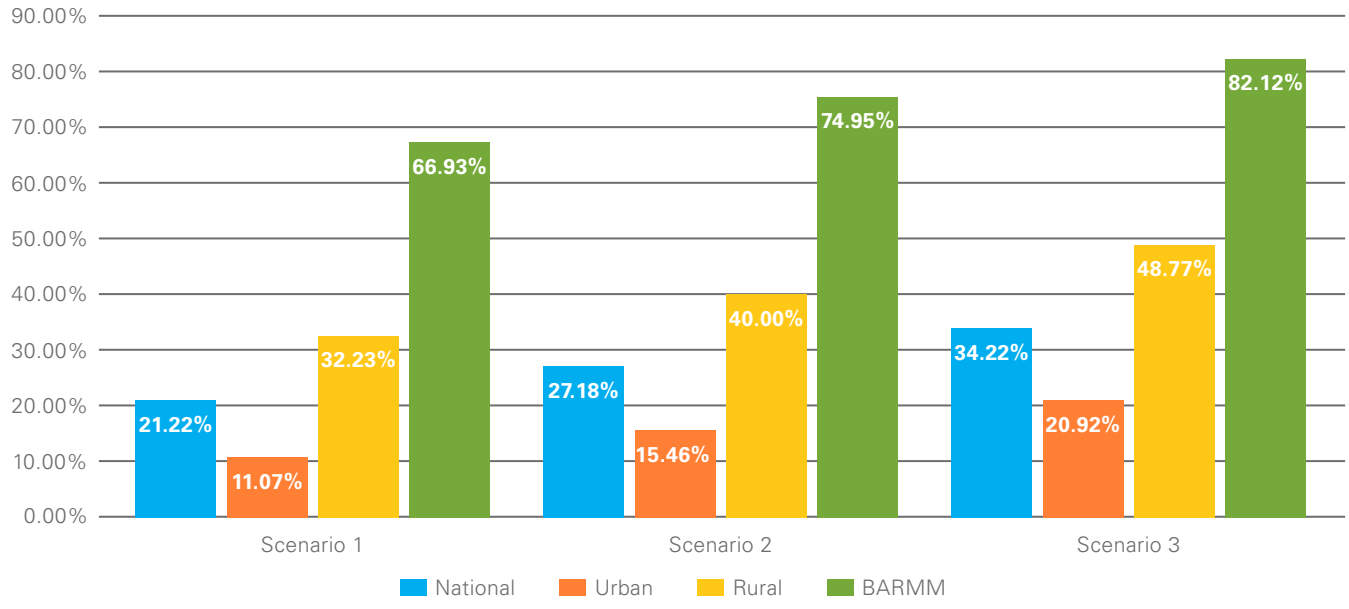
Poverty measure	Total	Urban	Rural	BARMM
Poverty rate	16.6%	8.2%	25.7%	58.5%
Poverty headcount	18,260,000	4,270,068	14,904,360	2,212,111
Poverty gap	3.9%	1.8%	6.1%	15.8%
Poverty severity	1.2%	0.06%	2.1%	5.8%

3.1.2. Impact of COVID-19 on poverty in the Philippines, without SAP

This section presents the projected poverty rates after COVID-19 without the SAP benefit, considering three scenarios of severity (10 per cent, 20 per cent, and 30 per cent reduction in household incomes). The national poverty rate after COVID-19 would have increased between 4.6 percentage points and 17.6 percentage points; it would be estimated at 21.2 per cent for scenario 1; 27.2 per cent for scenario 2; and 34.2 per cent for scenario 3. Rural poverty would range between 32.2 per cent and 48.8 per cent, while urban poverty would range between 11.1 per cent and 20.9 per cent *(Figure 1)*. The poverty gap also shows a considerable potential increase, compared with pre-COVID-19 levels, rising to as high as 10.4 per cent of GDP in the most severe scenario. The latter indicates that the average depth of poverty would also increase substantially, growing from an average of 1.2-per cent shortfall in income from the poverty line for people living in poverty to more than 4.3 per cent in the worst-case scenario.

For the three scenarios in BARMM, after COVID-19, the poverty rate is calculated to set between 66.9 per cent (2,530,882 people) and 82.1 per cent (3,105,275 people), an increase of 8.4 percentage points to 23.6 percentage points *(Table 2)*. This shows that the poorest region of the country is hit relatively harder than other locations. Pre-COVID-19, the poverty rate at the BARMM was 41.9 percentage points higher than the national poverty rate; post-COVID-19, the difference would have risen to 47.9 percentage points (in the worst-case scenario).

Figure 1. Poverty post-COVID-19 for different scenarios



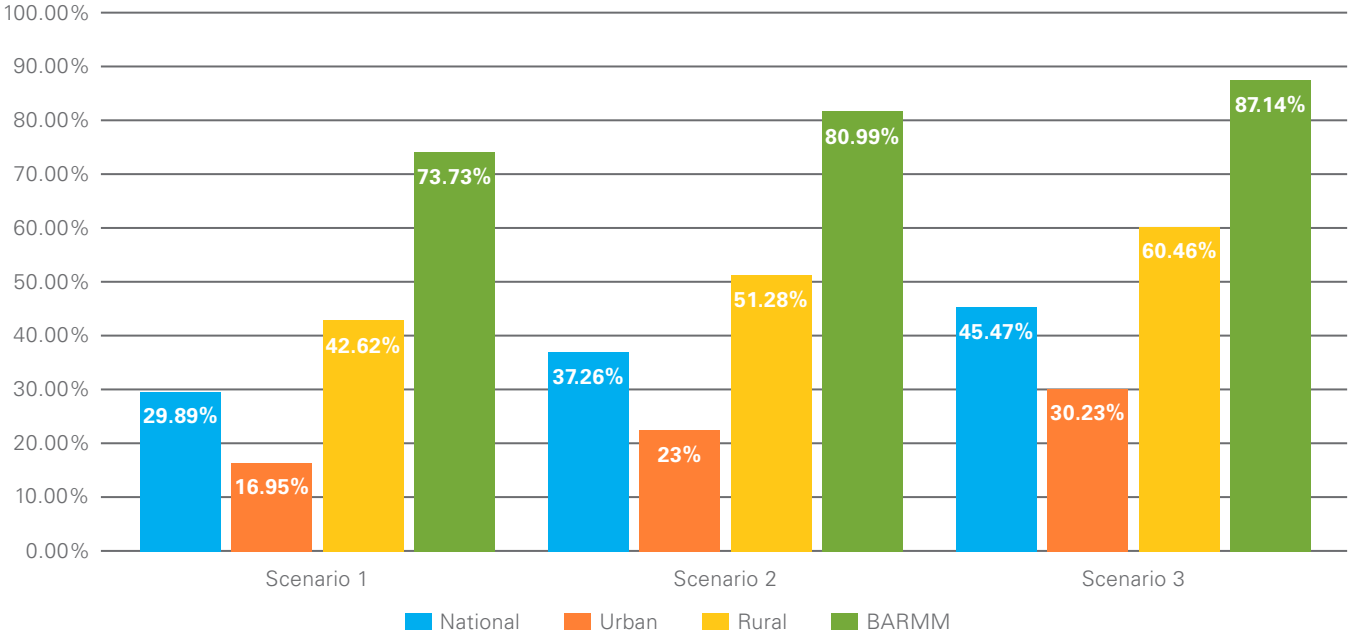
Source: 2018 FIES / author's calculation

Table 2. Poverty headcount post-COVID-19 for different scenarios

Poverty headcount (Without SAP)	Pre-COVID-19	Scenario 1	Scenario 2	Scenario 3
National	18,260,000	23,342,000	29,898,000	37,642,000
Urban	4,270,068	5,764,592	8,050,640	10,893,881
Rural	14,904,360	18,669,550	23,170,400	28,250,510
BARMM	2,212,111	2,530,882	2,834,150	3,105,275

Child poverty results show a potential increase of between 5.9 percentage points and 21.5 percentage points; the increase would reach 29.9 per cent for scenario 1 and 45.5 per cent for scenario 3 *(Figure 2)*. There is a significant difference in child poverty rates in urban and rural areas; in scenario 2, the rate could reach 51.3 per cent in the rural areas and 23 per cent in urban locations. Children living in BARMM are more vulnerable than the national average, with poverty rates that could range from73.7 per cent to 87.1 per cent for scenarios 1 and 3 – an increase that varies from 8 percentage points to 21.4 percentage points compared with pre-COVID-19 figures *(Table 3)*.

Figure 2. Child poverty post-COVID-19 for different scenarios



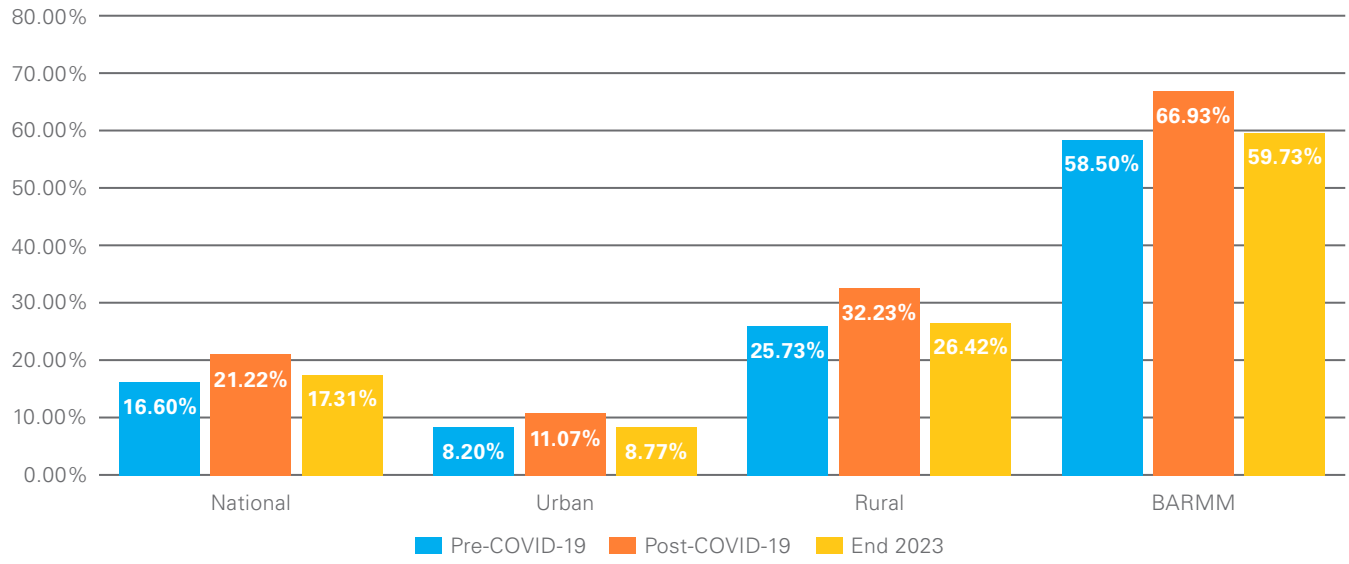
Source: 2018 FIES/author's calculation

Table 3. Child poverty headcount post-COVID-19 for different scenarios

Child poverty headcount (Without SAP)	Pre-COVID-19	Scenario 1	Scenario 2	Scenario 3
National	9,792,818	12,211,403	15,222,379	18,576,531
Urban	2,358,733	3,116,175	4,228,438	5,557,639
Rural	7,848,758	9,576,698	11,522,597	3,585,340
BARMM	1,044,389	1,170,967	1,286,269	1,383,942

This study also projected a possible economic recovery and modelled the impact on poverty indicators. Given an average income recovery of 7.5 per cent in the next three years, by the end of 2023, the poverty headcount in the Philippines is expected to range from 17.3 per cent (or 19,041,000 people) to 29.2 per cent (or 32,175,000 people) *(Figure 3)*. This shows that even for scenario 1, poverty rates are seen to remain higher than pre-COVID-19 levels by 0.7 percentage points by the end of 2023. Under scenario 2, three years after the COVID-19 outbreak, it is estimated that there will be an additional 6,215,000 Filipinos living in poverty *(Table 4)*. The situation is worse in BARMM. Compared with pre-COVID numbers, the poverty rate is expected to increase between 0.7 percentage points to 17.9 percentage points for scenarios 1 and 3 respectively, even with the income recovery.

Figure 3. Poverty comparison for scenario 1 (pre-COVID-19, post-COVID-19 and end 2023)



Source: 2018 FIES/author's calculation

Table 4. Poverty headcount comparison for scenario 1 (pre-COVID-19, post-COVID-19 and end 2023)

Poverty headcount (Scenario 1)	Pre-COVID-19	Post-COVID-19	End 2023
National	18,260,000	23,342,000	19,041,000
Urban	4,270,068	5,764,592	4,566,890
Rural	14,904,360	18,669,550	15,304,049
BARMM	2,212,111	2,530,882	2,258,622
Poverty headcount (Scenario 2)	**Pre-COVID-19**	**Post-COVID-19**	**End 2023**
National	18,260,000	29,898,000	24,475,000
Urban	4,270,068	8,050,640	6,384,272
Rural	14,904,360	23,170,400	19,555,818
BARMM	2,212,111	2,834,150	2,603,107
Poverty headcount (Scenario 3)	**Pre-COVID-19**	**Post-COVID-19**	**End 2023**
National	18,260,000	37,642,000	32,175,000
Urban	4,270,068	10,893,881	9,050,461
Rural	14,904,360	28,250,510	24,462,150
BARMM	2,212,111	3,105,275	2,908,265

Box 2. Income recovery

This study assumes a V-shaped recovery to model a future recovery of a household's average income. Previous studies, including one by Albert et al, surmise that such a recovery allows the Philippines to get back into the same economic trajectory that the country had prior to COVID-19. A V-shaped recovery assumes a constant annual growth rate of 2.5% for 2021 onward.

3.1.3. Poverty among the most vulnerable children

This section assesses the poverty impact of COVID-19 for some of the most vulnerable children if the SAP benefit was not implemented. For households with more than five members, their poverty headcount rate before COVID-19 was 9.3 percentage points higher than the national average. After the COVID-19, the impact of the pandemic was higher for households with more than five members, with post-COVID poverty rates ranging from 40 per cent to 56 per cent – an average of 10 percentage points higher than the national average.

Results also show that households with children currently not enrolled in school have higher poverty rates than the national average, with pre-COVID-19 poverty rates 12.9 percentage points higher than overall numbers. The impact of COVID-19 on the poverty rate of these households could vary from 44 per cent to 59 per cent – an average of 14 percentage points higher than national levels. These results show that it is essential for a social protection programme to consider dimensions of vulnerability beyond monetary poverty when addressing the needs of the most vulnerable children.

3.2. Multidimensional poverty

Income poverty alone cannot fully capture the dire situation of the most vulnerable sector of the population. Efforts to fight monetary poverty are not simultaneously reflected in other aspects of living, such as access to safe water, sanitation, safe shelter, education, and a nutritious diet. Deficits in any of these dimensions or, worse, overlapping deprivations can have severe consequences on a person's well-being and a country's socio-economic development.

This report deems it important to expand the analysis of the impact of COVID-19 beyond monetary poverty by giving a multi-dimensional perspective of the levels of deprivation among Filipino children. While the effects of the COVID-19 crisis on monetary poverty are direct and notable, the impact on various dimensions of deprivation, especially among the most vulnerable, are potentially just as severe. The next sections present projected results for dimensions used in the MODA methodology. The results show Filipino children will suffer the impact of COVID-19 on multiple, potentially overlapping deprivations.

3.2.1. Water

As part of its poverty reduction strategy, the Philippines, over the past couple of years, made significant efforts to increase access to drinking water. Lack of access to safe drinking water and household vulnerability are inextricably linked. Women are forced to spend hours large parts of their day fetching water; poor farmers and wage earners are less productive due to illness and children are more prone to severe cases of diarrhoea (UNICEF, 2020). According to data from the 2017 EPIS, 94 per cent of Philippine households have access to improved sources of drinking water, including piped water tubes, wells or boreholes, protected dug wells, bottled water, protected springs and rainwater. In the Philippines, the availability of improved sources of drinking water varies between rural and urban areas; figures are 91 per cent and 97 per cent, respectively (PSA, 2019).

The lack of access to improved sources of drinking water has a negative impact on households' deprivation levels and contributes to multidimensional poverty. But monetary poverty is not necessarily linked to the absence of improved drinking water, as infrastructure and public policies can guarantee safe drinking water even to the poorest households (ADB, 2009). Therefore, a decrease in a household's average income will not necessarily impair a household's access to drinking water in the short term. But over the long term, an extreme economic crisis could potentially cause dislocation, forcing households to move to lodgings without access to safe drinking water. As the crisis created by the COVID-19 pandemic is still recent, and despite the increased levels of monetary poverty, water indicators are not expected to change in the short term (UNICEF & Save the Children, 2020).

3.2.2. Sanitation

Despite the recent improvements in the levels of monetary poverty, around 20 million Filipinos do not have access to safely managed sanitation services.

Residents of Bgy. Tubaon, Virac, Catanduanes receive jerry cans supplied by UNICEF Philippines and distributed by the Regional Department of Health of Catanduanes.

©UNICEF Philippines / 2020 / Iris Lapid

Of these, some 9 million Filipinos use limited/unimproved toilets or none at all (UNICEF, 2020). Untreated waste from poor sanitation services has negative effects on the environment and can spread diseases that cause poor health and nutrition, loss of income, decreased productivity, and missed educational opportunities. In the Philippines, 297,000 children are estimated to die each year from diarrheal disease due to unsafe water and sanitation services (UNICEF, 2020). Increased investments need to be made for the country to reach the target of sanitation for all by 2030.

The COVID-19 pandemic has highlighted the vital importance of proper sanitation and its link to hygiene and the spread of diseases. However, the

pandemic is not expected to impair access to proper sanitation. A decrease in a local household's average income will not necessarily lead to a deterioration in sanitation indicators in the short term. This will happen only if households are forced to relocate to lodgings without access to sanitation facilities. As the crisis created by the COVID-19 pandemic is still recent, the increased levels of monetary poverty are not expected to worsen sanitation indicators (UNICEF, 2020b).

3.2.3. Housing

The Philippines has a housing backlog of 3.9 million households, with the highest demand for economic housing, followed by socialized housing, and lastly by low-cost housing. Significant public and private investments are required if the country aims to achieve the Sustainable Development Goals' target and by 2030, ensure access for all to adequate, safe and affordable housing and basic services, and slum upgrading (Gov. Philippines, 2020). In addition, more than 20 per cent of Filipino households live in light and mixed, but predominantly light, makeshift housing units. These units are unsafe given the weather conditions. The country is frequently hit by seismic activity and around 20 typhoons a year lash through the archipelago, destroying lives, livelihoods, and homes (Esquivias, 2016).

Housing deprivation is inextricably linked to poverty, especially in a country with a high housing backlog. (Habitat for humanity, 2020). But the effect of the pandemic on monetary poverty is not expected to depress a household's housing indicators in the short-term, as these are usually affected only by long and persistent crises that force poor households to relocate (UNICEF & Save the Children, 2020).

(Back row, second from left) Cheryl Aquino, 42, cuddles her 2-year-old son Jancel, in what used to be their home on top of a creek until Typhoon Rolly hit their region and destroyed hundreds of houses.

©UNICEF Philippines / 2020 / Jacques Gimeno

A local government official informs residents in Port Area Manila, a poor community, to evacuate before Typhoon Rolly hit.

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3.2.4. Child violence

Violence against children is widespread and remains a harsh reality for millions of children in the Philippines. Eighty per cent of Filipino children have experienced some form of violence at home, in school, in their community and online – the incidences are higher than the regional average of 64 per cent (UNICEF, 2018). Thousands of children in the BARMM are exposed to the effects of armed conflict, and even those who are not recruited to join armed groups can be caught in the crossfire and may be injured, abducted, sexually abused, and even killed (UNICEF, 2018).

The country has taken important steps towards reducing violence against children. In 2018, the Philippine government with UNICEF launched the "The Philippine Plan of Action to End Violence against Children". The plan seeks to break the cycle of violence by ensuring access to services, building the capacity of children to protect themselves and improving legislation (Conde, 2018).

Studies have shown that COVID-19 increases exposure of children to violence, including sexual violence, physical and emotional maltreatment. The financial and psychological pressures brought by the pandemic have increased tensions in the home, resulting in sharp increases in calls to domestic violence hotlines in the country (Save the Children, 2020). Between March and June 2020, the cybercrime office of the Department of Justice reported a 260% increase in cyber tips related to online sexual exploitation and abuse of children (OSAEC), confirming that the Philippines remains one of the top production sources of OSAEC materials (Save the Children, 2020). The Philippine government must use the experience of the pandemic to strengthen child protection systems against domestic violence and other forms of abuse. It is important to invest in remote monitoring systems that can better detect violence against children in family homes and on the internet (Save the Children, 2020).

3.2.5. Education

In 2016, with the introduction of the K to 12 programme, the Filipino school system underwent significant changes. The K to 12 programme runs for 12 years; it starts with a year in kindergarten, then six years of elementary school and six years of secondary school (Nuffic, 2019). Despite high enrolment at every school level (94 per cent for primary school and 86 per cent for secondary schools in 2018) –– both higher than the regional average –– a low ratio of students are able to complete basic education (World Bank, 2019). The number of children with access to education, the quality of education they receive, and the condition of their learning environment are causes for concern. Many schools do not have toilets and clean water. This situation is worse for vulnerable children, including indigenous children and children with disabilities (UNICEF, 2016).

As a response to the COVID-19 pandemic, the government closed schools on 9 March 2020, prematurely ending the school year by a month for almost 28 million students and postponing the usual start of the 2020-2021 academic year from June to early October (UNICEF, 2020b). In the meantime, the government opted to conduct distance education through e-learning and customized modules prepared by the Department of Education for pupils without internet access. Aside from missing valuable learning opportunities while not in school, students also experienced mental and emotional stress from missing classmates and friends (UNICEF, 2020c).

For school year 2020-2021, the Department of Education reported an overall enrolment of around 21.5 million children compared with the 27.7 million pupils enrolled in the previous school year. The decrease was due to a drop in enrolment in private schools; public school registration reached 99.68 per cent compared with only 50 per cent in private schools (Mocon-Ciriaco, 2020). This school year will be critical in terms of attendance and actual learning outcomes as virtual classrooms are accessible only to those with internet connection. Many Filipino children and their parents also may not be ready for long-term online learning (Save the Children, 2020).

The impact of COVID-19 on poverty levels and secondary school dropout rates was also projected. Studies show that inequality plays a significant role in secondary school dropout rates (World Bank, 2019). A surge in secondary school dropout could be expected next school year as a consequence of COVID-19's effects on poverty. Without the SAP, about 179,565 to 684,837 children are expected to drop out of secondary school due to increased poverty rates, varying on the severity of the income drop scenario *(Table 5)*. A higher dropout rate can be expected for girls due to an initially higher enrolment rate of girls (88 per cent for girls against 79 per cent for boys). However, gender-related discrepancies may be larger, as households determine which child they can afford to send to school, or which child can use the available gadgets in the households for online learning. School enrolment levels in BARMM are already significantly lower than the national average – 20 percentage points lower for elementary school and 45 percentage points lower for secondary school (World Bank; Australian Aid , 2019). Considering the projected poverty increase in the poorest region of the country, an estimated 2,241 to 6,280 students are expected to drop out from school.

UNICEF visits families affected by the COVID pandemic and earthquake in Makilala, North Cotabato in Mindanao.

Table 5. Secondary school dropout numbers of pupils in different scenarios

Number of secondary school dropouts	Scenario 1	Scenario 2	Scenario 3
National	179,565	411,213	684,837
BARMM	2,241	4,374	6,280

3.2.6. Nutrition

Filipino children suffer from poor diets, inadequate nutrition, and poor food systems. One in every three Filipino children under five years old is stunted, while roughly 7 per cent of children are too thin for their height (UNICEF, 2016b). Stunting levels are as high as 45 per cent in BARMM (UNICEF, 2019). Poor nutrition during a child's first years can have irreversible effects on his physical and mental development that eventually affects his performance in school, future productivity and ability to earn as an adult. Similarly, adolescents often eat food that do not meet their nutritional needs. Obesity among Filipino adolescents tripled in the last 15 years, reaching 10 per cent (UNICEF, 2016b). The triple burden of malnutrition – undernutrition, hidden hunger or the lack of essential nutrients, and overweight – threaten the survival, growth, and development of children, young people, economies and nations. In the last two years, the government has paid more attention to malnutrition as a significant public health concern. Stunting is now seen as one of the major impediments to human development and is recognised as a well-established

marker of poor child development. In response, the government established the Philippine Plan of Action on Nutrition (PPAN) 2017-2022, which lays out public investments and strategies such as the Supplementary Feeding Programme to tackle malnutrition (UNICEF, 2016b).

This report modelled possible effects of a decrease in household average income on nutrition outcomes. Simulations estimate that without the SAP benefit there would have been an increase in underweight prevalence of between 0.03 per cent and 0.08 per cent, varying on the scenario of severity. Wasting would have increased between 0.03 per cent and 0.1 per cent *(Table 6)*. The numbers indicate a modest increase in the additional share of children ages below five years who are affected by wasting or underweight. An important strategy to prevent deteriorating nutrition outcomes is the continuation of school feeding programmes even without in-person classes. The government has announced that the feeding programme for children will continue despite blended learning approaches in schools. Nutritious food products will be delivered to households or picked up by parents from schools (Scaling Up Nutrition, 2020).

Table 6. Increase in nutrition deprivations for different scenarios

Nutrition Indicators	Scenario 1	Scenario 2	Scenario 3
Underweight	0.03	0.06	0.08
Wasting	0.03	0.06	0.1

A family in Baseco Compound take shelter in an evacuation center during a pre-emptive evacuation against Typhoon Rolly.

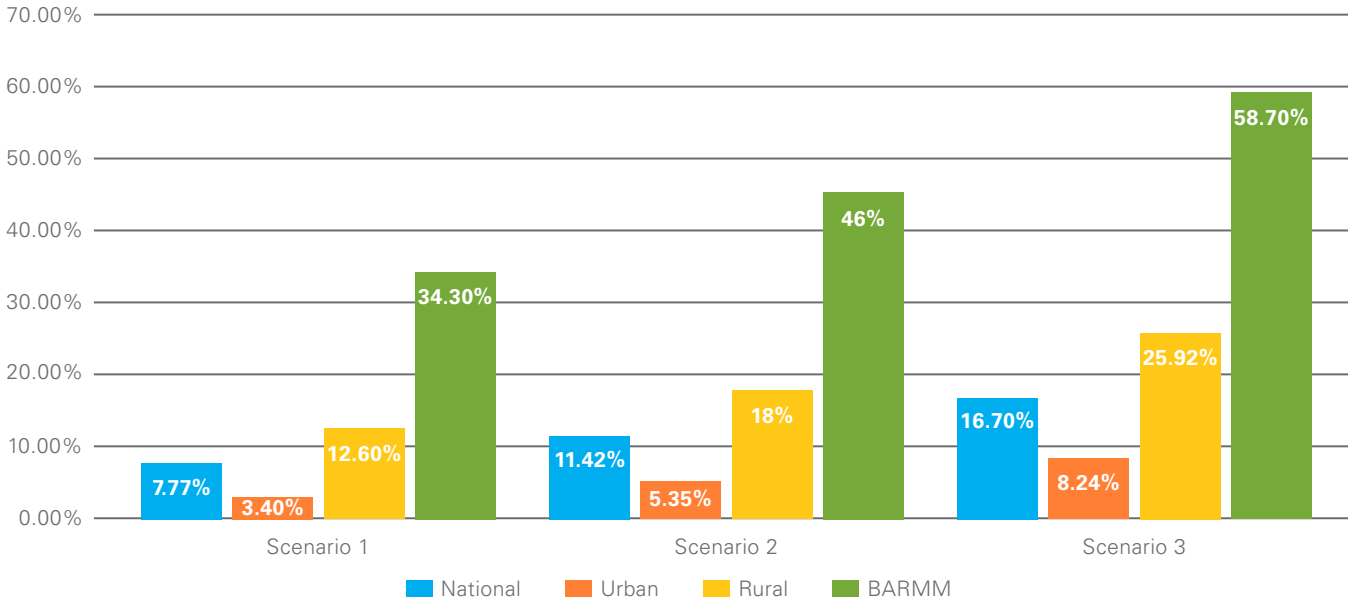
©UNICEF Philippines / 2020 / Rosa May Maitem

3.2.7. Food poverty

The pre-COVID-19 food poverty rate in the Philippines was pegged at 5.3 per cent. This meant 5,786,000 Filipinos were living without the means to obtain basic food items. As with monetary poverty indicators, there were huge disparities between regions; the poverty rate was 2.2 per cent in urban areas and 8.6 per cent in rural areas. The BARMM stood out negatively from the national average, with 24.6 per cent of its population below the national poverty line.

Considering the three income drop scenarios, the national food poverty rate after COVID-19 would be 7.8 per cent for scenario 1; 11.4 per cent for scenario 2; and 16.7 per cent for scenario 3. The numbers represent an increase of between 2.5 percentage points and 11.4 percentage points when compared with pre-COVID-19 numbers *(Figure 4)*. Within the three scenarios, rural poverty would range between 12.6 per cent and 25.9 per cent; for urban poverty, between 3.4 per cent and 8.2 per cent. The national food poverty gap also shows a considerable potential increase compared with pre-COVID-19 levels, growing to as high as 3.8 per cent in the most severe scenario (Table 7). The latter indicates that the average depth of poverty would also grow from an average of 0.03-per cent shortfall in income from the food poverty line to 1.3 per cent in the worst-case scenario. The post-COVID-19 scenario is more alarming in the country's poorest region. The food poverty rate in BARMM would have an average increase of 21.5 percentage points – between 34.2 per cent (1,293,234 people) and 58.7 per cent (2,219,674 people) (Table 8). Before the COVID-19 crisis, the food poverty rate at BARMM was 19.3 percentage points higher than the national poverty rate; post-COVID-19, the difference could rise to 26.4 percentage points in the best-case scenario.

Figure 4. Food poverty post-COVID-19



Source: 2018 FIES/author's calculation

Table 7. National food poverty post-COVID-19

Poverty measure	Pre-COVID-19	Scenario 1	Scenario 2	Scenario 3
Poverty rate	5.26%	7.77%	11.42%	16.7%
Poverty headcount	5,786,000	8,547,000	12,562,000	18,370,000
Poverty gap	0.01%	1.5%	2.41%	3.8%
Poverty severity	0.03%	0.06%	0.08%	1.3%

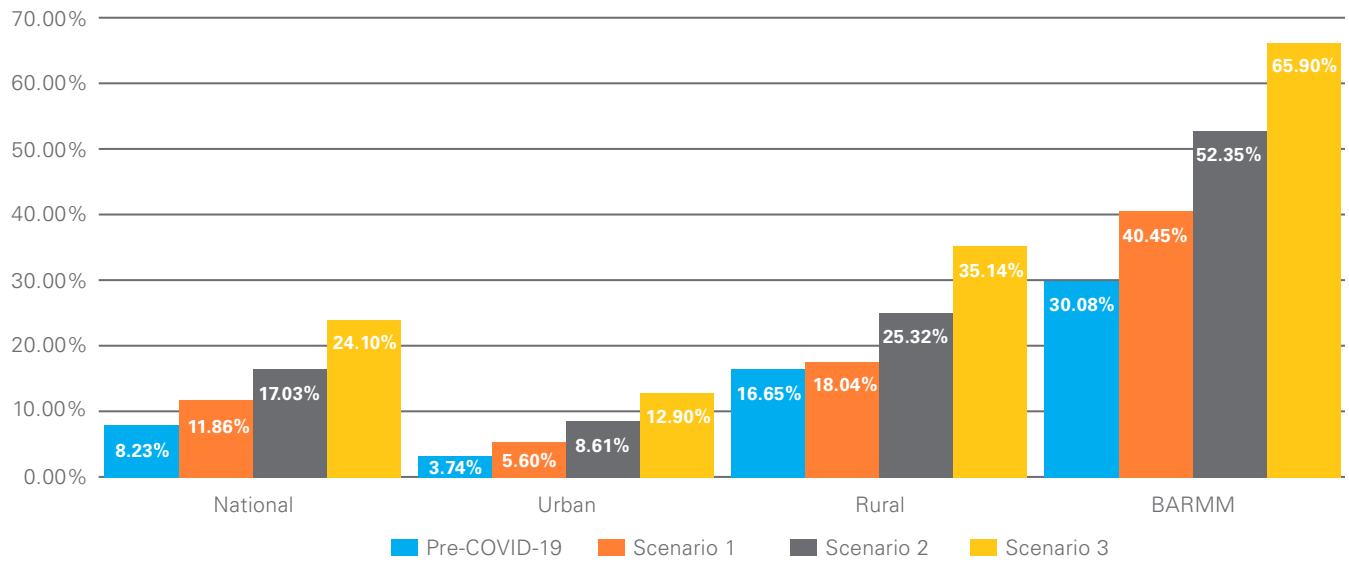
Table 8. Food poverty headcount post-COVID-19 for different scenarios

Food poverty headcount	Pre-COVID-19	Scenario 1	Scenario 2	Scenario 3
National	5,786,000	8,547,000	12,562,000	18,370,000
Urban	1,166,458	1,770,516	2,785,959	4,290,898
Rural	4,981,636	7,298,676	10,426,680	15,014,419
BARMM	930,221	1,293,234	1,720,531	2,219,674

The child food poverty rate before the COVID-19 crisis was 8.2 per cent, with 3,362,324 children below the national food poverty line; it was 3.7 per cent in urban areas and 16.6 per cent in rural areas. Again, BARMM fared poorly against the national average, with 30 per cent of its children living without the means to obtain basic food items. After COVID-19, the national child food poverty rate showed a potential increase of between 3.6 percentage points and 15.9 percentage points – set at 11.8 per cent for scenario 1 and 24.1 per cent for scenario 3. To illustrate the rural-urban divide for scenario 2, the rate could reach 25.3 per cent in rural areas and 8.6 per cent in urban locations. Children in the BARMM are more vulnerable than the national average, with poverty rates that could range from 40.4 per cent to 65.9 per cent in scenarios 1 and 3 – a potential increase from 10.4 percentage points to 35.8 percentage points compared with pre-COVID-19 figures *(Figure 5)*.

Three-year-old Mark Vincent was born with arthrogryposis, a rare congenital condition characterized by stiff joints and abnormally developed muscles, which makes him vulnerable to other illnesses.

Figure 5. Child food poverty comparison



Source: 2018 FIES/author's calculation

Given an average income recovery of 7.5 per cent in the next three years, by the end of 2023, food poverty in the Philippines would range from 5.2 per cent to 11.8 per cent (depending on the income drop scenario). This shows that by the end of 2023, in the best-case scenario, food poverty rates would remain at pre-COVID-19 levels. However, in a worst-case scenario, three years after the COVID-19 outbreak, there still would be an additional 7,194,000 Filipinos living below the food poverty line. Once again, the situation is worse in BARMM, as food poverty rates in 2023 are seen to range from 0.4 percentage points to 22.3 percentage points higher than pre-COVID levels, even with the recovery in incomes. Nearly half (46.9 per cent) of the region's population would not be able to purchase basic food items in scenario 3 (Table 9).

Table 9. Food poverty headcount after 3-year recovery

Food poverty headcount	Scenario 1	Scenario 2	Scenario 3
National	5,676,000	8,613,000	13,024,000
Urban	1,156,043	1,848,627	2,952,596
Rural	4,854,199	7,252,335	10,762,651
BARMM	947,237	1,309,872	1,775,361

SAP as a response to COVID-19

The loss of income, growing food insecurity, and health risks brought by the COVID-19 crisis, pose a threat to the well-being and survival of many poor households. The consequences of the pandemic could roll back the progress made by the Philippines in the fight against poverty. As a quick response to the crisis, the government launched the Social Amelioration Programme (SAP) under the leadership of the Office of the President, with the Department of Social Welfare and Development (DSWD) as the key implementing agency. The programme provides cash assistance to low-income households, including existing beneficiaries of the Pantawid Pamilyang Pilipino Programme (4P) and newly affected households. Other beneficiaries are informal workers and other vulnerable populations. The programme provides an emergency subsidy of between Php 5,000 and Php 8,000 – estimated to be the minimum required for families to meet their basic needs through the quarantine and lockdown period. (ABD, 2020). The benefit was delivered in two rounds in 2020. The first round covered May and July 2020 and reached 17,457,073 households (4,217,654 4P beneficiaries and 13,239,419 non-4P beneficiaries), with less than 2 per cent difference between the programme's target and actual beneficiaries, representing over Php 98 billion and 0.56 per cent of the country's GDP (DSWD, 2020). The second round targeted 13.8 million households: 1.3 million 4Ps beneficiaries living in Enhanced Community Quarantine (ECQ) areas; 7.2 million non-4Ps beneficiaries in ECQ areas; 3.2 million waitlisted families nationwide who did not receive the first round; and 2.1 million waitlisted families in ECQ areas.

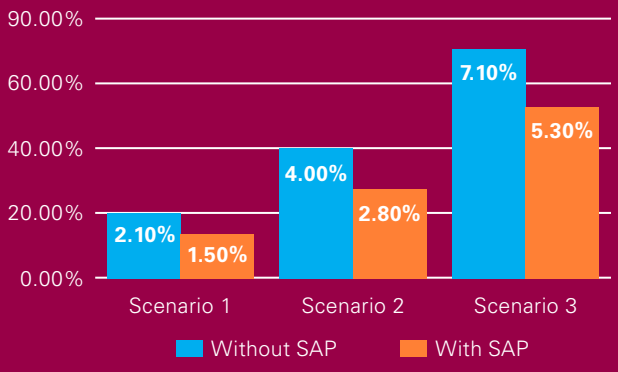
Box 3. Impact of COVID in the National Capital Region

The first confirmed case of COVID-19 in the Philippines was recorded in Metro Manila on January 30, 2020. Since then, the National Capita Region (NCR) has been the worst affected region in the Philippines and is considered the epicentre of the COVID-19 pandemic in the country. The region was placed under a state of calamity and community quarantine on March 15, 2020. While other regions were able to ease most of the quarantine measures throughout 2020, the NCR has gone through

multiple versions of ECQ. In March 2021, with the worsening number of confirmed cases, the government announced stricter measures. From March 22 to April 4, cross-border travel and mass gatherings in Metro Manila and surrounding provinces of Bulacan, Cavite, Laguna, and Rizal were banned. Curfew between 10 p.m. and 5 a.m. was imposed on all non-essential workers (Philippines news agency, 2021).

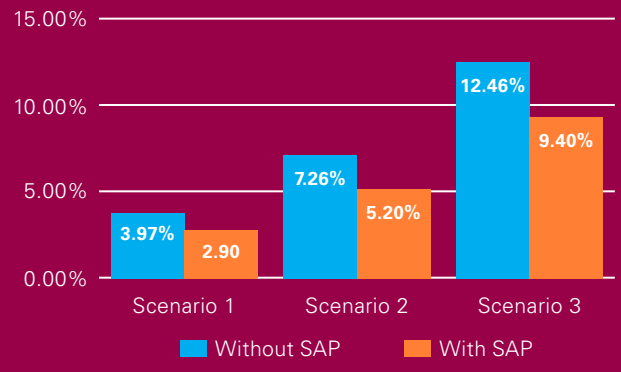
Even as the NCR has been the most affected region, this study does not present a separate costed analysis for the NCR because the poverty incidence in the region is significantly lower than the national average (1.3 per cent before COVID-19). After COVID-19, the poverty rate in the NCR would have increased between 0.8 percentage points and 5.8 percentage points, estimated at 2.1 per cent for scenario 1; 4 per cent for scenario 2; and 7.1 per cent for scenario 3. In terms of child poverty, there would have been an average increase of over 230,000 children living in monetary poverty in the NCR. Furthermore, the introduction of SAP reduced the impact of the pandemic on a household's livelihood in the NCR. Results showed an average reduction in overall poverty of 1.2 percentage points or 154,527 people (Figure 6). In terms of child poverty, the SAP reduced monetary poverty by an average 2.06 percentage points or 87,210 children *(Figure 7)*. As these figures are lower than poverty rates in BARMM and in other more deprived regions, no separate costed plan is presented. Nevertheless, proportionate measures to address the additional suffering in the NCR may still be warranted.

Figure 6. Overall monetary poverty comparison



Source: 2018 FIES / author's calculation

Figure 7. Child monetary poverty comparison



Source: 2018 FIES / author's calculation

4.1. Impact of SAP on monetary poverty

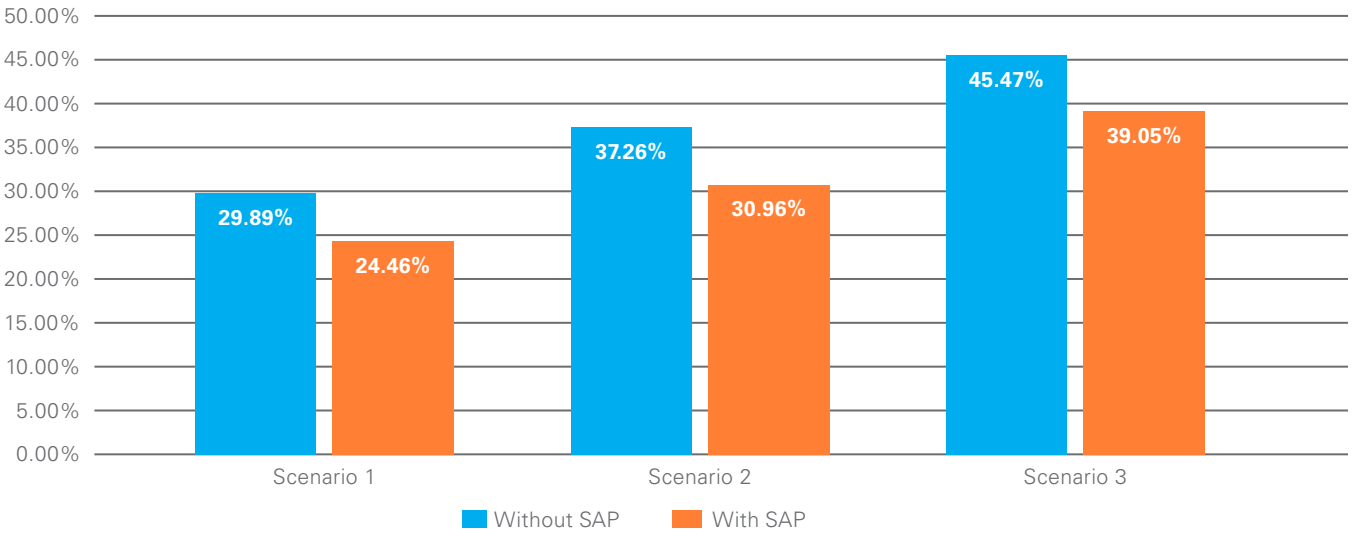
This report assessed the efficiency of the SAP in terms of how the programme alleviated the impact of COVID-19 on poverty by comparing scenarios with the SAP benefit against those without it. For scenario 1, the SAP reduced overall poverty by 4.4 percentage points or 4,862,000 people (Table 10) – with 2.6 percentage points and 6.3 percentage points in urban and rural areas, respectively. In scenario 2 and scenario 3, the SAP reduced overall poverty by an average 5.57 percentage points – with 3.9 percentage points and 7.4 percentage points in urban and rural areas, respectively. In all three scenarios, compared with pre-COVID levels, there still was an increase in the number of people living in poverty; the increase varied from 0.2 percentage points to 11.8 percentage points. But the SAP reduced the increase substantially. In BARMM, compared with a setting with no SAP, the SAP's impact depended on the scenario, varying between 5.4 percentage points and 7.3 percentage points – or lifting from poverty between 204,195 to 277,175 people *(Table 10)*.

Table 10. Poverty headcount with and without SAP benefit for different scenarios

National poverty headcount	Scenario 1	Scenario 2	Scenario 3
Without SAP	23,342,000	29,898,000	37,642,000
With SAP	18,480,000	24,002,000	31,273,000
Without SAP (BARMM)	2,530,882	2,834,150	3,105,275
With SAP (BARMM)	2,253,707	2,599,704	2,901,080

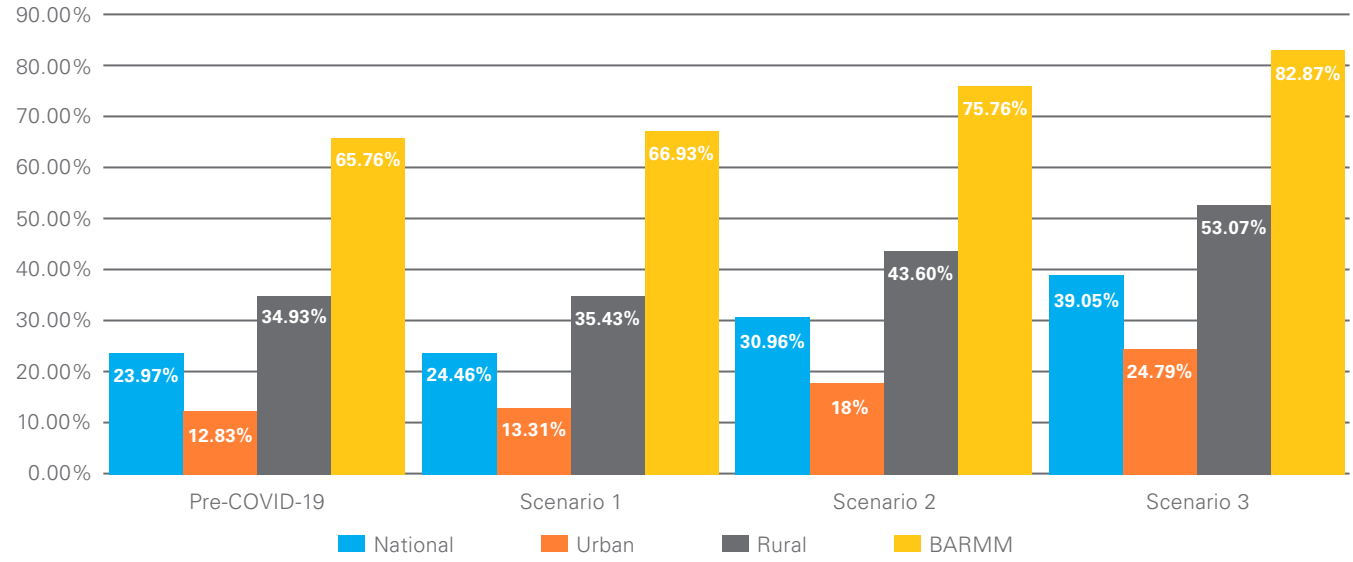
The impact of the SAP on monetary child poverty is similar to results observed in overall poverty, with an average reduction of 6 percentage points in all three scenarios, when compared with a situation without SAP. Results show that in scenario 1, the SAP benefit reduced child poverty to 24.46 per cent *(Figure 8)*. Despite the positive results in all three scenarios, when compared with pre-COVID-19 levels, there still was an increase in the number of children in poverty, ranging from 0.5 percentage points to 15 percentage points *(Figure 9)*. Looking at BARMM, compared with a situation without benefit, the SAP achieved a slightly better result, with an average reduction of 5.4 percentage points in child poverty depending on the scenario *(Table 11)*.

Figure 8. National child poverty post-COVID-19



Source: 2018 FIES/author's calculation

Figure 9. Post-COVID-19 child poverty for different scenarios



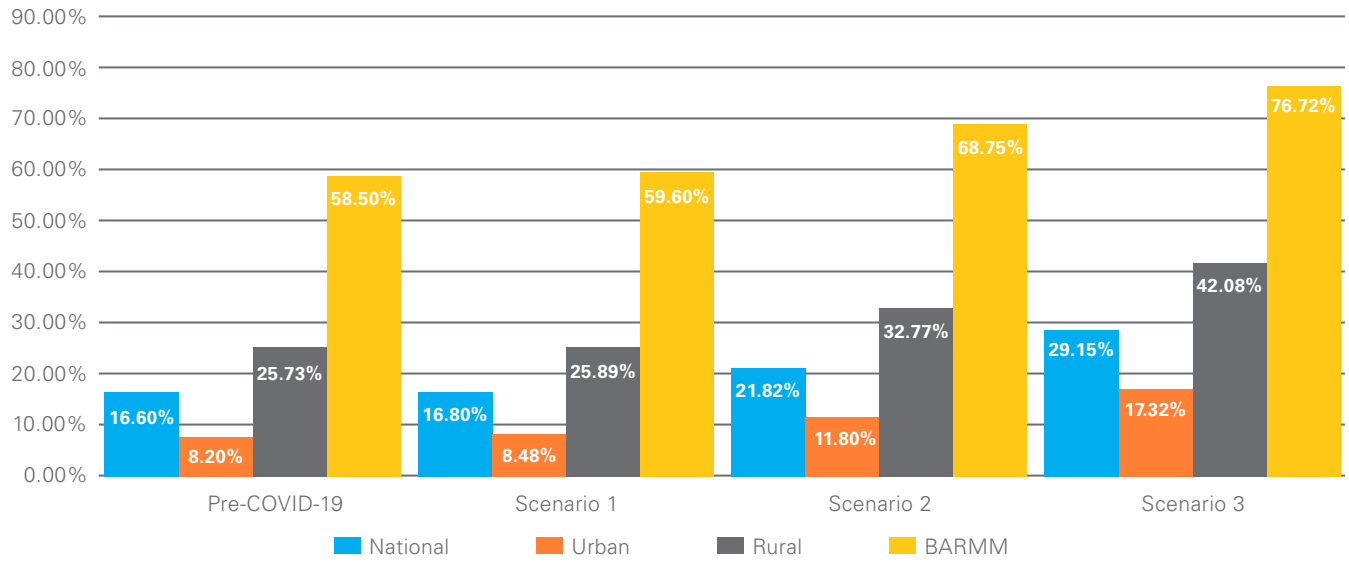
Source: 2018 FIES/author's calculation

Table 11. Child poverty with and without SAP benefit for different scenarios

Child poverty headcount	Scenario 1	Scenario 2	Scenario 3
Without SAP (national)	12,211,403	15,222,379	18,576,531
With SAP (national)	9,993,005	12,648,546	15,953,674
Without SAP (BARMM)	1,170,967	1,286,269	1,383,942
With SAP (BARMM)	1,062,971	1,203,207	1,316,127

The programme provided majority of beneficiaries with two months of additional income equivalent to 120% of the monthly poverty line for a family of five, and reached a relatively large number of households. Results could have met what the programme meant to achieve if relief was provided more regularly. Considering that the COVID-19 crisis extended for over a year, the benefit was not sufficient to produce a significant and sustained impact in mitigating the severe consequences of COVID-19 on poverty levels.

Figure 10. Comparison of overall poverty



Source: 2018 FIES/author's calculation

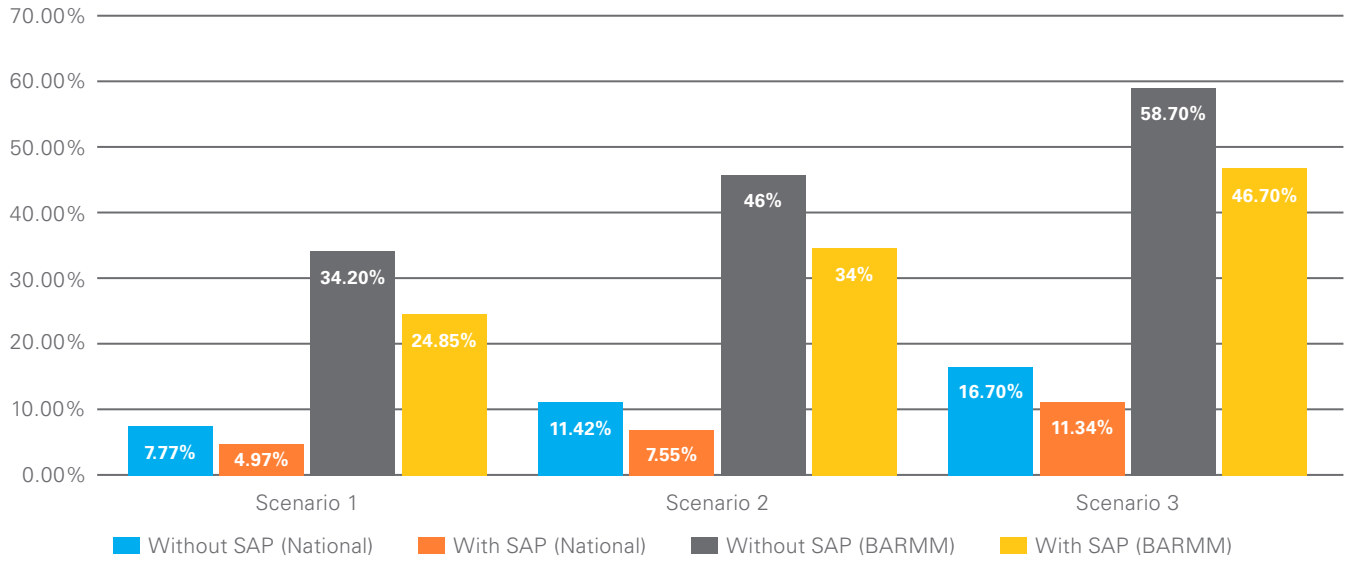
Table 12. Poverty headcount post-COVID-19 with SAP benefit for different scenarios

Poverty headcount	Pre-COVID-19	Scenario 1	Scenario 2	Scenario 3
National	18,260,000	18,480,000	24,002,000	31,273,000
Urban	4,270,068	4,415,875	6,144,732	8,670, 321
Rural	14,904,360	14,997,041	18,982,350	23,824,964
BARMM	2,212,111	2,253,707	2,599,704	2,901,080

4.2. Impact of SAP on food poverty

In terms of food poverty, the impact of the SAP assistance aligned with the results discussed in the previous section. When compared to post-COVID-19 without SAP, under scenario 1, the SAP benefit reduced overall food poverty by 2.8 percentage points or 3,080,000 people – with a decrease of 1.3 percentage points and 4.5 percentage points in urban and rural areas, respectively. For scenarios 2 and 3, the decrease was 3.9 percentage points and 5.4 percentage points, respectively *(Figure 11)*.

Figure 11. Food poverty with and without SAP



Source: 2018 FIES/author's calculation

Despite the additional income from the SAP, there was an increase in the number of people living below the food poverty line in scenarios 2 and 3 when compared with pre-COVID-19 numbers[1]. In the worst-case scenario, there was increase of 6 percentage points in the national food poverty headcount. For BARMM, the situation was worse.

The SAP eased some of the increased poverty levels there by an average of 10.8 percentage points (Table 13). But the number of people who live below the food poverty line in BARMM is higher than the regional average; it rose from 24.6 per cent before the COVID crisis to 46.7 per cent under the worst-case scenario even with the SAP benefit.

Table 13. Food poverty rate post-COVID-19 with SAP benefit for different scenarios

Food poverty rate	Pre-COVID-19	Scenario 1	Scenario 2	Scenario 3
National	5.26%	4.97%	7.55%	11.34%
Urban	2.24%	2.12%	3.35%	5.38%
Rural	8.60%	8.07%	12.15%	17.86%
BARMM	24.60%	24.85%	34.44%	46.7%

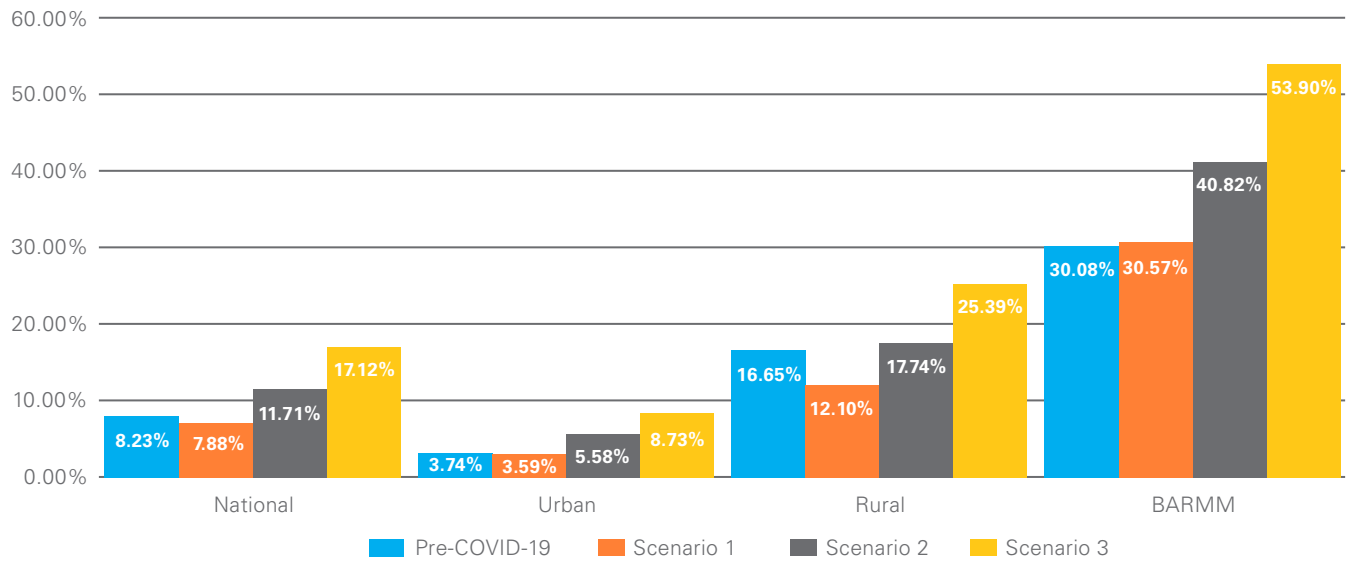
Table 14. Food poverty headcount post-COVID-19 with SAP benefit for different scenarios

Food poverty rate	Pre-COVID-19	Scenario 1	Scenario 2	Scenario 3
National	5,786,000	5,467,000	8,305,000	12,474,000
Urban	1,166,458	1,103,969	1,744,479	2,801,581
Rural	4,981,636	4,674,628	7,038,009	10,345,584
BARMM	930,221	939,674	1,302,310	1,765,908

Results in scenario 1 show that the SAP reduced child food poverty to 7.88 per cent, with 3.6 per cent and 12.1 per cent in urban and rural areas, respectively. For scenario 1, the SAP pared child food poverty to levels lower than those before COVID-19. For BARMM, child poverty rose 23.8 percentage points from pre-COVID levels in scenario 3 *(Figure 12)*.

[1] Local government units, with the support of the DSWD, also provided in-kind food aid, but the monetary value and distribution schemes (including frequency) of such food assistance varied considerably, therefore, their impacts were not incorporated in this analysis.

Figure 12. Child food poverty comparison (Pre-COVID-19 and Post-COVID-19 with SAP)

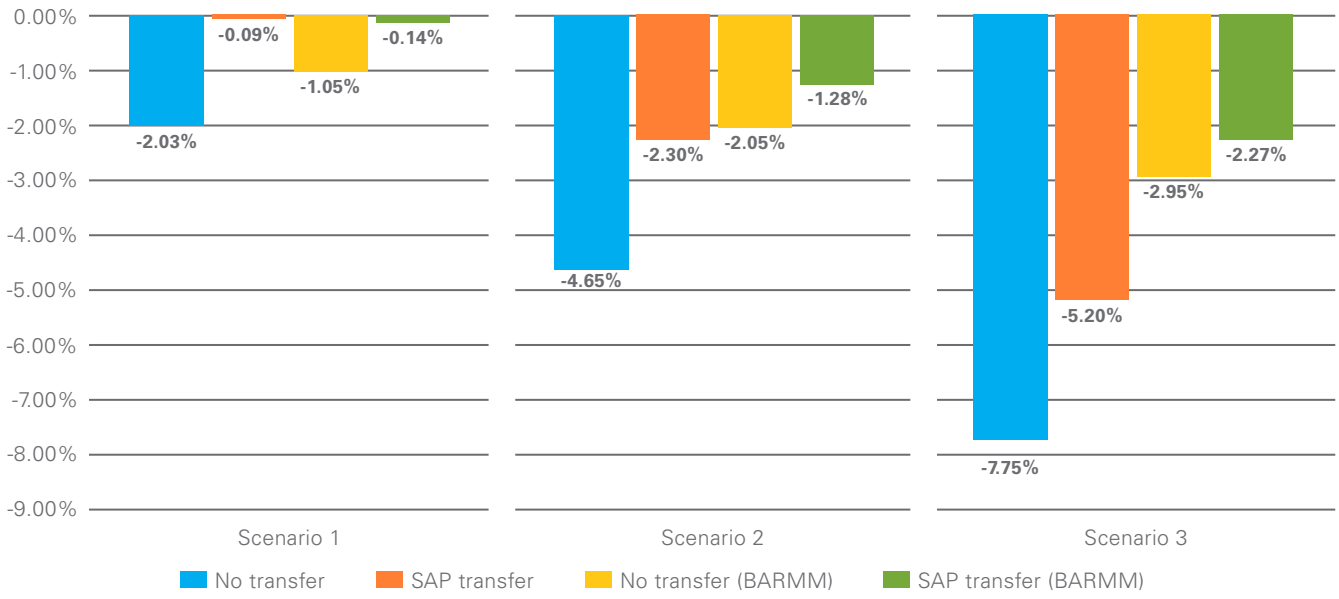


Source: 2018 FIES/author's calculation

4.3. Impact of SAP on education

Despite the SAP benefit and compared with pre-COVID-19 numbers, figures showed an increase in overall secondary school dropout, ranging from 0.1 per cent to 5.2 per cent – or 7,773 to 459,797 students. However, compared with post-COVID-19 without SAP, these figures are down between 2.03 per cent and 7.75 per cent, a significant reduction. For BARMM, the reduction in secondary school dropout caused by the introduction of SAP was modest, likely due to lower enrolment rates to begin with. For scenario 1, the projected secondary school dropout was down 0.91 percentage points – or 1,949 students. For scenarios 2 and 3, the average reduction linked to the SAP benefit was 0.72 percentage points *(Figure 13)*.

Figure 13. Impact of poverty increase on secondary school enrolment (with and without SAP)

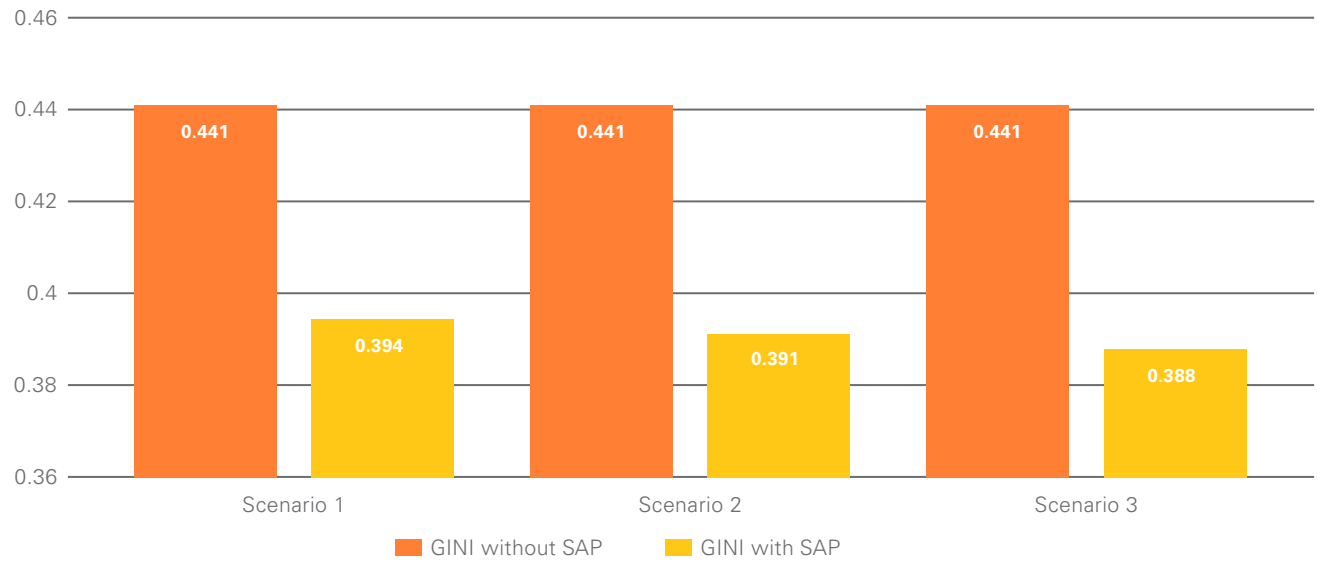


Source: World Bank 2019/author's calculation

4.4. Impact of SAP on inequality

This study also assessed the efficiency of the SAP in reducing inequality in the country. The impact of the COVID-19 crisis on the GINI coefficient cannot be estimated by this study due to data limitations (e.g. no access to information on household livelihoods beyond income estimates). The income contraction caused by COVID-19 was extended equally to the entire income distribution, thus, no impact on inequality was seen in the simulation. Still, results show that the SAP helped reduce the country's GINI coefficient by a maximum of 0.06 points. Without the SAP, the inequality rate was 0.441. In all three scenarios, the GINI coefficient with the SAP benefit was lower than pre-COVID-19 levels. The GINI was reduced to 0.394 in scenario 1 and 0.388 in scenario 3 *(Figure 14)*.

Figure 14. National GINI coefficient comparison



Source: 2018 FIES/author's calculation

For BARMM, without the additional income from SAP, the GINI coefficient under scenario 3 was 0.293. With the SAP, the projected GINI coefficient was reduced to 0.257 *(Table 15)*. This suggests that the SAP benefited the most vulnerable members of the population.

Table 15. BARMM GINI coefficient comparison

GINI coefficient	Scenario 1	Scenario 2	Scenario 3
GINI without SAP	0.293	0.293	0.293
GINI with SAP	0.263	0.261	0.257

Policy Options

Considering that the COVID-19 crisis lasted longer than originally expected, the impact on average household income has been severe. The emergency relief provided by SAP has not been sufficient in addressing the people's needs. This report presents policy options *(Table 23)* that would help expand the effects of SAP in poverty alleviation.

5.1. Extend the benefit for two months

Extending the benefit for another two months would significantly reduce the effects of the COVID-19 crisis, especially on the most vulnerable. For scenario 1, there would be an overall reduction of 11 percentage points in poverty, with 6.7 percentage points and 16.3 percentage points for urban and rural areas respectively. For scenarios 2 and 3, the reduction would vary from 9 percentage points to 10.1 percentage points, with an average impact of 12.5 percentage points in rural areas *(Table 16)*. The impact is evident by taking a scenario without any emergency assistance in the country's poorest regions and comparing it with the benefit of an extension. For BARMM, results suggest the extension would reduce poverty rate between 11.7 percentage points and 15.6 percentage points — or 443,179 to 591,031 people lifted out of poverty. For scenario 1 in Bicol, Eastern Visayas, Western Mindanao, and Caraga, an extension would reduce poverty rate by an average 12.8 percentage points – altogether relieving more than 2 million people from poverty *(Table 17)*.

Table 16. Comparison of national poverty rates for different scenarios

National poverty rate	Scenario 1	Scenario 2	Scenario 3
Without SAP	21.2%	27.2%	34.20%
With SAP	16.8%	21.8%	28.4%
With SAP extension	10.6%	18.2%	24.1%
BARMM poverty rate	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	66.9%	74.9%	82.1%
With SAP	59.6%	68.7%	76.7%
With SAP extension	51.3%	61.2%	70.4%
Bicol poverty rate	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	37.9%	47.1%	56.2%
With SAP	31.1%	38.8%	48.5%
With SAP extension	25.6%	33.1%	41.9%

Eastern Visayas poverty rate	Scenario 1	Scenario 2	Scenario 3
Without SAP	41.7%	49.9%	58.6%
With SAP	34.9%	42.5%	51.7%
With SAP extension	27.9%	35.9%	44.1%
Western Mindanao poverty rate	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	40.3%	48.9%	57.7%
With SAP	34.4%	41.9%	50.8%
With SAP extension	27.6%	35.4%	43.6%
Caraga poverty rate	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	38.7%	47.2%	56.2%
With SAP	32.5%	40.4%	49.3%
With SAP extension	26.2%	33.7%	42.2%

Table 17. Comparison of national poverty headcount for different scenarios

National poverty headcount	Scenario 1	Scenario 2	Scenario 3
Without SAP	23,342,000	29,898,000	37,642,000
With SAP	18,480,000	24,002,000	31,273,000
With SAP extension	11,176,000	19,976,000	26,510,000
BARMM poverty headcount	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	2,530,882	2,834,150	3,105,275
With SAP	2,253,707	2,599,704	2,901,080
With SAP extension	1,939,852	2,312,696	2,662,096
Bicol poverty headcount	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	2,197,058	2,730,381	3,257,907
With SAP	1,802,863	2,249,231	2,811,539
With SAP extension	1,484,029	1,918,803	2,428,938

Eastern Visayas poverty headcount	Scenario 1	Scenario 2	Scenario 3
Without SAP	2,417,344	2,892,697	3,397,035
With SAP	2, 023,149	2,463,720	2,997,043
With SAP extension	1, 617,359	2,081,119	2,556,472
Western Mindanao poverty headcount	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	1,245,270	1,511,010	1,782,930
With SAP	1,062,960	1,294,710	1,569,720
With SAP extension	852,840	1,093,860	1,347,240
Caraga poverty headcount	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	1,004,926	1,225,646	1,459,350
With SAP	843,930	1,049,070	1,280,177
With SAP extension	680,337	875,090	1,095,811

The extension of the programme would benefit the most vulnerable children. Monetary child poverty under scenario 1 would improve to 17.6 per cent, a reduction of 12.3 percentage points from pre-COVID-19 numbers *(Figure 15)*. For scenarios 2 and 3 there would be an average reduction of 11.1 percentage points – with an average impact of 13.6 percentage points in rural areas. At BARMM, results show an average reduction of 6.6 percentage points compared with results from the regular SAP benefit.

Figure 15. Comparison of child poverty post-COVID-19

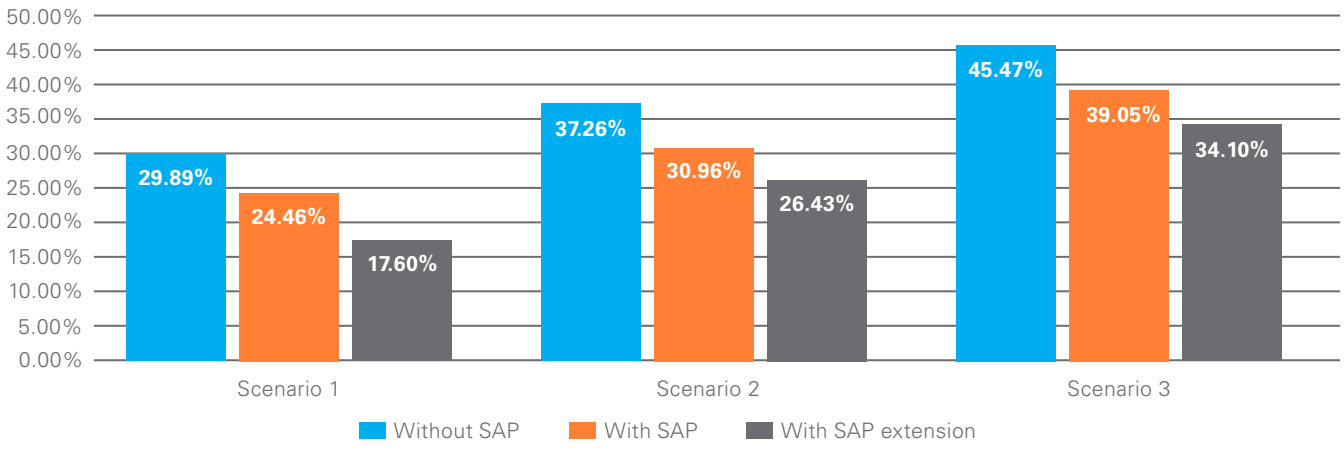


Table 18. Comparison of child poverty headcount post-COVID-19

National child poverty headcount	Scenario 1	Scenario 2	Scenario 3
Without SAP	12,211,403	15,222,379	18,576,531
With SAP	10,232,004	12,987,639	16,358,133
With SAP extension	8,289,374	10,793,753	13,939,548

5.2. Extend the benefit in BARMM for four months

The BARMM is historically the poorest in the Philippines. Households in the region tend to have fewer coping mechanisms than other households as a result of pre-COVID poverty levels. The COVID-19 crisis has caused severe harm to its population. This study proposes a four-month extension of the benefit to the most vulnerable in BARMM. Results show that the extension would cause a further decrease in poverty of 23.9 percentage points to 19.5 percentage points – or 737,370 to 902,995 people relieved from poverty *(Table 20)*. In terms of monetary child poverty, the extension would represent a reduction of between 16.9 percentage points and 23.5 percentage points, reaching 50.2 per cent in scenario 1 *(Figure 16)*.

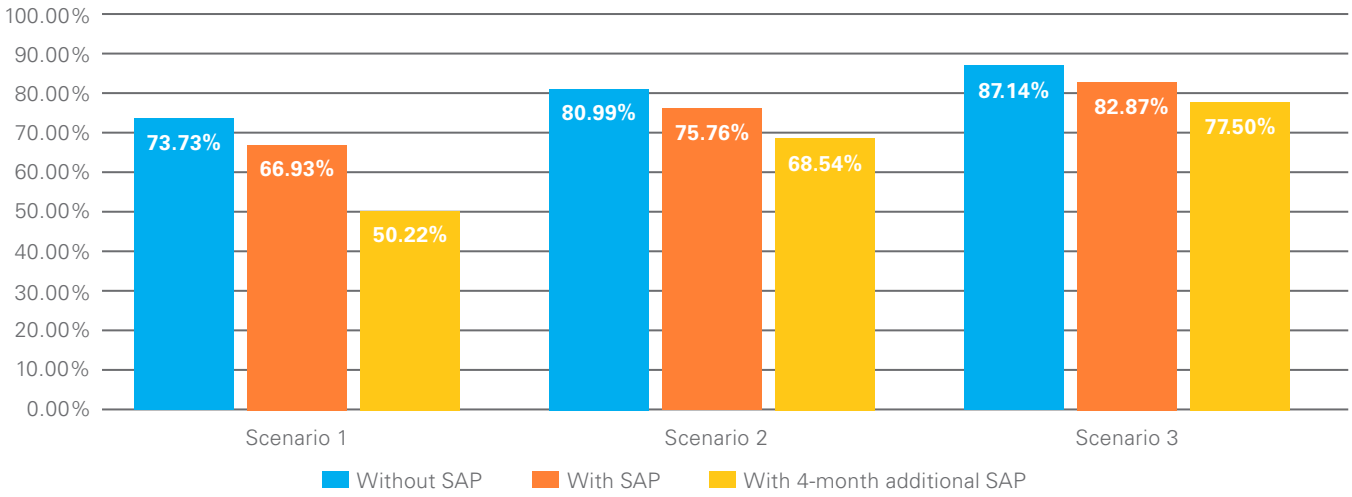
Table 19. Overall poverty with different SAP benefits

Overall poverty rate	Scenario 1	Scenario 2	Scenario 3
Without SAP	66.9%	74.9%	82.1%
With SAP	59.6%	68.7%	76.7%
With SAP extension	43.1%	52.6%	62.6%

Table 20. Overall poverty headcount with different SAP benefits

Overall poverty headcount	Scenario 1	Scenario 2	Scenario 3
Without SAP	2,530,882	2,834,150	3,105,275
With SAP	2,253,707	2,599,704	2,901,080
With SAP extension	1,627,887	1,990,900	2,367,905

Figure 16. Comparison of child poverty post-COVID-19 in BARMM



Source: 2018 FIES/author's calculation

Table 21. Comparison of child poverty headcount post-COVID-19 in BARMM

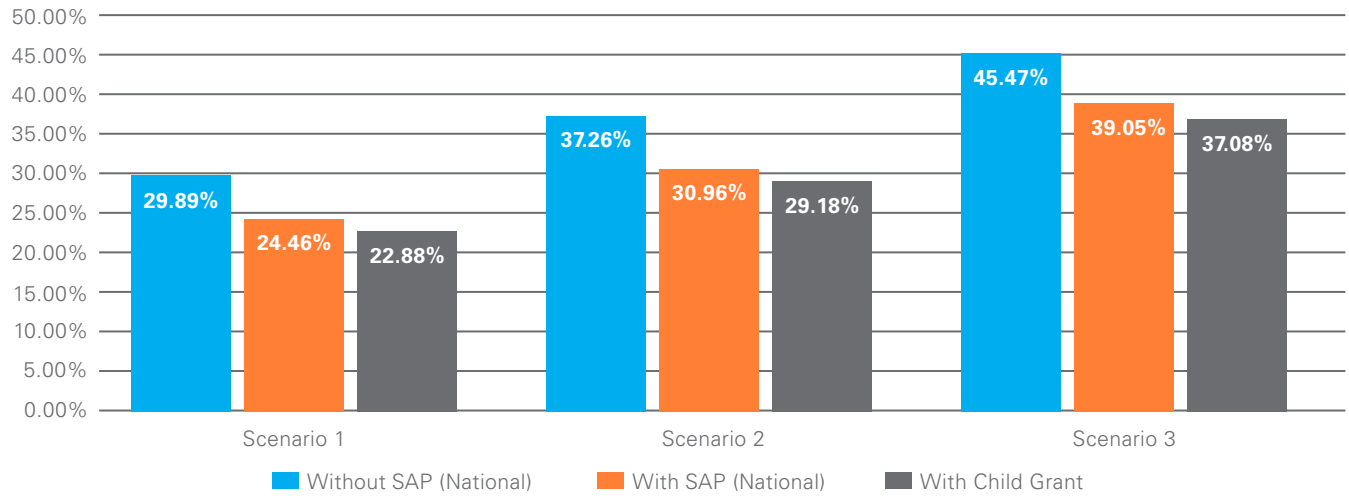
Child poverty headcount	Scenario 1	Scenario 2	Scenario 3
Without SAP	1,170,967	1,286,269	1,383,942
With SAP	1,062,971	1,203,207	1,316,127
With SAP extension	797,585	958,151	1,114,587

5.3. Child grant for children ages 0-2

Providing a child grant for children ages 0 to 2, which is a category of children who do not often benefit directly from any social protection programme in the Philippines, could improve children's well-being across a range of outcomes, including health and nutrition. Such a grant could have transformational impact in the country, as the early years are critical to developing the future human capital of the nation. A monthly grant of Php500 for children below two years, would bring an average reduction of 0.67 percentage points in overall poverty – 0.44 percentage points and 0.89 percentage points for urban and rural areas respectively. The impact would be more significant in overall monetary child poverty. Compared with

results from only the SAP, a grant would lower child poverty headcount between 1.58 percentage points to 1.97 percentage points –– or remove 645,501 to 804,833 children out of poverty *(Figure 17)*. Furthermore, children from 0 to 2 years have a higher incidence of monetary poverty headcount – 24.68 per cent of children from this age group before the COVID-19 crisis were living in poverty against 23.97 per cent of children from all age groups. With the grant, child monetary poverty in the 0 to 2 age group would decline, on average, 6.95 percentage points compared with pre-COVID-19 levels. Looking at the poorest regions in the country , child monetary poverty in the 0 to 2 age group would have an average drop of between 24.7 percentage points and 27.9 percentage points, depending on the scenario *(Table 22)*.

Figure 17. Comparison of child poverty post-COVID-19



Source: 2018 FIES/author's calculation

Table 22. Comparison of child poverty post-COVID-19 among 0-2 years

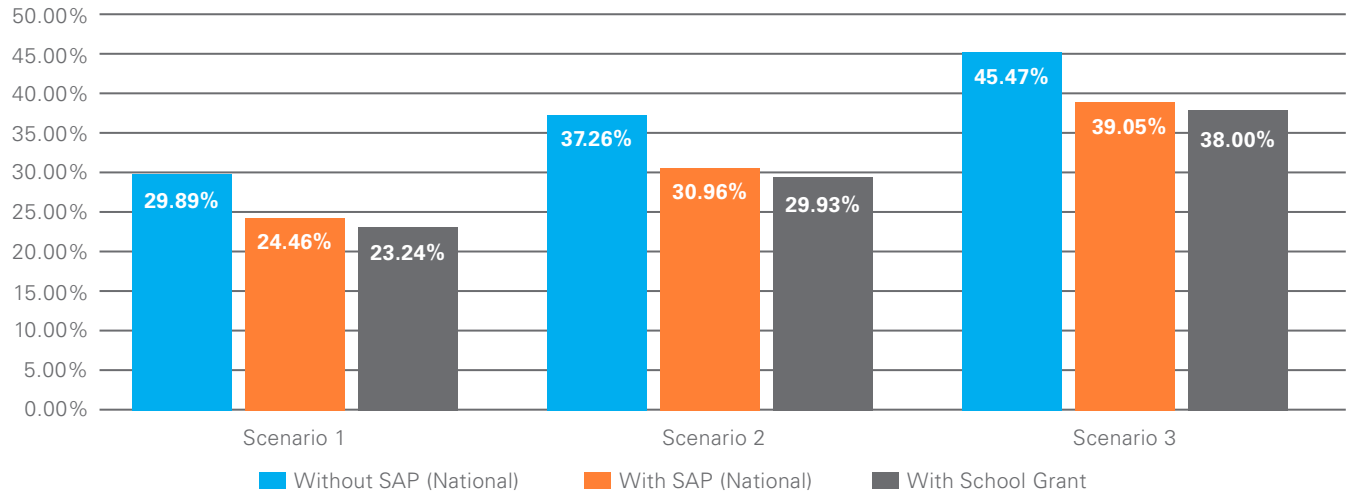
Child poverty rate	Scenario 1	Scenario 2	Scenario 3
Without SAP	30.6%	37.9%	45.9%
With SAP	25.01%	31.6%	39.6%
With child grant	12.4%	17.4%	23.95%
BARMM child poverty rate	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	72.3%	79.4%	86.8%
With SAP	65.2%	73.8%	81.2%
With child grant	40.5%	51.7%	63.3%

Bicol child poverty rate	Scenario 1	Scenario 2	Scenario 3
Without SAP	51%	60.6%	68.7%
With SAP	44.7%	52.8%	62.1%
With child grant	22.6%	32.3%	43.2%
Eastern Visayas child poverty rate	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	55.4%	62.9%	70.2%
With SAP	47.8%	56.4%	65.3%
With child grant	26.5%	36.9%	46.7%
Western Mindanao child poverty rate	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	50.1%	59.2%	68.3%
With SAP	43.2%	51.5%	61.9%
With child grant	25.4%	33.1%	41.7%
Caraga child poverty rate	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	51.6%	60.3%	69.1%
With SAP	45.8%	54.4%	63.3%
With child grant	25.9%	34.3%	44.8%

5.4. Emergency school grant for children ages 5-17

An emergency school grant for children ages 5 to17 would not only reduce monetary poverty but also improve indicators of children's well-being that were compromised by the COVID-19 pandemic. These include nutrition and education. An emergency grant of Php1,200 for children ages 5 to 17 would bring an average reduction of 0.69 percentage points in overall monetary poverty with 0.45 percentage points and 0.88 percentage points for urban and rural areas respectively. The results are more significant in monetary child poverty. The emergency school grant would also reduce monetary child poverty by an average 1.82 percentage points or relieve an average of 744,913 children nationwide from poverty (Figure 18). For BARMM, Bicol, Eastern Visayas, Western Mindanao and Caraga, child monetary poverty would post an average drop of between 7.9 percentage points and 9 percentage points, depending on the scenario *(Table 23)*.

Figure 18. Comparison of child poverty post-COVID-19



Source: 2018 FIES/author's calculation

Table 23. Comparison of child poverty post-COVID-19

Child poverty rate	Scenario 1	Scenario 2	Scenario 3
Without SAP	29.9%	37.3%	45.5%
With SAP	24.5%	30.9%	39.1%
With school grant	23.2%	29.9%	38%
BARMM child poverty rate	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	73.3%	81%	87.1%
With SAP	66.9%	75.7%	82.9%
With school grant	64.4%	73.6%	81.3%
Bicol child poverty rate	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	47.9%	57.8%	66.7%
With SAP	40.6%	49.4%	59.7%
With school grant	38.3%	47.1%	57.6%
Easter Visayas child poverty rate	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	52.3%	60.8%	69.2%
With SAP	45.7%	53.9%	63.4%
With school grant	43.2%	51.9%	61.2%

Western Mindanao child poverty rate	Scenario 1	Scenario 2	Scenario 3
Without SAP	49.1%	57.9%	66.8%
With SAP	42.9%	51.2%	60.7%
With school grant	40.2%	48.8%	58.3%
Caraga child poverty rate	**Scenario 1**	**Scenario 2**	**Scenario 3**
Without SAP	49.4%	58.2%	66.7%
With SAP	42.9%	51.7%	60.5%
With school grant	40.6%	49.2%	58.6%

5.5. Expansion of the 4Ps

An expansion of the 4Ps for households living above the poverty threshold could provide a safety net and prevent an increase in the incidence of poverty as near-poor households have a high risk of slipping into poverty. With the SAP, the near-poor headcount varied from 6.8 per cent to 8 per cent, depending on the income drop scenario. An expansion of the 4P benefit to include those with incomes 15% above the current poverty threshold would bring an average reduction of 3.2 percentage points in the number of people living just above the poverty line *(Table 24)*. In terms of child poverty, this would mean that more than 22,000 children would no longer live in a near-poverty situation.

Table 24. Overall monetary poverty comparison, 4Ps expansion

Overall near-poverty headcount	Scenario 1	Scenario 2	Scenario 3
Without SAP	7.12%	7.38%	7.63%
With SAP	6.80%	7.56%	8.00%
With 4P expansion	3.62%	4.18%	4.65%

5.6. 4P without the three-child limit

The 4P benefit currently limits to three children per household who are eligible for cash assistance at the same time. This excludes other vulnerable children who might also deserve to benefit from the programme. Lifting the three-child limit would not only contribute to the reduction of monetary poverty but would also hasten results in other dimensions and contribute to several desired child outcomes. Due to data limitations, this study was not able to simulate accurate results on the impact of this expansion in monetary poverty. Nonetheless, it is strongly advised that this policy option be considered, as cash transfer programmes are effective policy instruments in reducing monetary child poverty, boosting school enrolment, increasing use of health services and improving dietary diversity.

Table 25. Policy options cost estimation

Policy option	Beneficiaries	Average total benefit (Php)	Total cost (USD) in million	Total cost (Php) in million	% GDP
SAP 2-month extension	17,457,073	PHP 13,000	$ 4,674	PHP 226,942	1.17%
SAP BARMM-extension	506,954	PHP 26,000	$ 271	PHP 13,181	0.07%
Child grant	6,581,131	PHP 6,000	$ 813	PHP 39,487	0.20%
Emergency school grant	27,908,598	PHP 1,200	$ 690	PHP 33,490	0.17%
4P expansion	3,704,139	PHP 14,000	$ 1,068	PHP 51,858	0.27%

Table 26. Policy options cost estimation for the five poorest regions

Policy option	Beneficiaries	Average total benefit (Php)	Total cost (USD) in million	Total cost (Php) in million	% GDP
SAP 2-month extension	3,633,159	PHP 13,000	$ 973	PHP 47,231	0.24%
Child grant	2,123,057	PHP 6,000	$ 262	PHP 12,738	0.07%
Emergency school grant	8,846,071	PHP 1,200	$ 219	PHP 10,615	0.05%

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