THE SITUATION OF FILIPINO CHILDREN

AT A GLANCE

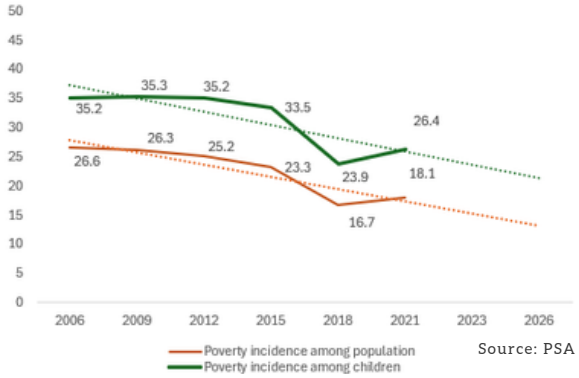
Senate Economic Planning Office

The Philippines represents a young demographic. According to the Philippine Statistics Authority, approximately 37.95 million individuals, or 33.62% of the projected total population for 2024, are children aged 0-17. Of this, around 8.89 million are under 5 years old, while the remaining 29.06 million are between 5 to 17 years old. With declining total fertility and mortality rates shaping the demographic transition over the past decade, the country stands poised to harness a substantial demographic dividend. However, Filipino children often grapple with multi-faceted challenges, which, if not adequately addressed, could impede their ability to reach their full potential throughout their lives, and contribute effectively to the nation's human capital development and economic growth.

CURRENT STATE AND CHALLENGES

Poverty Incidence Among Population and Among Children in the Philippines, 2006-2021

Estimates in %



Source: PSA

- Filipino children are more likely to live in poverty than the general population as evidenced by higher poverty incidences since 2006.
- Child poverty rate was 26.4% in 2021, reflecting an 8.8 percentage point decline since 2006, alongside an 8.5-point drop in overall poverty. Trend model forecasting predicts child poverty at 21.3% and overall poverty at 13.3% by 2028, falling short of the government's Medium-Term Fiscal Framework target of 9% overall poverty.
- In 2021, child poverty rose by 2.5 percentage points from 2018, reaching 10.46 million children. This could be attributed to the impacts of the Covid-19 pandemic.
- Child poverty rates vary considerably across regions, with the highest incidences recorded in BARMM (44.2%), Caraga (44.1%), and Region V (39.9%) and the lowest in NCR (6.3%), CAR (13.7%), and Region IV-A (16.4%) in 2021. Moreover, ten regions have rates exceeding the national average of 26.4%.

Poverty incidence among children is defined as the proportion of children who belong to families whose income is insufficient to meet their basic food and non-food needs to the total number of children.

Income poverty alone does not fully capture the situation of Filipino children. Challenges exist in critical aspects of well-being, reinforcing poverty across generations.

In 2022, only **59.9%** of children achieved full vaccination, far short of the ideal 95% target. The Philippines is among the top 5 countries globally with the most unvaccinated children (637,000 in 2022).

Source: WUENIC, 2022

Stunting is a serious public health concern affecting one in five (21.6%) infants and toddler (aged 0-23 months) and one in four (26.6%) preschoolers (aged 3-5 years old).

Source: FNRI (2021)

The lack of basic water, sanitation, and hygiene (WASH) facilities in schools—available in only 44%, 74%, and 61% of schools, respectively, in 2021—exacerbates child poverty by impacting children's health, school attendance, and learning outcomes, perpetuating cycles of disadvantage.

Source: UNICEF (2023)

Only one out of five children with disabilities (325,000 of 1.27 million) has a disability ID card, indicating significant barriers in accessibility or awareness of the benefits they are entitled to.

A child with disabilities needs 40-80% higher expenditure than a child without disabilities. Source: UNICEF (2022)

Participation of children ages three to four years in pre-kindergarten programs in both public and private schools was low at around 40%.

Source: EDCOM II (2023)

Sustainable Development Goal (SDG)4 indicators on proficiency in reading and mathematics show that basic education in the Philippines is in crisis with less than a fifth of students learning minimum proficiency skills in reading and in mathematics.

Source: PIDS (2023)

9.7 million Filipino children were displaced due to weather-related events from 2016 to 2021. The Philippines has one the highest numbers of child displacements among 44 countries in a 2023 UNICEF analysis.

Source: UNICEF (2023)

Early pregnancies among young girls (under 15 years old) have significantly increased, with total live births among them up by 35% – from 2,320 in 2021 to 3,135 in 2022.

Source: PSA (2023)

Out of the 1.1 million working children in 2023, 678,000 (62%) were engaged in child labor, a type of work that is harmful to the child's well-being and development.

Source: PSA (2024)

17,681 violence against children cases were recorded in 2023. The top three cases are child abuse, rape, and acts of lasciviousness.

Source: PNP WCPC (2022)

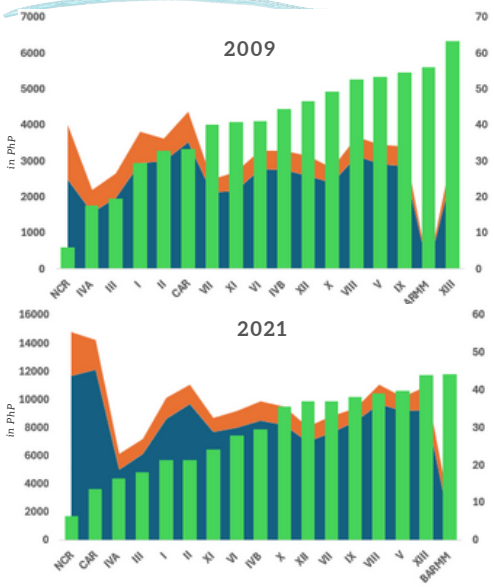
PUBLIC SOCIAL EXPENDITURES AND CHILD POVERTY IN THE PHILIPPINES

PUBLIC SOCIAL EXPENDITURES consist of government funds designated for a range of social services. In this analysis, the national government's allocation for social services encompasses expenditures in the following categories: a) education, culture, and manpower development; b) health services; c) social security, welfare, and employment; d) housing and community development; and e) land distribution. At the local government level, social expenditures include funding for education, health, labor and employment, housing, and social services and welfare.

- Significant regional variations in social spending and child poverty rates have been observed from 2009 to 2021.
- Social expenditures by the national government varied widely from **PhP613** to **PhP49,687** per capita per year, which likely reflects the scale of national-level programs across regions. Meanwhile, local government spending ranged from **PhP372** to **PhP3,092** per capita, which may be due to varying local fiscal capacities.
- Regional child poverty rates also showed considerable disparities, ranging from **4.3%** to **68.3%**.
- A pairwise correlation analysis reveals a weak to moderate inverse relationship (-0.35) between national social expenditures and child poverty rates, while a similar analysis shows a moderate to strong inverse relationship (-0.60) between local government social expenditures and child poverty rates.

Note: Expenditure data are lagged by one year to account for the delayed effects on child poverty. ARMM data only includes LG spending.
Sources of data: DBM, DOF, & PSA

Public Social Expenditures Per Capita and Child Poverty Rates in the Philippines, By Region, 2009 and 2021



A panel regression analysis of regional child poverty rates in the Philippines from 2009 to 2021 reveals a weak to moderate relationship between social spending by national and local governments and child poverty levels, with the impact varying by type of spending and other contextual factors, holding other variables constant.

REGRESSION RESULTS: A SNAPSHOT

- A weak inverse relationship is observed between national government education spending and child poverty rates, indicating that higher education expenditures by the national government are associated with a modest reduction in child poverty levels.
- **In contrast, local government education spending shows a moderate negative relationship with child poverty rates, suggesting that increased investments in education by local governments are linked to more significant declines in child poverty.**
- Interestingly, national government social welfare expenditures and local government spending on health and social welfare exhibit a weak positive relationship with child poverty rates. This suggests that higher expenditures may be a reactive measure in response to rising poverty levels rather than a proactive driver of poverty reduction. Alternatively, the positive association could indicate that increased spending does not consistently translate into direct benefits for poor households with children, possibly due to inefficiencies in program implementation, targeting issues, or the influence of external socio-economic factors that offset the potential poverty-reducing effects of such expenditures.

CONTROL VARIABLES

- Average annual family income is significantly associated with reductions in child poverty, underscoring the importance of implementing policies aimed at increasing household incomes.

- Consistent with prevailing literature on household size and poverty in the Philippines, larger average household sizes correlate with higher incidences of child poverty,

- Higher female employment rates are associated with lower child poverty levels, This relationship suggests that when more women are gainfully employed, they contribute significantly to the household income, thereby reducing the likelihood of children living in poverty.

Please see attached technical note for the detailed discussion of the regression analysis.

POLICY OPTIONS

Addressing child poverty and improving the welfare of Filipino children in dire conditions necessitate targeted measures for those most in need. To this end, the following strategies and legislative measures, among others, are recommended:

Reduce wide disparities on child poverty across regions through targeted spending and interventions.

Allocate additional resources to regions with the highest child poverty rates and lowest public social spending per capita, such as Regions IX (Zamboanga Peninsula), V (Bicol Region), and BARMM. Ensure effective use of funds by establishing transparent beneficiary selection, regular audits, and strong monitoring systems. Expand social protection programs like well-targeted cash transfers linked to conditions such as school attendance and health check-ups. Strengthen grievance mechanisms to improve accountability and develop locally tailored programs with community involvement for sustainable impact.

Pursue educational assessment reform and strengthen early childhood education.

The Second Congressional Commission on Education (EDCOM II) recommends revamping basic education assessment with a unified framework and computer-based testing, and studying the creation of an independent body for oversight to improve efficiency, data quality, and overall capabilities. To strengthen the implementation of early childhood education, SBN 2029 proposes to enhance coordination and oversight within the decentralized system.

Pass the Magna Carta of Children.

Senate Bill No. (SBN) 2612 aims to establish a comprehensive legal framework to protect and promote the rights of children in the Philippines. The bill codifies existing laws related to children, harmonizes them with the United Nations Convention on the Rights of the Child, and introduces measures across various sectors including health, education, and protection to support and safeguard children's rights. Passage of measures to strengthen enforcement and increase penalties for child abuse, exploitation, and discrimination (SBNs 563, 1118, and 1397) and prevent adolescent pregnancy (SBN 1979) should also be considered.

Support children with disabilities.

SBN 2467 or the proposed Disability Support Fund Act addresses the needs of indigent children with disabilities by allocating resources to provide them with monthly stipends and assistive equipment and devices.

Promote women's full participation in economic life.

Improve women's access to meaningful employment and business opportunities. SBN 584 (Inclusive Business Act) and SBN 2050 (Women in Business Development Act) seek to support women small producers and business enterprises. SBN 1827 aims to expand prohibited acts of discrimination against women in the workplace on account of sex.

TECHNICAL NOTE
REGRESSION ANALYSIS OF REGIONAL CHILD POVERTY RATES AND PUBLIC SOCIAL EXPENDITURES IN THE PHILIPPINES

INTRODUCTION

The persistent issue of child poverty in the Philippines has profound long-term implications for social and economic disparities. Children who grow up in poverty are more likely to experience limited access to education, healthcare, and employment opportunities, perpetuating cycles of inequality across generations. Child poverty rates have consistently surpassed those of the general population, highlighting the critical need for targeted interventions to ensure equitable opportunities for all Filipino children.

Historically, the Philippine government has allocated significant portions of the national budget to social services, with allocations ranging from 22% in 1990 to 40% of the national budget in 2017.[1] Local government expenditures for social services as share of total expenditures have averaged 21% annually from 2008 to 2020.

This study is an attempt to examine the relationship between public social spending by national and local governments and child poverty across the 17 regions of the Philippines. It aims to evaluate the prevailing assumption that higher social expenditures lead to reductions in child poverty, thereby informing future policy decisions to enhance the impact of social spending on child poverty reduction.

DATA AND VARIABLES

The analysis uses panel data to examine child poverty across the 17 regions of the Philippines for the years 2009, 2012, 2015, 2018, and 2021, utilizing multiple data sources. The dependent variable is the child poverty rate, measured as the percentage of children (aged 0-17) living in households with incomes below the official poverty threshold, based on data from the Philippine Statistics Authority (PSA).

Explanatory variables are grouped into two categories: fiscal policy and socio-economic demographic factors. For fiscal policy, we consider National Government (NG) Social Expenditures and Local Government (LG) Social Expenditures, both lagged by one year to account for the delayed effects on poverty. Due to incomplete regional disaggregation of NG social expenditures, only education and social welfare spending—accounting for an average of 44% of NG social expenditures—are analyzed. LG expenditures, disaggregated into education, health, and social welfare, represent over 90% of total local social spending. Data are sourced from the Department of Budget and Management and the Department of Finance - Bureau of Local Government Finance and adjusted to 2018 Pesos per capita to account for inflation and population differences, ensuring consistent comparisons over time and across regions.

Socio-economic demographic factors are represented by the (i) average annual family income, (ii) average household size, and (iii) female employment rate per region with data sourced from the Family Income and Expenditure Surveys and data from the PSA. These variables help control for additional socio-economic influences that might affect regional child poverty rates. Interestingly, emerging international literature examines the relationship between female employment and poverty, a focus that was explored in this analysis.

Table 1. Descriptive Statistics of Child Poverty and Public Social Expenditures in the 17 Regions of the Philippines, 2009, 2012, 2015, 2018, and 2021

Variable	Mean	Standard Deviation	Min	Max	Observations
Child Poverty	33.5	14.6	4.3	67.2	N=81;n=17;T=4.8
National Government (NG) Expenditures Per Capita: Education	4,363.1	4,277.8	1,175.7	35,190.2	N=81;n=17;T=4.8
NG Expenditures Per Capita: Social Welfare	698.2	822.8	7.1	5,448.6	N=81;n=17;T=4.8
Local Government (LG) Expenditures Per Capita: Education	137.7	147.7	34.3	745.1	N=81;n=17;T=4.8
LG Expenditures Per Capita: Health	476.3	209.1	114.8	1,288.9	N=81;n=17;T=4.8
LG Expenditures Per Capita: Social Welfare	251.4	166.9	64.4	823.7	N=81;n=17;T=4.8
Average Annual Family Income	250,747.7	71,757.19	141,497.7	470,281.6	N=81;n=17;T=4.8
Average Household Size	4.9	0.6	4.0	6.0	N=81;n=17;T=4.8
Female Employment Rate	94.0	1.7	88.6	97.0	N=81;n=17;T=4.8

Notes: N = number of observations; n = number of regions; T = number of average years per region

ESTIMATING THE MODEL

The equation below shows the specification of the model, which allows us to analyze the relationship between government social spending, socio-economic factors, and child poverty:

$$CP_{it} = \omega_{0+}\beta NE_{it-1} + \beta NS_{it-1} + \beta LE_{it-1} + \beta LH_{it-1} + \beta LS_{it-1} + \beta I_{it} + \beta S_{it} + \beta F_{it} + \alpha_i + \mu_{it}$$

where:

CP_{it} : Child poverty rate in the region *i* in the year *t*
NE_{it-1} : National government expenditures on education per capita in the region *i* in the year *t*-1
NS_{it-1} : National government expenditures on social welfare per capita in the region *i* in the year *t*-1
LE_{it-1} : Local government expenditures on education per capita in the region *i* in the year *t*-1
LH_{it-1} : Local government expenditures on health per capita in the region *i* in the year *t*-1
LS_{it-1} : Local government expenditures on social welfare per capita in the region *i* in the year *t*-1
I_{it} : Average annual family income in the region *i* in the year *t*
S_{it} : Average household size in the region *i* in the year *t*
F_{it} : Female employment rate in the region *i* in the year *t*
α_i : Unobservable fixed effect
μ_{it} : Error term

A double log transformation was applied to address skewness of data and non-linearity between variables. Given the substantial regional disparities affecting child poverty in the sample, a panel data methodology was employed to account for both spatial and temporal dimensions. The individual effects were modeled as either random or fixed, depending on their correlation with the explanatory variables. If the individual effects are uncorrelated with the explanatory variables, a random effects model is appropriate; if they are correlated, a fixed effects model is used.

The Hausman test was conducted to determine the appropriate model, yielding a p-value of 0.0511. Although this result is close to the 0.05 threshold, it technically fails to reject the null hypothesis of no significant correlation between regressors and unobserved individual effects. As a result, the random effects model (Model 2A) was selected, as it is both consistent and efficient for the analysis. However, the borderline p-value suggests that the fixed effects model (Model 1A) cannot be entirely disregarded.

Additionally, Models 1B and 2B were adjusted for heteroskedasticity or variance inconsistency of the error terms by employing clustered standard errors. Robustness tests confirm that our models are as streamlined as possible to avoid undue complexity, while still containing enough parameters to accurately reflect the data's underlying trends.

[1] DBM. (January 2019). *Social Services spending highest in 2017 and 2018*. Retrieved from https://www.dbm.gov.ph/index.php?view=article&id=602:status-of-allotment-releases-june-2016&catid=218:status-of-allotment-releases .

TECHNICAL NOTE
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RESULTS

Table 2 presents the regression results, with Models 1A and 2A serving as baseline specifications. To address potential heteroskedasticity, heteroskedasticity-robust standard errors were applied to these models, producing corrected results for more reliable statistical inference (Models 1B and 2B). In all regressions, key control variables such as average family income, average household size, and female employment rate were consistently included to ensure robust and meaningful estimates.

After applying a double log transformation and controlling for other factors, national government (NG) education spending exhibits a weak inverse relationship with child poverty; a 10% increase in education spending is associated with a 0.7% reduction in the child poverty rate (Model 2A/2B). Conversely, NG social welfare spending shows a positive association, where a 10% increase corresponds to a 0.3% rise in child poverty. This suggests that social welfare spending may be reactive to worsening poverty conditions or that allocated funds might not effectively reach poor households due to implementation inefficiencies or external socio-economic factors.

Local government (LG) education spending exhibits a moderate negative relationship with child poverty, where a 10% increase in education expenditures is associated with a 3.5% reduction in child poverty rates (Model 2A/2B). In contrast, local government spending on health and social welfare shows positive relationships with child poverty, as a 10% rise in health expenditures corresponds to a 1.2% increase in child poverty, while a similar increase in social welfare spending is linked to a 0.1% rise in child poverty incidence.

Notably, all main regressors (NG and LG expenditures) are statistically significant under Model 2A/2B (random effects), the preferred model per the Hausman test. Some significance is also observed under the fixed effects model, suggesting robust associations. An attempt was made to include NG expenditures on health in the model; however, it was found to be statistically insignificant and multicollinear with other independent variables. This may reflect a focus on broader, long-term health initiatives that are not directly or immediately associated with child poverty.

Table 2 . Regression Analysis: Child Poverty and Public Social Expenditures in the Philippines, 2009, 2012, 2015, 2018, and 2021

Dependent Variable: Child Poverty Rate	Model 1A	Model 2A	Model 1B	Model 2B
Independent Variables:				
NG Expenditures Per Capita: Education	-0.0836** (0.041)	-0.0734* (0.044)	-0.0836** (0.037)	-0.0734* (0.047)
NG Expenditures Per Capita: Social Welfare	0.0295* (0.015)	0.0323** (0.016)	0.0295** (0.010)	0.0323** (0.015)
LG Expenditures Per Capita: Education	-0.1278 (0.086)	-0.3517*** (0.065)	-0.1278* (0.072)	-0.3517*** (0.103)
LG Expenditures Per Capita: Health	0.1400 (0.126)	0.1189 (0.093)	0.1400 (0.102)	0.1189** (0.059)
LG Expenditures Per Capita: Social Welfare	0.0132 (0.053)	0.0964** (0.045)	0.0132 (0.050)	0.0964*** (0.030)
Average Annual Family Income	-0.9226*** (0.167)	-1.2270*** (0.156)	-0.9226*** (0.093)	-1.2270*** (0.147)
Average Household Size	1.006*** (0.144)	1.049** (0.144)	1.006*** (0.151)	1.049*** (0.145)
Female Employment Rate	-3.009** (1.126)	-2.323** (1.161)	-3.009*** (1.02)	-2.323*** (0.796)
R2 within	0.79	0.76	0.79	0.76
R2 between	0.92	0.93	0.92	0.93
R2 overall	0.82	0.90	0.82	0.90
Observations (regions)	81 (17)	81 (17)	81 (17)	81 (17)

Notes: Standard errors are in parenthesis; ***, **, and * indicate significance at $p < 0.01$, $p < 0.05$ and $p < 0.1$, respectively.

Among the control variables, both average annual family income and female employment rate exhibit significant negative relationships with child poverty. In Model 2A/2B, a 10% increase in average annual family income is associated with a 12% reduction in child poverty, emphasizing the crucial role of household economic stability in mitigating poverty. Similarly, a 10% rise in the female employment rate corresponds to a substantial 23% decline in child poverty, suggesting that expanding female employment opportunities is a highly effective strategy for child poverty reduction. Notably, the regression analysis using male employment rate also revealed a strong and statistically significant negative association with child poverty. However, male employment is highly multicollinear with female employment, likely due to shared economic factors influencing both. Given this, only female employment was retained in the model to explore the role of female employment in child poverty reduction.

Meanwhile, average household size shows a positive relationship with child poverty, where a 10% increase in household size is linked to a corresponding 10% rise in child poverty incidence. This aligns with findings from PSA and UNICEF (2015), which reported that children in larger families in the Philippines experienced higher poverty rates between 2003 and 2009.[2] These results highlight the complex interplay between social spending, socio-economic factors, and child poverty, underscoring the need for targeted policy interventions that consider both macroeconomic indicators and household-level dynamics.

It is worth noting that the 0.9 overall R-squared value of the random effects model indicates that the model explains a substantial portion of the variation in child poverty rates, highlighting its strong explanatory power and the relevance of the included regressors.

CONCLUSIONS

This study examined the relationship between public social expenditures and child poverty in the Philippines, focusing on both national and local government spending while incorporating key socio-economic variables such as average family income, household size, and female employment rates. Using panel regression analysis, the findings reveal a weak to moderate inverse relationship between government education spending and child poverty rates. As education expenditures increase, child poverty declines, though the effect appears limited, likely due to the long-term nature of education's impact on poverty reduction. Conversely, an unexpected positive association was found between local government spending on health and social welfare and child poverty rates. This suggests that social welfare expenditures may be reactive, aimed at addressing existing poverty levels, or that funds may be inefficiently allocated, limiting their effectiveness. These findings align with international research highlighting the diminishing redistributive effects of social protection programs due to eligibility constraints, mismanagement, or insufficient targeting of vulnerable populations.[3]

Key socio-economic variables also played significant roles. Higher average family income and female employment rates were strongly linked to lower child poverty, emphasizing the importance of household economic stability and women's labor force participation. On the other hand, larger household sizes were associated with higher child poverty rates, consistent with previous studies showing that children in larger families tend to face greater economic hardship. To further explore these dynamics, a pairwise correlation analysis of local government social spending and child poverty rates across provinces in 2018 and 2021 revealed a weak inverse correlation (-0.2478). While this indicates some poverty-reducing potential, the relationship remains limited, suggesting that increased local social expenditures alone are insufficient without improved implementation and better targeting mechanisms.

The findings underscore the critical need for comprehensive evaluations of social development programs at both national and local levels. Social spending should be increased and, more importantly, better targeted toward areas with the highest concentrations of impoverished children. Effective allocation mechanisms, regular audits, and transparent program monitoring must be prioritized to maximize the impact of public expenditures. Moreover, the study highlights the strong child poverty-reducing effect of female employment, emphasizing the need for policies promoting women's access to quality jobs and equal employment opportunities. Expanding women's participation in the labor market could significantly reduce child poverty through enhanced household income.

Finally, ensuring that social spending is precisely calibrated and evidence-driven will strengthen the effectiveness of social protection programs. Targeted, transparent, and well-managed government interventions can better combat child poverty, offering Filipino children a more equitable and promising future.

[2] PSA and UNICEF. (2015). Child Poverty in the Philippines.

[3] Sanchez, Angeles and Navarro, Maria. (2021). Public Policies of Welfare State and Child Poverty in the European Union.