



Children Under Multidimensional Poverty Trap (Exploring the Priority Dimension to Achieve SDGs' Target Post Covid-19 Disruption)

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Abstract. The Covid-19 pandemic has disrupted various aspects of life and left major challenges to achieve the TPB/SDGs. Especially, in reducing child poverty. This study aims to study child poverty in DKI Jakarta Province by estimating poverty in monetary and multidimensional terms in pre and post the Covid-19 pandemic. The results of the Susenas BPS for the March 2019 and March 2020 were used to identify this. This study using Foster-Greer-Thorbecke/FGT Formula and Multiple Overlapping Deprivation Analysis/MODA methodology. The results of the analysis show that monetary child poverty is still quite far from the TPB/SDGs target in 2030. Meanwhile, multidimensional child poverty has succeeded in exceeding the target. Monetary and multidimensional dimensions have an influence on child poverty, with different intensities. The Covid-19 pandemic quickly pulled children down below the monetary poverty line. Particularly, children with household conditions of ≥ 5 people, low-educated Head of Household (HoH), female HoH, and unemployed HoH. On the other hand, the increase in multidimensional child poverty has not occurred. Three of the six dimensions had the highest deprivation values in the 0-17 age group, namely the dimensions of education, food and nutrition, and housing. These conditions are relatively similar to before the Covid-19 pandemic occurred.

Keywords: Child, Multidimensional Poverty, SDGs' Target.

1 Introduction

Childhood constitutes a central episode in the entire human life cycle. Children who grow up in poverty tend to have lower productivity and income in adulthood (Rizky et al., 2019; Heckman, 2008 in Ravallion, 2016). In adulthood, individuals aged 8–17 years who grew up in poor families may experience an earning penalty of up to 85–90% compared to children raised in more favorable conditions (Rizky et al., 2019).

Such a situation poses a significant barrier for Indonesia in realizing its Vision 2045, namely “Indonesia Maju” (Advanced Indonesia). One of the four pillars supporting the

realization of this vision is human development and the mastery of science and technology. In line with the 2025–2029 National Medium-Term Development Plan (RPJMN), the current phase of national development is a period to lay a strong foundation for achieving an Advanced Indonesia by 2045. Therefore, promoting better public policies for the protection and fulfillment of every child's rights is of paramount importance.

The child poverty rate is recorded as higher than the overall poverty rate across all provinces in Indonesia. In 2016, Papua had the highest child poverty rate (35.37%), while Bali had the lowest (5.39%). The child poverty rate in Jakarta Special Capital Region (DKI Jakarta) was 5.5%, just below Bali.

The global Covid-19 pandemic was predicted to push an additional 42–66 million children into extreme poverty (measured by daily expenditure below US\$1.25 PPP) (United Nations, 2020). According to Statistics Indonesia (BPS), the child poverty rate in Indonesia in 2020 reached 12.23%, an increase of 0.47 percentage points from 2019. This increase was higher than that for the ≥ 18 years age group (up 0.33 percentage points to 8.65%) and the all-ages group (up 0.37 percentage points to 9.78%).

The Covid-19 pandemic has further widened the gap in achieving the Sustainable Development Goals (SDGs) target by 2030, particularly Goal 1. This study aims to estimate both monetary and multidimensional poverty among children in DKI Jakarta Province. The research is expected to identify the dimensions that influence child poverty and to determine which dimensions and indicators should be prioritized for intervention in DKI Jakarta, particularly in the post-pandemic period.

2 Literature Review

The child age group is defined as individuals aged 0–17 years. Childhood represents the most vulnerable stage in a person's life, yet it is also a decisive period for determining the quality of the individual in subsequent stages of life. The main developmental periods within childhood include the prenatal period, the neonatal period, infancy, childhood, and puberty (Hurlock, 2018). The quality of each of these developmental stages is influenced by various conditions, and the needs of children vary across each stage of their development.

This perspective on children's needs is also reflected in the Convention on the Rights of the Child. The Convention consists of three parts and encompasses 54 articles, organized into five clusters: the right to special protection; the right to education, leisure, and cultural activities; civil rights and freedoms; the right to basic health and welfare; and the right to a family environment and alternative care. Efforts to fulfill children's rights have been further strengthened by a global commitment to achieving the Sustainable Development Goals (SDGs) by 2030. According to a joint publication by the Ministry of National Development Planning (Bappenas) and UNICEF (2017), 9 out of the 17 SDGs are identified as priorities for children, including Goal 1 (see Table 1).

Table 1. Priority Goals, Targets, and Indicators of the SDGs for Children.

Goal	Priority Targets for Children	Selected Indicators to Measure Progress	Type of Indicator	NATIONAL		DKI JAKARTA	
				Baseline	Data Source	Baseline	Data Source
1	1.1 By 2030, eradicate extreme poverty for all people everywhere	Proportion of the children living below the international poverty line (\$1.90 a day based on international price 2011)	Global Indicator	9%	SUSENAS 2015	Not Available	-
	1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	Proportion of children living below the national poverty line	Global Indicator	14%	SUSENAS 2015	5,70%	SUSENAS 2015
		Proportion of children living below two times of the national poverty line	National Indicator	60%	SUSENAS 2015	48,40%	SUSENAS 2015
		Proportion of children deprived in two or more dimensions of non-income poverty	National Indicator	65%	SUSENAS 2015	55%	SUSENAS 2015

Ravallion (2016) outlines several key concepts related to welfare that form the foundation of global poverty measurement methods, including Welfarism and Capabilities. The concept of Welfarism posits that the level of individual welfare serves as a standard for monitoring social progress within a population. This approach is rooted in the classical theory of utilitarianism, which assumes that each individual will act rationally to maximize their utility. Welfarism subsequently became the basis for the monetary poverty measurement approach, which is widely used by many countries around the world today. Within this framework, an individual is considered poor if they are unable to achieve the agreed-upon level of individual welfare within a given population.

From the Capabilities perspective, Sen (1999) argues that poverty should be understood as a deprivation of basic capabilities rather than merely as low income. Sen does not deny that income is an important instrument for escaping deprivation. His argument aligns with the findings of Narayan et al. (2000), whose research indicates that several aspects constrain an individual's welfare, including material well-being (food security and employment), psychological well-being (empowerment and opportunities to have one's voice heard), public infrastructure (such as roads, transportation facilities, and clean water), and the assets possessed by the poor (including physical capital, human capital, social capital, environmental capital, etc.).

The monetary and multidimensional approaches are not mutually exclusive; rather, they complement each other in sharpening the analysis of poverty characteristics in a given area. Based on this premise, the present study adopts both monetary and multidimensional approaches to examine child poverty in DKI Jakarta Province. The definition of poverty applied herein directly influences the choice of methods for its measurement.

Table 2. Comparative Matrix of Research Substance and Findings from Previous Studies.

Category	BPS and UNICEF, 2017	N. R. Tantan and E. T. Astuti, 2021	Adis Imam Munandar, Aji Wahyu Ramadhani, and Palupi Lindiasari Samputra, 2017	This Study
Publication Title	Analisis Kemiskinan Anak dan Deprivasi Hak-Hak Dasar Anak di Indonesia	Measuring Child Poverty in Jakarta Metropolitan Area Using a Multi-dimensional Perspective	Kemiskinan Anak di DKI Jakarta: Pendekatan Multiple Overlapping Deprivation Analysis	Children Under Multidimensional Poverty Trap (Exploring The Priority Dimension to Achieve SDGs' Target Post Covid-19 Disruption)
Dimensions and Indicators Used	A. Housing - Floor Area - Floor Material B. Facility - Drinking Water - Sanitation - Cooking Fuel C. Food and Nutrition - Calorie Intake - Fat Proportion - Breastfeeding D. Education - School Participation - Age-Appropriate School Participation E. Child Protection - Birth Certificate - Child Marriage F. Health - Health Insurance - Immunization	A. Housing - Floor Area - Floor Material B. Education - School Attendance - Lateness in Schooling C. Facility - Drinking Water Sources - Sanitation - Cooking Fuel D. Food and Nutrition - Calorie Consumption - Fat Proportion - Breastfeeding E. Child Protection - Birth Certificate - Early Marriage - Child Worker F. Health - Insurance - Immunization	A. Housing - Floor Area per Capita - Floor Material B. Facility - Decent Drinking Water - Decent Sanitation - Cooking Fuel C. Food and Nutrition - Calorie Intake - Fat Proportion - Breastfeeding D. Education - School Participation - Age-Appropriate School Participation E. Child Protection - Birth Certificate - Child Marriage - Child Labor - Child Safety F. Health - Health Insurance - Complete Basic Immunization	The dimensions and indicators used by researchers adopted the standards in MODA with adjustments to the indicators used, namely: A. Housing - Floor Area per Capita - Floor Material B. Facility - Decent Drinking Water - Decent Sanitation - Cooking Fuel C. Food and Nutrition - Calorie Intake - Breastfeeding D. Education - School Participation - Age-Appropriate School Participation - Access to Information E. Child Protection - Birth Certificate - Child Marriage - Child Victims of Crime - Child Labor F. Health - Health Insurance - Complete Immunization
Data Sources	Susenas March 2016	Susenas March 2016	Susenas March 2017	Researchers used data sourced from Susenas March 2019 and Susenas March 2020; these two periods were selected to see the comparison between before and after Covid-19 (the early phase of the pandemic). Year 2019 and 2020
Research Period	Year 2016	Year 2016	Year 2017	Year 2019 and 2020
Scope of Multidimensional Child Poverty Research	National	Jakarta Metropolitan Area	DKI Jakarta	Province and City/Regency in DKI Jakarta

In this study, a comparison is made between the monetary poverty approach and the multidimensional poverty approach for the periods before the pandemic (2019) and the

early stage of the pandemic (2020) (see Figure 1). Based on this comparison, it is expected that the dimensions requiring prioritization in the context of DKI Jakarta can be identified to support the achievement of the Sustainable Development Goals (SDGs) targets by 2030.

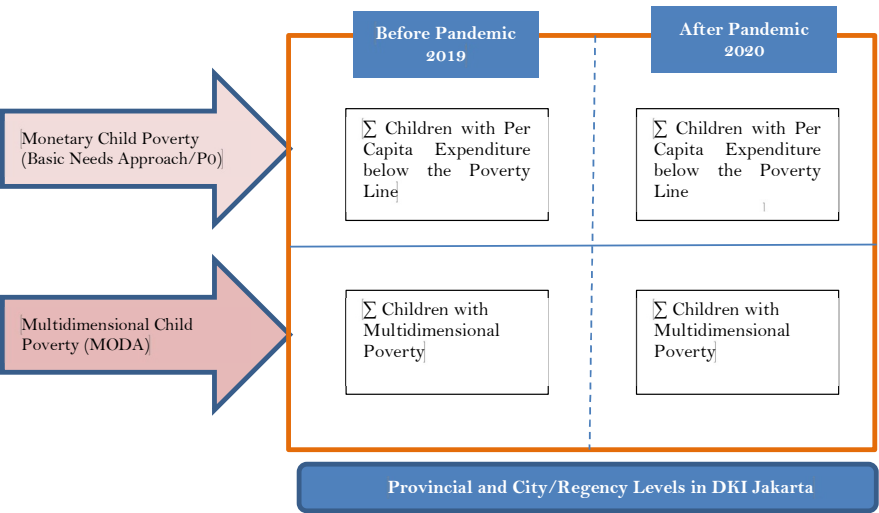


Fig. 1. Conceptual Framework of the Study.

3 Research Methodology

The estimation of child poverty, both monetary and multidimensional, in this study is based on data from the National Socio-Economic Survey (Susenas) conducted in March 2019 and March 2020. Data analysis was carried out using two approaches: the Foster-Greer-Thorbecke (FGT) formula for measuring monetary child poverty, and the Multiple Overlapping Deprivation Analysis (MODA) approach for measuring multidimensional child poverty.

3.1 Monetary Poverty

The FGT formula was applied to generate several indicators: the Poverty Headcount Index (P0), the Poverty Gap Index (P1), and the Poverty Severity Index (P2). In addition, the monetary child poverty analysis also included calculations of the Poverty Share (Povs), the Population Share (Pops), and the Poverty Risk (PovRisk). These additional indicators follow the definitions provided in Statistics Indonesia (BPS, 2017), as described below:

Poverty Share (Povs) refers to the percentage of poor children with a certain characteristic category relative to the total number of poor children. The formula for calculating Poverty Share is:

$$Povs = \frac{mk_i}{mt} \quad (1)$$

where,

Povs = value of the poverty share

mki = number of poor children with characteristic category i

mt = total number of poor children

Population Share (Pops) refers to the percentage of children within a specific category of a given characteristic relative to the total child population. The formula for calculating the Population Share is:

$$Pops = \frac{ak_i}{at} \quad (2)$$

where,

Pops = value of the population share

aki = number of children in category i of a particular characteristic

at = total number of children

Poverty Risk (PovRisk) refers to the likelihood that a child belonging to a specific category of a given characteristic will be poor. The formula for calculating Poverty Risk is:

$$PovRisk = \frac{Povs_i}{Pops_i} \quad (3)$$

where,

PovRisk = value of the poverty risk

Povsi = poverty share of children in category i of a particular characteristic

Popsi = population share of children in category i of a particular characteristic

3.2 Multidimensional Poverty

The analysis of multidimensional child poverty in this study applies the Multiple Overlapping Deprivation Analysis (MODA) method developed by UNICEF (2012). MODA is a holistic approach for measuring the extent of deprivation experienced by children in terms of their basic rights from a multidimensional perspective. The concept of deprivation in MODA assumes that the disadvantages faced by a child are multidimensional, interrelated, and overlapping, with the most severe effects tending to occur among socioeconomically disadvantaged children.

There are three main stages in the MODA calculation: determining the dimensions and indicators to be used, establishing operational definitions and deprivation criteria for each indicator, and calculating deprivation at the child level.

Selection of Dimensions and Indicators. The initial stage of MODA calculation is the determination of the dimensions and indicators to be applied. The primary reference for selecting these dimensions and indicators is the 1989 Convention on the Rights of the Child. At least four categories can serve as the starting point for identifying dimensions and indicators within MODA: survival, development, protection, and participation.

The concept of deprivation can be defined using one or more of the following considerations: national norms, standards, or legislation; internationally agreed definitions, such as those aligned with the SDGs; and theoretical frameworks developed by scientists, researchers, or academics. The determination of dimensions, indicators, and deprivation definitions in this study also takes into account local characteristics. In addition, it is guided by Law No. 23 of 2002 on Child Protection, the targets outlined in the 2020–2024 National Medium-Term Development Plan (RPJMN), the targets in the 2023–2026 Regional Development Plan (RPD) of DKI Jakarta Province, and the 2030 SDGs targets. The availability of data within the Susenas as well as sensitivity analysis of the data are also important considerations in this process.

Selected Indicators and Dimensions, and the Concept of Deprivation. This study applies six dimensions and sixteen indicators. Details regarding the operational definitions, deprivation concepts, and references used in selecting the indicators for each dimension are presented in Table 3.

Table 3. Dimensions, Indicators, and Deprivation Concepts by Age Group.

Dimension	Indicator	The Concept of Deprivation	
		0-4 year	5-17 year
1. Housing	Floor Area per Capita	Children aged 0-4 years living in homes with a floor area per capita of ≤ 7.2 m ²	Children aged 5-17 years living in homes with a floor area per capita of ≤ 7.2 m ²
	Floor Material	Children aged 0-4 years living in houses with dirt floors or other earthen surfaces	Children aged 5-17 years living in houses with dirt floors or other earthen surfaces
2. Facility	Decent Drinking Water	Children aged 0-4 years who do not have access to decent drinking water	Children aged 5-17 years who do not have access to decent drinking water
	Decent Sanitation	Children aged 0-4 years who do not have access to adequate sanitation facilities	Children aged 5-17 years who do not have access to adequate sanitation facilities
	Cooking Fuel	Children aged 0-4 years living in households that cook using natural fuels (firewood, charcoal, and the like)	Children aged 5-17 years living in households that cook using natural fuels (firewood, charcoal, and the like)
3. Food and Nutrition	Calorie Intake	Children aged 0-4 years with calorie consumption below the Recommended Nutrient Adequacy Level	Children aged 5-17 years with calorie consumption below the Recommended Nutrient Adequacy Level
	Breastfeeding	Children aged 0-23 months who are not exclusively breastfed or given complementary foods (appropriate for their age)	-
4. Education	School Participation	Children aged 3-4 years do not attend preschool	Children aged 5-6 years do not attend preschool Children aged 7-17 years who do not attend primary or secondary school
	Age-Appropriate School Participation	-	Children aged 7-17 who are not in school or are attending classes/levels that are below their age level

Dimension	Indicator	The Concept of Deprivation	
		0-4 year	5-17 year
5. Child Protection	Access to Information	-	Children aged 5-17 who do not have internet access to obtain information/news and learning processes
	Birth Certificate	Children aged 0-4 years who do not have a birth certificate	Children aged 5-17 years who do not have a birth certificate
	Child Marriage	-	Children aged 10-17 who are married or have been married
	Child Victims of Crime	Children aged 0-4 years who have been victims of crime	Children aged 5-17 who have been victims of crime
	Child Labor	-	Children aged 10-17 who worked or helped earn income in the past week
6. Health	Health Insurance	Children aged 0-4 years do not have health insurance	Children aged 5-17 years do not have health insurance
	Complete Immunization	Children aged 12-59 months who have not received complete immunizations	-

The deprivation analysis was conducted for each age group consistent with the stages of child growth and development, namely ages 0–4 years and 5–17 years. Indicator selection was also adjusted according to these age groups, with the analytical focus aligned to age-specific program intervention targets. In MODA, a child who does not fall within the reference age range for a given indicator is considered not deprived for that indicator. For example, a child aged 0–2 years is considered not deprived in the pre-school participation indicator.

Deprivation Indicators in the Multidimensional Analysis. The deprivation analysis in MODA places emphasis on both dimension-specific and multidimensional perspectives. The union approach is applied to determine whether a child is deprived in a given dimension. Under this approach, a child is categorized as deprived in a dimension if at least one of the indicators within that dimension is unmet. Although the union method is less sensitive in revealing the depth of deprivation, it is more effective in quickly identifying deprived children, thereby facilitating timely intervention programs.

Headcount Ratio at the Indicator Level. The headcount ratio at the indicator level is defined as the percentage of children experiencing deprivation in a given indicator, using the following formula.

$$h_{i,r} = \frac{q_{i,r}}{n_r} \tag{4}$$

where,
 $h_{i,r}$ = headcount ratio of deprivation for indicator i at age reference r
 $q_{i,r}$ = number of children deprived in indicator i at age reference r
 n_r = total number of children at age reference r

Headcount Ratio at the Dimension Level. The headcount ratio at the dimension level is defined as the percentage of children experiencing deprivation in at least one indicator within a dimension, using the following formula.

$$h_{j,r} = \frac{q_{j,r}}{n_r} \quad (5)$$

where,

$h_{j,r}$ = headcount ratio of deprivation for dimension j at age reference r

$q_{j,r}$ = number of children deprived in at least one indicator within dimension j at age reference r

n_r = total number of children at age reference r

A multidimensional approach means identifying the number of deprived children as exactly 2, 3, ..., d dimensions. Determining the number of dimensions begins with identifying the dimensional deprivation of each child, then looking at the multi-deprivation (overlap) between dimensions. The combination of multidimensional deprivation can be displayed using a Venn diagram (see Figure 2).

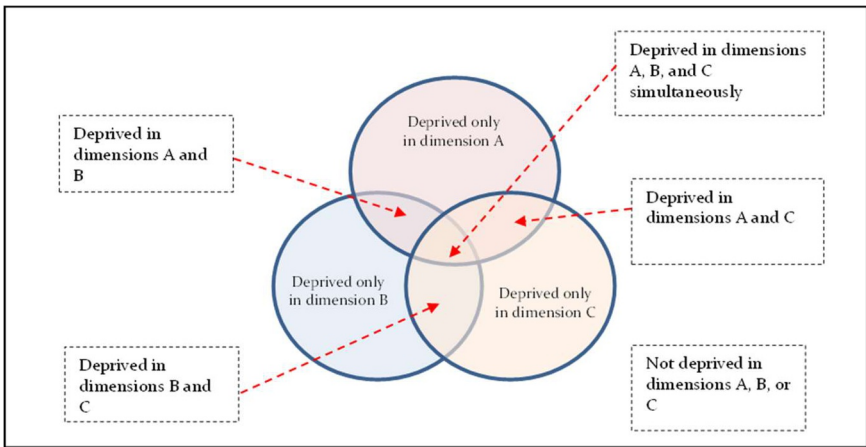


Fig. 2. Child Deprivation in Three Dimensions.

MODA Headcount Ratio (H). MODA uses a composite set of measures—namely, the MODA Headcount Ratio (H), deprivation intensity (A), and the adjusted MODA measure (M0)—to enable comparability across regions and over time. The multidimensional deprivation headcount ratio is identified using three approaches: Union, the child is deprived in at least one dimension ($0 < k \leq 1$); Intersection, the child is deprived in exactly d dimensions ($k = d$); and Intermediate, the child is deprived in at least d dimensions ($0 < k < d$).

Here, k is the cut-off value, and d is the total number of dimensions in which deprivation occurs. A higher cut-off value allows the user to focus on children experiencing

the most severe forms of deprivation. Nonetheless, MODA reports headcount ratios for all possible cut-off values (k). The MODA Headcount Ratio is calculated as follows:

$$H = \frac{q_k}{n} \quad (6)$$

where,

H = MODA Headcount Ratio

q_k = number of children deprived in at least k dimensions

n = total number of children

The number of dimensions in which children who are not identified as MODA-deprived experience deprivation is excluded from the calculation. In other words, if the cut-off is set at $k \geq 3$, children deprived in only one or two dimensions are excluded from the formula.

Adjusted MODA Headcount Ratio (M_0). Deprivation intensity is the average proportion of multidimensional deprivation among children identified as MODA-deprived, and is calculated as follows.

$$A = \frac{\sum_1^{q_k} c_k}{q_k \times d} \quad (7)$$

where,

A = average deprivation intensity

c_k = number of deprived dimensions experienced by a MODA-deprived child

q_k = number of children deprived in at least k dimensions

d = total number of dimensions considered (in this study, $d = 6$)

Referring to the concept of multidimensional poverty, Alkire and Foster (2007) define the deprivation intensity value (A) as the intensity of poverty. The concept of deprivation intensity is also applied in MODA; however, the value of A focuses more on the intensity or depth of deprivation experienced by children who are multidimensionally deprived.

The Adjusted MODA value incorporates information on deprivation intensity, making it more sensitive to changes in the number of dimensions in which deprivation occurs. For example, when using a cut-off value of $k \geq 3$, changes in the number of deprived dimensions at $d = 3, 4, 5$, or 6 will not affect the MODA Headcount Ratio (H), whereas the M_0 value will adjust accordingly. The Adjusted MODA value can thus be used to compare Headcount Ratios over time, with the calculation formula as follows:

$$M_0 = H \times A \quad (8)$$

where,

M_0 = Value of Adjusted MODA Headcount Ratio

H = MODA Headcount Ratio

A = Deprivation Average Intensity

4 Results and Discussion

4.1 Monetary Child Poverty

The child poverty rate (P0) among children aged 0–17 years in DKI Jakarta Province was recorded at 5.45% in 2019, rising to 6.36% in 2020 (see Figure 3). The child poverty rate in both 2019 and 2020 in DKI Jakarta Province was higher than the general poverty rate (for all age groups). A similar situation was observed across all municipalities/regencies, where the child poverty rate consistently exceeded the general poverty rate.

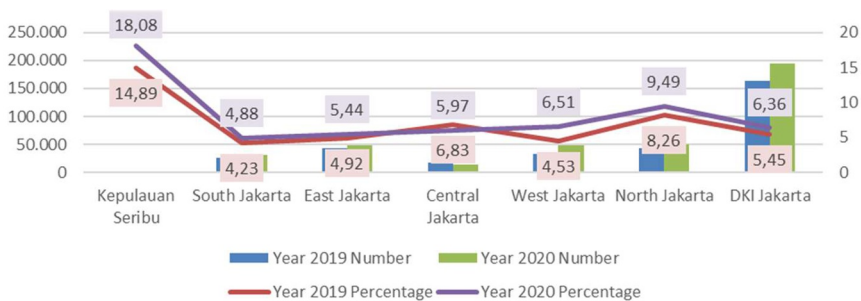


Fig. 3. Percentage (P0) and Number of Monetarily Poor Children in Municipalities/Regencies and in DKI Jakarta Province, 2019–2020.

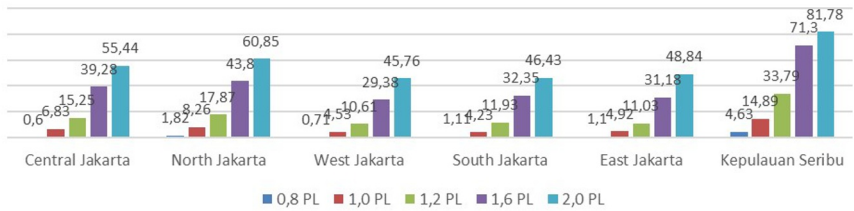
The percentage of poor children increased by more than 100% when the poverty line was raised to 1.2 times its original value. This situation occurred in both 2019 and 2020; however, the intensity of the increase was greater in 2020. Child poverty vulnerability in several municipalities within DKI Jakarta was recorded to be higher than the provincial level, particularly in Kepulauan Seribu Regency and North Jakarta City (see Figure 4).

From a demographic perspective, the percentage of poor children in DKI Jakarta tends to be higher as the number of household members increases. Furthermore, the percentage of poor children in households headed by women is higher than in those headed by men. Another demographic aspect identified is that the percentage of poor children among recent migration (migran risen) households is higher than among non-recent migration households. This pattern is consistent for both 2019 and 2020.

In 2019, the percentage of poor children in households where the head of the household (HoH) had no more than a junior secondary school (SMP/equivalent) education was higher than in households with more educated HoHs. The situation remained unchanged in 2020. However, the percentage of poor children with an HoH who had never

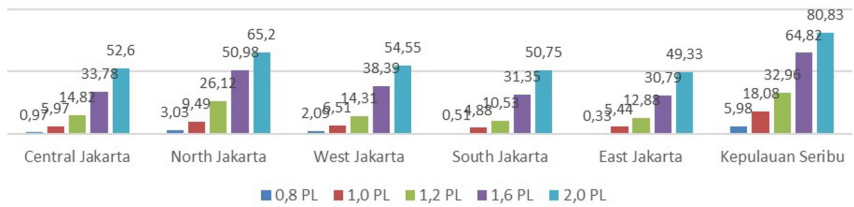
attended school experienced a relatively significant increase, from 5.58% in 2019 to 17.06% in 2020.

A. Year 2019



B. Year 2020

Fig. 4. Percentage of Poor Children (P0) in Municipalities/Regencies of DKI Jakarta by Selected Poverty Lines (PL), 2019–2020.



In 2019, 10% of poor children lived in households where the head of the household (HoH) was unemployed. This proportion decreased to 8.56% in 2020. In 2019, 13.79% of poor children lived in households where the HoH was a casual worker, and this proportion further increased in 2020. Furthermore, poor children living in households with only one working household member accounted for the highest proportion in 2019, at 7.14%, rising slightly to 7.19% in 2020. A significant increase was observed in the proportion of poor children living in households where no household members were employed, from just 0.04% in 2019 to 16.95% in 2020.

Regarding housing tenure status, 8.67% of poor children in 2019 lived in dwellings with rent-free or other tenure arrangements. This proportion was the highest compared to other housing tenure categories. In 2020, poor children living in rent-free or other tenure housing still accounted for the largest share at 8.33%.

In terms of access to decent sanitation, 8.40% of poor children in 2019 lived without access to proper sanitation. This proportion increased to 14.71% in 2020. For access to decent drinking water sources in DKI Jakarta, in 2019, 5.45% of poor children lived in households with such access. Meanwhile, among households without access to decent drinking water sources, 1.96% of children were poor. The proportions for both classifications increased in 2020, with a particularly significant rise among poor children in households without access to decent drinking water sources.

In 2019, 4.55% of poor children lacked a birth certificate. By 2020, the percentage of poor children without a birth certificate had nearly tripled to 13.57%. In 2019, both children and household heads with health insurance coverage recorded a higher percentage of poor children compared to those without such coverage. However, in 2020, this situation was reversed. In 2019, 5.67% of poor children lived in households where no members had employment social security, a proportion that decreased to 3.81% in 2020.

When examined based on the P0 value per category across all characteristics used in this study, several categories were found to have a higher P0 in 2020 compared to 2019. The five categories with the largest P0 increases are presented in Table 4.

Table 4. Characteristics and Categories of Child Poverty with the Highest P0 Increase Value.

Characteristics and Categories	P0 Value 2019	P0 Value 2020	Gap 2019—2020
Number of working household members: No household members are employed	0,04%	16,95%	-16,91%
HoH Education Level: Never attended school	5,58%	17,06%	-11,48%
Ownership of child's birth certificate: None	4,55%	13,57%	-9,02%
HoH Education Level: Elementary School Graduate/equivalent	6,99%	14,05%	-7,06%
Access to decent sanitation: No access	8,40%	14,71%	-6,31%

One aspect worth highlighting from the analysis of child poverty characteristics in DKI Jakarta concerns the proportion of poor children within each characteristic category (Poverty Share). In 2019, 76.70% of poor children lived in households with more than five members. Although this proportion declined in 2020, it remained relatively high at 67.65%.

When viewed from the employment status of the household head, 80.37% of poor children in 2019 lived in households where the head was employed, and this figure increased to 87.60% in 2020. In terms of education, 58.49% of poor children in 2019 resided in households where the head had completed only junior secondary education or lower. This proportion slightly decreased to 56.43% in 2020. Regarding social protection, the percentage of poor children living in households with no members covered by employment social security reached 100% in 2019. Although this figure decreased in 2020, it remained very high at 95.62%.

Another noteworthy aspect from the analysis of monetary child poverty characteristics in DKI Jakarta is related to Poverty Risk. Several characteristics were identified as having a high Poverty Risk in both 2019 and 2020, including the number of household members, recent migration status, the highest education level of the household head, employment status of the household head, and possession of employment social security. Children living in households with five or more members had a higher risk of being poor. Low educational attainment of the household head (junior secondary or lower), unemployment, and/or the absence of employment social security also significantly increased the risk of child poverty. Furthermore, children with recent migration status were also found to have a higher risk of being poor in DKI Jakarta.

According to Bappenas and UNICEF (2017), the proportion of children living below the national poverty line in DKI Jakarta in 2015 was 5.70% (see Table 1, Goal 1, Target 1.2). This figure serves as the baseline for achieving indicator 1.2.1 in DKI Jakarta on monetary child poverty. The SDGs target is to reduce this baseline figure by half by 2030, meaning a target of 2.85% by that year. Meanwhile, the estimated monetary child poverty rate in this study was 6.36% as of March 2020. To achieve the 2030 target of 2.85%, DKI Jakarta needs to reduce its rate by 3.51 percentage points over eight years, equivalent to 0.438 percentage points per year starting from 2023.

4.2 Multidimensional Child Poverty

For children aged 0–4 years, 6.85% experienced no deprivation in any dimension in 2019. This figure increased to 8.72% in 2020. In 2019, 38.82% of children in this age group experienced deprivation in two dimensions simultaneously. In 2020, deprivation in two dimensions remained the most prevalent, affecting 35.97% of children aged 0–4 years in DKI Jakarta Province.

A. Age Group 0–4 Years



B. Age Group 5–17 Years



Fig. 5. Percentage of Deprived Children by Number of Dimensions and Age Group in DKI Jakarta Province, 2019–2020.

The distribution of children deprived across multiple dimensions for the 5–17 age group showed a relatively different pattern compared to the 0–4 age group in both 2019 and 2020. In this older group, deprivation in a single dimension was the most common

throughout 2019–2020, followed by deprivation in two dimensions, and then three dimensions. The percentage of children aged 5–17 years with no deprivation in any dimension in DKI Jakarta Province was recorded at 11.20% in 2019 and increased to 12.55% in 2020 (see Figure 5).

The three dimensions with the highest deprivation levels in DKI Jakarta Province in both 2019 and 2020 were the education dimension, the food and nutrition dimension, and the housing dimension (see Figure 6). The same pattern was observed at the municipal/district level within DKI Jakarta Province in both years. The only exception occurred in 2019 in the Kepulauan Seribu, where the three dimensions with the highest deprivation levels were education, food and nutrition, and facilities. Within the education dimension, the indicators with the highest deprivation levels at the provincial level were access to information (ages 5–17) and preschool participation (ages 3–4). Furthermore, in the food and nutrition dimension, the indicator with the highest deprivation level at the provincial level was caloric intake (ages 5–17). Meanwhile, in the housing dimension, the indicator with the highest deprivation level was floor area per capita.



Fig. 6. Percentage of Deprived Children by Dimension in the Age Group 0–17 Years in DKI Jakarta Province, 2019–2020

The adjusted percentage of deprived children ($M0$) in this analysis was calculated using multiple deprivation cut-off thresholds. Using the threshold of $k \geq 2$, it was found that the Adjusted Percentage of Deprived Children (Multidimensional Child Poverty/ $M0$) in DKI Jakarta declined across all age groups between 2019 and 2020. In 2020, the $M0$ values for the $k \geq 2$ threshold were recorded at 24.56% for children aged 0–4 years, 19% for children aged 5–17 years, and 20.61% for children aged 0–17 years (see Figure 7).

Between 2019 and 2020, the $M0$ value for the $k \geq 2$ threshold in the 0–4 years age group improved in all municipalities/districts except West Jakarta (up by 1.03 percentage points) and North Jakarta (up by 0.97 percentage points). Meanwhile, the $M0$ values for the $k \geq 2$ threshold in the 5–17 years and 0–17 years age groups showed improvements across all municipalities/districts.

According to the joint release by Bappenas and UNICEF (2017), the proportion of children deprived in two or more non-income poverty dimensions in DKI Jakarta in 2015 stood at 55% (see Table 1, Goal 1, Target 1.2). This figure serves as the baseline for Indicator 1.2.2 in DKI Jakarta regarding multidimensional child poverty. The SDGs target aims to reduce this figure by half by 2030, which corresponds to 27.5%. In comparison, the present study estimates the multidimensional child poverty rate for children aged 0–17 at 20.61% as of March 2020—already surpassing the SDGs target.

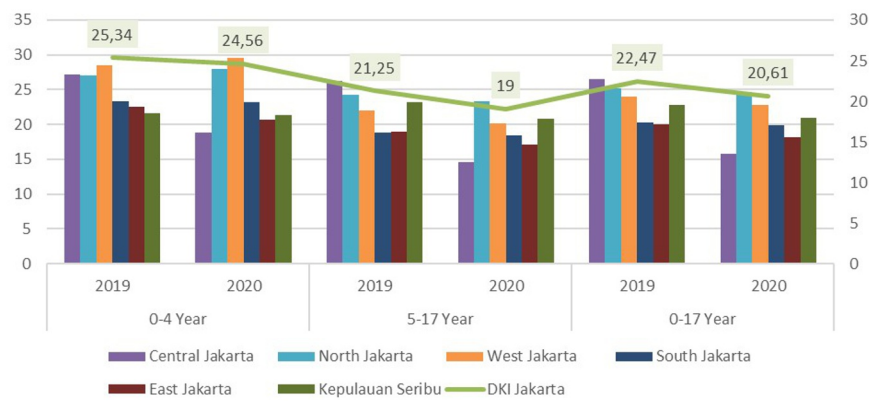


Fig. 7. Percentage of Adjusted Deprived Children/M0 (k, cutoff ≥ 2) by Age Group across Cities/Regencies and the Province of DKI Jakarta, 2019–2020

An analysis was also conducted on the overlap between children with multidimensional poverty status (using k, cutoff ≥ 2) and monetary poverty. The results show that of the 22.47% of children recorded as multidimensionally poor in 2019, 6.27% of them were also monetarily poor. This proportion decreased slightly in 2020, where out of 20.61% of children recorded as multidimensionally poor, 6.11% of them were also monetarily poor. However, if the monetary poverty line is doubled (poor and vulnerable to poverty), it is recorded that of the total 22.47% of children who were multidimensionally poor, 59.61% of them were also monetarily poor in 2019. This proportion rose to 62.46% of the total 20.61% of children in 2020 (see table 5).

Table 5. Overlap between Monetary Poverty and MODA (k, cutoff ≥ 2) in DKI Jakarta Province.

A. Year 2019

			MODA		Total
			Not Deprived	Deprived	
Monetary	PL	Not Poor	99.45%	93.73%	94.55%

			MODA		Total
			Not Deprived	Deprived	
		Poor	0.55%	6.27%	5.45%
			77.53%	22.47%	100.00%
	2xPL	Not Poor	75.17%	40.39%	49.68%
		Poor	24.83%	59.61%	50.32%
			77.53%	22.47%	100.00%

B. Year 2020

			MODA		Total
			Not Deprived	Deprived	
Monetary	PL	Not Poor	99.07%	93.89%	93.64%
		Poor	0.93%	6.11%	6.36%
			79.39%	20.61%	100.00%
	2xPL	Not Poor	70.36%	37.54%	46.00%
		Poor	29.64%	62.46%	54.00%
			79.39%	20.61%	100.00%

5 Conclusion and Recommendations

The analysis reveals that the achievement of DKI Jakarta in reducing child monetary poverty remains considerably distant from the Sustainable Development Goals (SDGs) target for 2030 (SDGs 2015 baseline for DKI Jakarta: monetary poverty at 5.7%; target 2030: 2.85%). As of March 2020, the child monetary poverty rate in DKI Jakarta reached 6.36%. To meet the 2030 target, the province needs to achieve a reduction of 3.51 percentage points over the remaining eight years, equivalent to an annual decline of approximately 0.438 percentage points from 2023 onwards. In contrast, the findings for multidimensional child poverty in DKI Jakarta indicate a more optimistic picture. The multidimensional poverty rate for children aged 0–17 in this study stood at 20.61% as of March 2020, already surpassing the SDGs target (SDGs 2015 baseline for DKI Jakarta: multidimensional poverty at 55%; target 2030: 27.5%).

The COVID-19 pandemic rapidly pushed children into monetary poverty, particularly those in households with ≥ 5 members, households headed by individuals with low education, female-headed households, and households where the head was unemployed. Conversely, the early period of the pandemic had not yet resulted in an increase in multidimensional child poverty at the provincial level. Nevertheless, the proportion of multidimensional poor children remained substantially higher than that of monetarily

poor children. Furthermore, in 2020, three out of six dimensions recorded the highest deprivation levels among children aged 0–17—both at the provincial and city/regency levels—namely education, food and nutrition, and housing.

Based on these conclusions, several policy recommendations are proposed, (1) develop targeted poverty alleviation programs that are age-specific and address the root causes of multidimensional child poverty, prioritizing interventions in the dimensions of education, food and nutrition, and housing; (2) adopt a holistic and multisectoral approach to poverty reduction—considering the child’s household and community environment, as well as cross-sectoral governmental affairs (e.g., education, employment, security) and stakeholder (governmental and non-governmental); (3) ensure the fulfillment of the Convention on the Rights of the Child, including through the provision of more adequate regulatory instruments, such as a Provincial Regulation on Child Protection derived from Law No. 23 of 2002 on Child Protection; dan (4) initiate the development of MODA as a tool for measuring multidimensional child poverty at the regional level, to facilitate monitoring and evaluation processes, particularly in support of achieving the SDGs target by 2030.

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