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Policy Paper

# From Campaigns to Systems: Evaluating the Effectiveness of Indonesia's One Village, One ECE

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**Abstract**

Early childhood education (ECE) is a critical foundation for human capital development. This study evaluates Indonesia's 2022 "One Village, One ECE" campaign, which aims to expand access to early childhood education. Using pooled cross-sectional, fixed-effects, and random-effects models on district-level data (2019-2024), we assess the policy's impact on gross enrollment rates (GER) for children aged 3–6 as a part of the proxy indicator SDG 4.2 (ECE) and a key foundation for achieving SDG 8 (Decent Work and Economic Growth). Findings indicate that local campaign commitment alone does not significantly increase enrollment. Instead, enrollment gains are driven by strategic factors: infrastructure expansion, local ECE budgets, and the Family Hope Program (PKH). We conclude that political commitment must be complemented by systemic implementation to achieve universal ECE access, so that a finding reflected in Indonesia's relevant policy shift toward 13 years of compulsory education (1 year pre-primary and 12 years primary and secondary education).

**Keywords**: SDG 4.2; Early Childhood Education; 1 Village One ECE Campaign; 13-year compulsory education; Policy.

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## 1. Introduction

Early childhood development establishes the critical foundation for a child's future physical, emotional, social, and cognitive growth. Notably, approximately 90% of brain development occurs before the age of six, highlighting a limited yet vital window for stimulation. Ensuring access to high-quality Early Childhood Education (ECE) is a primary mechanism for providing this essential stimulation, creating environments that foster exploration, creativity, and the fundamental skills necessary for lifelong learning (Doherty, 1997).

In the Indonesian context, Early Childhood Education (ECE) is defined as a comprehensive range of education and development services for children aged 3–6 years. These services include: Tempat Penitipan Anak (TPA), which provides childcare for children aged 0-6 years; Kelompok Bermain (KB), a playgroup primarily for children aged 3-4 years; Taman Kanak-Kanak (TK), a kindergarten program for children aged 5-6 years; and other similar ECE units (SPS), all of which are under the coordination of the Ministry of Education. Additionally, Indonesia offers ECE services enriched with religious education, particularly Quranic recitation, through institutions such as Bustanul Athfal and Raudatul Athfal, which align with the structure of TK. Taman Pendidikan Al-Quran (TPQ) also provides religious education for children aged 4-6 years old and is coordinated under the Ministry of Religious Affairs.

However, ECE participation has remained a significant challenge. According to Presidential Regulation No. 59/2017 about Implementation of SDGs, SDG 4.2 specifically targets universal access to quality early childhood development, care, and pre-primary education. The national Gross Enrollment Rate (GER) for children aged 3-6 years as a part of the proxy indicator SDGs 4.2 stagnated at around 35.59% in 2021, showing no significant improvement since 2019 (Social Economic Survey, 2019-2021). To address this challenge, the Indonesian government launched the "One Village, One ECE" campaign in early 2022. This initiative aimed to mobilize village governments to invest in and establish ECE services, targeting the estimated 19,000 villages that lacked ECE facilities. The campaign encourages local leaders to accelerate access to quality early education through a participatory, village-level approach.

The effectiveness of the "One Village, One ECE" campaign must be evaluated within the broader context of complementary strategic initiatives from Midterm Development Planning Document 2019-2024 (RPJMN, 2019). These include demand-side interventions like the Family Hope Program (PKH), which aligns with evidence on conditional cash transfers reducing economic barriers (Beuermann, et al., 2025), and supply-side expansions through new school construction and classroom additions, supported by literature on infrastructure's role in improving access (Duflo, 2001; Berlinski et al., 2009). However, the campaign's limited impact on enrollment occurs when the components to support the campaign are insufficient. As Banerjee and Duflo (2011) argue, effective policy requires coordinated demand and supply side strategies. Furthermore, while increased budget allocation indicates commitment, its effectiveness depends on strategic deployment toward quality improvements, consistent with Hanushek and Woessmann's (2007) emphasis on how resources are used rather than just their quantity. World Bank (2018) reinforces that physical access must be paired with quality learning environments. Thus, the campaign has the potential to ensure better integration of these elements to address both enrollment barriers and service quality.

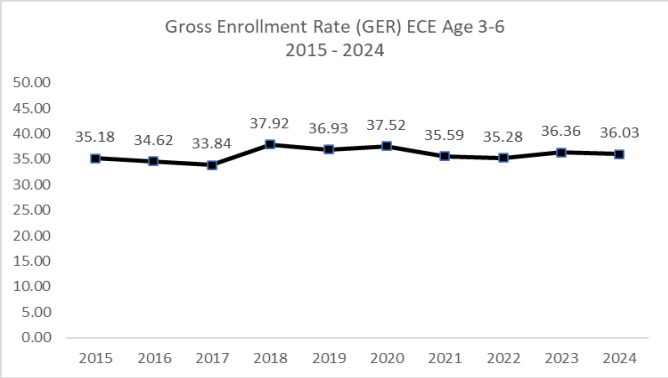


**Figure 1.** Gross Enrollment Rate (GER) for ECE (Ages 3-6), 2015-2024
**Source:** Social Economic Survey (Susenas), 2015-2024

Several studies have highlighted the importance of early childhood education for child development. Heckman (2012) discovered that investing in high-quality early childhood education yields the highest returns compared to investments in other educational levels. Additionally, Ryu (2019) examined the impact of compulsory preschool education in Brazil and concluded that the program significantly enhanced mothers' access to decent employment opportunities.

In addition to describing the importance of the political commitment, Indonesia's experience with the SD INPRES Program and 12-year compulsory education policies demonstrates that political commitment can produce significant change when it is accompanied by binding regulations, dedicated financing, and clear implementation mechanisms. In the case of the 12-year compulsory education policy, national mandates were translated directly into local commitment, and districts that adopted the policy experienced greater increases in education participation than those that did not (Kusumah, 2021).

However, there is a lack of studies examining how a commitment to providing early childhood education services, such as the "One Village One ECE" initiative, contributes to increased educational participation. In addition to assessing the impact of this commitment, this study will also explore other programs that may influence the growth of ECE participation. Fortunately, Indonesia's decentralization policy (Law of Republic Indonesia Number 23 of 2014) provides a natural experiment for this evaluation. As regional governments can choose whether to adopt the campaign, it is possible to compare outcomes between committed and non-committed districts. Therefore, this study aims to rigorously examine the impact of the "One Village, One ECE" campaign on GER, while also analyzing the effects of the PKH, new school construction, and classroom addition programs. By doing so, it seeks to identify the most potent drivers of ECE participation and provide evidence-based insights for achieving universal early childhood education access in Indonesia.

## 2. Methods

### 2.1 Data Collection

To analyze the impact of the "One Village One ECE" campaign on early childhood education participation, several data sources are needed, in general, using secondary data, including the Social and Economic Survey (Susenas) 2019-2024, the Village Potency (Podes) Survey, and the Basic Education Data (DAPODIK) 2019 and 2024. Additionally, tertiary data from local medium-term planning documents and official reports from local governments regarding their commitment to the "One Village One ECE" campaign will also be used.

#### 2.1.1 Social Economic Survey

The Indonesian National Statistics Office administers the annual Social Economic Survey to capture comprehensive information on household demographics, educational attainment, health conditions, economic status, geographic characteristics, access to information and communication technology, etc. The survey, which samples approximately 300,000 households, produces individual-level data released each March and can be disaggregated for analysis at the district, provincial, and national levels. This study utilizes data from the 2019–2024 survey rounds, which covers the period from the introduction of the One Village, One Early Childhood Education (ECE) campaign to the most recent year available. Based on these data, I estimated the Gross Enrolment Rate (GER) in ECE and the share of Family Hope Program (PKH) beneficiaries at the district level.

#### 2.1.2 Basic Education Data

The Basic Education Data (Ministry of Education and Culture and Ministry of Religious Affairs) provides comprehensive, school-reported data on Indonesia's education system. This study uses the 2019 dataset as a pre-policy baseline and the 2024 dataset to assess post-implementation conditions of the "One Village, One ECE" campaign. A district-level comparative analysis of schools and classrooms between these periods evaluates the policy's impact on educational infrastructure, offering insights into its effectiveness in expanding access and improving learning environments.

### 2.1.3 Village Potency Data

The Village Potency Survey (PODES), conducted every four years by Indonesia's National Statistics Office, serves as a source of comprehensive data on village-level conditions. The survey provided a broad spectrum of information, including geographical characteristics, general administrative and institutional profiles, demographic and employment structures, housing and environmental quality, the incidence of natural disasters, as well as the availability of educational and health services. Such detailed information enables researchers and policymakers to examine developmental disparities across rural areas and to assess the effectiveness of national and local policies.

In this study, the 2019 PODES data were used to establish the baseline conditions during the early stage of the One Village, One Early Childhood Education (ECE) campaign, while the 2024 data were utilized to capture conditions after the policy was implemented. These datasets were analyzed in conjunction with the Basic Education Data to provide a comparative framework. The analysis focused particularly on geographical and educational indicators, with the aim of assessing accessibility to early childhood education at the village level and identifying spatial barriers that may influence the equitable expansion of ECE services.

### 2.1.4 Commitment for Implementation 1 Village 1 ECE

In conducting this research, it is necessary to study the Midterm Regional Development Planning documents to determine the district's commitment to the implementation of 1 Village 1 ECE. The Midterm Regional Development Planning is a five-year strategic plan formulated by district and provincial governments in Indonesia to guide policy direction and enable government agencies to carry out their responsibilities. The plan, which includes policies, strategies, targets, and budget estimates for each proposed initiative, is approved by the mayor, regent, and the district's legislative system. Due to the limited information related to the one village 1 ECE commitment, this research was also supplemented with information related to the one village 1 ECE commitment delivered through electronic media.

For my research, I reviewed Midterm District Development Plans and electronic media information to analyze the policies implemented at the district, city, or provincial level during that period. I focused on policies related to the enforcement of the one village 1 ECE commitment. This information was used to establish the intervention (district/city with commitment for 1 Village 1 ECE) and control groups (district/city without commitment for 1 Village 1 ECE).

## 2.2 Data Analysis

### 2.2.1 Measurement Instrument

Some indicators/variables needed to be calculated to analyze this topic: Gross Enrollment Rate (GER), ECE for children aged 3-6 years old, Percentage of Children aged 3-6 years old that receive Family Hope Program (PKH), and Percentage of Allocation for ECE over Education Spending.

**Calculation of Gross Enrollment Rate (GER) ECE for age 3-6 years old**

$$GER\ ECE\ 3-6\ = \frac{Children\ \ age\ 3-6\ who\ enrolled\ in\ ECE}{all\ children\ \ age\ 3-6}$$

**Calculation of the Percentage of Children aged 3-6 years old who receive the Family Hope Program (PKH)**

$$PKH\ Recipient\ = \frac{children\ 3-6\ who\ received\ PKH}{all\ children\ age\ 3-6}$$

**Calculation of the Percentage of Allocation for ECE over Education Spending**

$$ECE\ Spending\ = \frac{Allocation\ for\ ECE}{Allocation\ for\ Education\ Spending}$$

### 2.2.2 Identification Strategy

In this study, the district was selected as the unit of analysis. Indonesia consists of 514 administrative districts and cities (416 districts and 98 cities), making this level of aggregation sufficiently robust for statistical analysis under the assumption of a normal distribution. The analysis utilized data from 2019 and 2024 to evaluate the impact of the One Village, One ECE campaign on participation rates in ECE. The

main coefficients of interest were derived from a set of dummy variables (d1i) designed to capture local government commitment. Specifically, d11 = 1 indicated districts were not committed to implementing the One Village, One ECE campaign (coded as the control group), whereas d12 = 1 denoted districts committed to the One Village, One ECE campaign (coded as the intervention group).

This specification allowed for a comparative framework between committed and uncommitted governments in assessing policy effects. To estimate these effects, several econometric models were applied following the econometrics framework (Angrist, 2008). The 2019 data served as the pre-implementation baseline, while the 2024 data reflected the post-implementation period. A fixed-effects model was used to control for unobserved heterogeneity across districts, thereby enhancing the validity of causal inferences regarding the policy's impact on early childhood education participation.

$$Y_{jt} = \delta_1 d_{1jt} + \alpha j + \lambda t + \varepsilon j \quad \text{.....(1)}$$

In Model (1), the independent variable of interest was d1jt, representing the district's commitment to the One Village, One ECE campaign in district-j at time-t, where one meant the district's commitment to the One Village, One ECE campaign and 0 meant the district was not committed to implementing the One Village, One ECE campaign. The dependent variable was GER ECE age 3-6 in district-j at time-t. To control for endogeneity, I used district fixed effects and time fixed effects.

$$Y_{jt} = \delta_1 d_{1jt} + \alpha j + \lambda_t + \sum_{i=1}^{3} \beta_i X_{ijt} + \varepsilon_j \quad \text{.....(2)}$$

The Model (2) analysis was the same as that used for Model (1), except that I controlled for one of the strategy variables represented by X1jt, which denoted the percentage of children aged 3-6 years old that receive the Family Hope Program (PKH) in district-j at time-t. X2jt represented the logarithm of the total number of ECE classrooms in district-j at time-t. X3jt represented the Percentage of Allocation for ECE over Education Spending in district-j at time-t. This model included the impact of the policy's strategies because it could be the most affected variable in the model, surpassing the dummy variable representing the districts committed to the One Village, One ECE campaign.

$$Yjt = \delta 1 d1jt + \alpha j + \lambda t + \sum_{i=1}^{3} \beta_i X_{ijt} + \beta 4 d1jt * X1jt + \beta 5 d1jt * X2jt + \beta 6 d1jt * X3jt + ujt \quad \text{.....(3)}$$

Model (3) examined the impact of an interaction between districts committed to the One Village, ECE campaign implementation, and the strategy. d1jt * X1jt represented the interaction between the policy and PKH strategy. d1jt * X2jt represented the interaction between the policy and the strategy to increase the number of ECE classrooms. d1jt * X3jt represented the interaction between the policy and the strategy to provide a budget for ECE.

## 3. Results and Discussions

This section presents the results of summary statistics and regression analysis using a difference-in-differences (DID) model to assess the impact of the One Village, One ECE campaign on early childhood education (ECE) participation in Indonesia. The first specification estimates the direct effect of the policy using a regression model without interaction terms, focusing on the influence of district commitment to the campaign on ECE participation. The second specification adds controls for policy-related strategies to determine whether the observed effect persists after accounting for these strategies. The third specification incorporates interaction terms to examine both the direct policy impact and the moderating role of strategy implementation, providing further insights into how specific strategies enhanced the campaign's effectiveness in committed districts.

### 3.1 Summary Statistics

Table 2.2.1 provides the summary statistics of district-level data in 2019, covering 514 districts and cities as units of observation. The average gross enrollment rate for early childhood education (ECE) among children aged 3–6 years was 35.35 percent, with a considerable variation across districts. The enrollment rate ranged from as low as 0 percent to a maximum of 82.33 percent, illustrating substantial disparities in access and participation in ECE across regions.

**Table 1.** Summary Statistics of 2019 District Data

| Variables | Obs. | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| Gross Enrollment Rate ECE 3-6 yo | 514 | 35.35 | 14.03 | 0 | 82.33 |
| District Commit with 1 Village 1 ECE Campaign | 514 | 0 | 0 | 0 | 0 |
| Percentage of Children with PKH | 514 | 14.87 | 10.38 | 0 | 67.68 |
| Total ECE Classroom | 514 | 845.72 | 943.29 | 3 | 6928 |
| Percentage of ECE Allocation | 514 | 4.50 | 5.93 | .11 | 51.95 |

**Source:** Social and Economic Survey 2019, Local Government Spending Data 2019, and Basic Education Data 2019

During this period, the "One Village, One ECE" policy had not yet been introduced; therefore, the proportion of districts committed to this initiative was recorded as zero. Meanwhile, the data show that approximately 14.87 percent of children on average benefited from the Program Keluarga Harapan (PKH), although the variance is wide, with some districts reporting no beneficiaries and others reaching nearly 68 percent. In terms of infrastructure, each district had, on average, 845 ECE classrooms, yet the distribution was highly unequal; certain districts only had three classrooms, while other districts had 6,928. Finally, fiscal allocation for ECE averaged 4.5 percent of the education budget, though the variance was also wide across districts, from a minimum of 0.11 percent to as high as 51.95 percent.

**Table 2.** Summary Statistics of 2024 District Data

| Variables | Obs. | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| Gross Enrollment Rate ECE 3-6 yo | 514 | 34.89 | 13.43 | 0 | 76.05 |
| District Commit with 1 Village 1 ECE Campaign | 514 | .704 | .45 | 0 | 1 |
| Percentage of Children with PKH | 514 | 16.56 | 9.83 | 0 | 52.27 |
| Total ECE Classroom | 514 | 850.61 | 943.36 | 2 | 6463 |
| Percentage of ECE Allocation | 514 | 9.88 | 6.07 | .11 | 51.95 |

**Source:** Social and Economic Survey 2024, Local Government Spending Data 2024, and Basic Education Data 2024

In line with Table 2.2.1, Table 2.2.2 provides the summary statistics of district-level data in 2024, covering 514 districts and cities as units of observation. The average gross enrollment rate for early childhood education (ECE) among children aged 3–6 years was 34.89 percent, with a considerable variation across districts. The enrollment rate ranged from as low as 0 percent to a maximum of 76.05 percent, illustrating substantial disparities in access and participation in ECE across regions.

At this period, the "One Village, One ECE" campaign had been introduced; therefore, the proportion of districts committed to this initiative increased to 70.4 percent. Meanwhile, the data show that approximately 16.56 percent of children on average benefited from the Program Keluarga Harapan (PKH), although the variance is wide, with some districts reporting no beneficiaries and others reaching nearly 52.27 percent. In terms of infrastructure, each district had on average 850 ECE classrooms, yet the distribution was highly unequal; certain districts only had two classrooms, while other districts had 6,463.

Finally, fiscal allocation for ECE averaged 9.88 percent of the education budget, although the variance was also wide across districts, from a minimum of 0.11 percent to as high as 51.95 percent.

**Table 3.** Summary Statistics for Changes without Commitment for One Village, One ECE

| Variables | 2019 | 2024 | Change |
|---|---|---|---|
| Gross Enrollment Rate ECE 3-6 yo | 32.09 | 32.08 | -0.01 |
| Percentage of Children Get PKH | 13.72 | 15.22 | 1.5 |
| Total ECE Classroom | 812.50 | 820 | 7.5 |
| Percentage of ECE Allocation | 4.10 | 8.82 | 4.72 |

**Source:** Social and Economic Survey 2019 and 2024, Local Government Spending Data 2019 and 2024, and Basic Education Data 2019 and 2024

Table 2.2.3 presents the comparison of district-level summary statistics between 2019 and 2024 for 152 districts that did not declare commitment to the "One Village, One ECE" campaign. The data indicate that the gross enrollment rate for early childhood education (ECE) among children aged 3–6 years remained virtually stagnant, decreasing only marginally by 0.01 percentage points, from 32.09 percent in 2019 to 32.08 percent in 2024.

In contrast, several other indicators show positive changes. The proportion of children receiving support from the Family Hope Program (PKH) increased by 1.5 percentage points, rising from 13.72 percent to 15.22 percent. Infrastructure development also showed modest improvement, with the average number of ECE classrooms per district increasing from 812.5 to 820. Furthermore, fiscal support for ECE experienced a rise, with the share of the education budget allocated to ECE increasing from 4.10 percent in 2019 to 8.82 percent in 2024, or an average increase of 4.72 percentage points.

**Table 4.** Summary Statistics for Changes with Commitment for One Village, One ECE

| Variables | 2019 | 2024 | Change |
|---|---|---|---|
| Gross Enrollment Rate ECE 3-6 yo | 36.72 | 36.07 | -0,65 |
| Percentage of Children Get PKH | 15.36 | 17.13 | 1,77 |
| Total ECE Classroom | 859.67 | 863.46 | 3,79 |
| Percentage of ECE Allocation | 4.67 | 10.32 | 5,65 |

***Source:*** *Social and Economic Survey 2019 and 2024, Local Government Spending Data 2019 and 2024, and Basic Education Data 2019 and 2024*

Table 2.2.4 presents a comparative analysis of the summary statistics before and after the implementation of the "One Village, One ECE" campaign, focusing on 362 districts that declared their commitment to this initiative. Interestingly, despite the policy intervention, the gross enrollment rate for early childhood education (ECE) among children aged 3–6 years in these districts experienced a slight decline of 0.65 percent.

On the other hand, several positive developments are evident. The proportion of children benefiting from the Family Hope Program (PKH) increased from 15.36 percent to 17.13 percent, suggesting an expansion in the reach of social protection programs. In terms of infrastructure, the average number of ECE classrooms rose modestly, with each district reporting an increase of approximately three classrooms. Moreover, fiscal commitment to ECE showed a more substantial improvement, with the share of the education budget allocated to ECE increasing by 5.65 percent. These results indicate that while the policy has contributed to strengthening financial support and modestly expanding service provision, challenges remain in translating these efforts into higher enrollment rates.

From descriptive statistics, we can note that a comparison between districts that declared commitment to the "One Village, One ECE" campaign and those that did not reveals several important contrasts. In committed districts (362 districts), the gross enrollment rate for ECE among children aged 3–6 years slightly declined by 0.65 percentage points, while in non-committed districts (152 districts), the rate remained virtually unchanged, decreasing only by 0.01 percentage points.

Although both groups failed to show substantial progress in enrollment, they made some progress in other indicators. Committed districts experienced stronger improvements in fiscal prioritization. Similarly, infrastructure expansion in committed districts added an average of 3 classrooms per district, while non-committed districts reported a slightly higher increase of 7.5 classrooms. Regarding social protection, both groups saw progress, with PKH coverage rising by 1.77 percent in committed districts and by 1.5 percent in non-committed districts. Taken together, these findings suggest that while both committed and non-committed districts achieved incremental gains in budgetary allocation, infrastructure, and social assistance, the introduction of the "One Village, One ECE" campaign has not yet translated into measurable improvements in enrollment rates. However, to guarantee the validity of such conditions, it is necessary to conduct empirical analysis to ensure that the conclusions drawn are accurate and not misleading.

### 3.2 Difference-in-Difference: Before and After the One Village, One ECE Campaign Announced

Table 3.1.1 presents the Difference-in-Difference estimates, comparing changes in districts that declared commitment to the One Village, One ECE campaign with those that did not, before and after the policy announcement.

**Table 5.** Difference-in-Difference: Gross Enrollment Rate (GER) ECE Aged 3-6 in the Treatment and Control Groups Before and After Campaign Announced

| Variable | District Commit (treatment group) (1) | District not Commit (control group) (2) | Difference: treatment-control (3) |
|---|---|---|---|
| GER ECE increased before the campaign (2019 to 2021) | -1.22<br>(7.11) | -0.82<br>(6.2) | -0.40 |
| GER ECE increases after the campaign (2022 to 2024) | 0.79<br>(7.67) | 0.73<br>(7.84) | 0.06 |
| GER ECE increased before and after the campaign | 2.02<br>(10.48) | 1.55<br>(10.89) | 0.46 |

**Source:** Social and Economic Survey 2019–2024

Table 3.1.1 presents the Difference-in-Difference (DiD) estimates of the Gross Enrollment Rate (GER) for Early Childhood Education (ECE) among children aged three to six, comparing districts committed to the campaign with those that were not. Before the campaign (2019–2021), both treatment and control groups experienced a decline in GER. The difference between the two groups during this period was marginal (–0.40), suggesting no systematic divergence prior to the campaign.

Following the campaign (2022–2024), both groups exhibited a modest improvement in GER, increasing by 0.79 points in the treatment districts and 0.73 points in the control districts. The post-campaign difference between groups is small (0.06), indicating that political commitment to the campaign did not yield a significant change in enrollment relative to non-committed districts.

The DiD estimator, measured as the change in GER after versus before the campaign between groups, shows a positive but small effect (0.46). This finding implies that while districts declaring commitment recorded a slightly higher increase compared to control districts. However, the magnitude of the effect remains limited and statistically uncertain, given the large standard errors. For that, a deeper analysis required, using control variables that may affect the outcome in line with the literature review.

The DiD estimate indicates a positive but modest effect (0.46), suggesting that committed districts achieved a slightly greater increase in enrollment than non-committed districts. Nevertheless, the effect size is small and statistically inconclusive due to substantial standard errors. This highlights the need for further analysis, incorporating relevant control variables as suggested in the literature, to better isolate the determinants influencing the observed outcomes.

### 3.3 Estimation Result of the Regression Model without Interaction

Table 3.2.1 presents the estimation results of the regression models without interaction terms. Model (1) used a pooled cross-sectional specification, while Model (2) applies a fixed-effects model. Given the limitations of the fixed-effects model, particularly its low explanatory power, Models (3) through (6)

adopt a random-effects model, both with and without the inclusion of control variables. This stepwise modeling strategy enables a more comprehensive assessment of the relationship between the One Village, One ECE commitment and gross enrollment rate ECE outcomes, while progressively accounting for the cash transfer (PKH) program, increase of classroom, and local government spending for ECE that may influence early childhood education participation.

**Table 6.** Estimation Result of Gross Enrollment Rate ECE 3-6 yo without Interaction

| Variables | Gross Enrollment Rate ECE 3-6 Years Old | | | | | |
|---|---|---|---|---|---|---|
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** |
| Dummy District Commitment | 1.501 | -0.595 | 0.035 | -0.002 | -0.109 | -0.299 |
| | (1.04) | (0.69) | (0.66) | (0.66) | (0.66) | (0.65) |
| Percentage of Children Get PKH | 0.18*** | 0.025 | | 0.113** | 0.088* | 0.098** |
| | (0.05) | (0.04) | | (0.04) | (0.03) | (0.03) |
| Logarithm of total classrooms | 4.53*** | 1.571 | | | 5.247*** | 4.895*** |
| | (0.47) | (1.28) | | | (0.46) | (0.46) |
| Percentage of ECE Allocation | 0.52*** | -0.065 | | | | 0.235*** |
| | (0.15) | (0.08) | | | | (0.07) |
| Constant | 2.21 | 25.534** | 35.355*** | 33.668*** | 1.523 | 2.49 |
| | (2.76) | (7.93) | (0.62) | (0.83) | (2.86) | (2.80) |
| State effects? | No | Yes | Yes | Yes | Yes | Yes |
| Time effects? | No | Yes | Yes | Yes | Yes | Yes |
| R-squared | 0.28 | 0.006 | 0.022 | 0.038 | 0.250 | 0.290 |
| N | 1028 | 1028 | 1028 | 1028 | 1028 | 1028 |

* p<0.05, ** p<0.01, *** p<0.001

The results table 3.3.1 explained that with all models without interaction consistently indicate that district-level adoption of the One Village, One ECE campaign has not led to significant improvements in early childhood education participation. This finding suggests that declarative commitment alone is insufficient to advance progress toward SDG 4.2, universal access to quality early childhood development, care, and pre-primary education. By contrast, factors directly related to the availability of ECE classrooms, sustained budget allocation for ECE, and household support through the Family Hope Program (PKH). These results align with the logic of 13-Year Compulsory Education, which emphasizes institutionalization, minimum service standards, and sustainable financing in ECE rather than voluntary or campaign-based approaches.

### 3.4 Estimation Result of the Regression Model with Interaction

Table 3.3.1 examined the direct effect of district commitment to the One Village, One ECE campaign on gross enrollment rates. However, it is equally important to account for potential interaction effects between campaign adoption and the complementary strategies implemented alongside it. The following analysis, therefore, evaluates the extent to which policy commitment, when combined with specific strategic interventions, contributes to improvements in early childhood education enrollment.

**Table 7.** Estimation Result of Gross Enrollment Rate ECE 3-6 Years Old with Interaction

| Variables | Gross Enrollment Rate ECE 3-6 Years Old | | |
|---|---|---|---|
| | **(1)** | **(2)** | **(3)** |
| Dummy District Commitment =1 ($d_1$) | -2.095** | 0.652 | 0.71 |
| | (0.81) | (2.60) | (2.58) |
| Percentage of Children Get PKH ($X_1$) | 0.081* | 0.05 | 0.059 |
| | (0.04) | (0.04) | (0.04) |
| Interaction term between $d_1$ and $X_1$ | 0.088* | 0.099* | 0.087* |

| Variables | Gross Enrollment Rate ECE 3-6 Years Old | | |
|---|---|---|---|
| | **(1)** | **(2)** | **(3)** |
| | (0.04) | (0.04) | (0.04) |
| The logarithm of total classrooms ($X_2$) | | 5.405*** | 5.224*** |
| | | (0.47) | (0.47) |
| The interaction term between $d_1$ and $X_2$ | | -0.476 | -0.626 |
| | | (0.38) | (0.38) |
| Percentage of ECE Allocation ($X_3$) | | | 0.160** |
| | | | (0.06) |
| The interaction term between $d_1$ and $X_3$ | | | 0.02 |
| | | | (0.06) |
| Constant | 34.049*** | 1.018 | 1.146 |
| | (0.88) | (2.94) | (2.89) |
| State effects? | Yes | Yes | Yes |
| Time effects? | Yes | Yes | Yes |
| R-squared | 0.422 | 0.443 | 0.447 |
| N | 1028 | 1028 | 1028 |

* p<0.05, ** p<0.01, *** p<0.001

Table 3.4.1 showed that Districts that formally adopted the One Village, One ECE campaign did not achieve higher ECE participation on their own; furthermore, adoption without a supporting implementation strategy was associated with lower enrollment outcomes. This finding confirms that even if we examine the campaign with the strategies, the campaign alone is insufficient to expand participation in quality early childhood development services, a core objective of SDG 4.2. However, the positive interaction between district commitment and PKH coverage demonstrates that social protection plays a critical enabling role. When household income constraints are addressed through PKH, local ECE commitments are more likely to increase participation among children aged 3–6. This result highlights the importance of integrating education policy with social protection to ensure equitable access, particularly for vulnerable populations, as an essential principle of both SDG 4.2 and the SDG 1 (No Poverty) to ensure "No One Left Behind" Commitment.

Both results confirm that classroom availability and ECE budget allocation are consistently associated with higher ECE participation, underscoring the importance of supply-side readiness and fiscal sustainability. However, the absence of a significant interaction between these inputs and formal policy adoption suggests that infrastructure expansion and budget increases are effective regardless of campaign status. This implies that progress toward SDG 4.2 depends on sustained commitment to local budget investment, which in turn reflects the need for effective institutions, a core principle of SDG 16.

### 3.5 Discussion

The findings indicate that achieving SDG 4.2 requires embedding ECE within the compulsory education framework and strengthening its implementation through infrastructure investment, fiscal prioritization, and integration with social protection policies. This evidence shifts the focus from policy declaration to policy execution, providing a foundation for the next chapter's discussion on implementation challenges and institutional capacity at the local level. The dominant structural factor resides in the sustained commitment of both central and local governments to prioritize early childhood education as a strategic investment in human capital development. Such commitment is critical for institutionalizing ECE within public policy frameworks and for ensuring the long-term mainstreaming of budget allocations to the sector. To achieve this, ECE must be formally embedded not only within national education policies but also within local education policy frameworks.

The importance of a strong national policy framework capable of reshaping budgetary priorities at both the central and local levels. National initiatives that embed clear mandates and financing mechanisms, such as Indonesia's experience with compulsory education and, more recently, the Free Nutritious Meal Program (Makan Bergizi Gratis, MBG), have illustrated how central government leadership can shift expenditure paradigms across sectors and levels of government. In the case of MBG, national prioritization has compelled local governments to align budgets, administrative capacity, and implementation efforts with a clearly defined human development objective. With this commitment, in

2025, the government allocated approximately IDR 71 trillion to the program (State Budget Financial Note, 2025), representing a substantial level of public expenditure compared to other national programs. A similar approach is needed for early childhood education, where integrating ECE within the 13-Year Compulsory Education framework can institutionalize funding commitments, establish minimum service standards, and strengthen accountability for outcomes aligned with SDG 4.2.

However, Subnational education budgets in Indonesia have remained heavily concentrated on personnel expenditures, particularly teacher salaries, with little variation over time. For example, according to the Regional Education Balance Sheet (NPD Kemdikdasmen, 2023), the utilization of the Education Operational Assistance Fund (BOSP) shows that a substantial share is allocated to honorarium teacher salaries (24.3 percent) and school administration (19.54 percent), leaving limited fiscal space to expand access to early childhood education. Consequently, direct support for PAUD expansion remains minimal. This pattern is reinforced by the low prioritization of ECE financing, which accounted for only 5.6 percent of education spending in 2024 (State Budget, 2024). These trends indicate that BOSP resources have not been optimally directed toward instructional improvement and infrastructure development, while teacher remuneration, particularly in PAUD, would be more sustainably financed through local government budgets (APBD) to ensure both teacher quality and service availability.

Expanding access to ECE is a significant strategy for increasing ECE participation. However, in the absence of adequate fiscal support, significant service gaps persist at the local level. As of 2021, approximately 29,830 sub-districts and villages remained without access to any ECE services (Podes, 2021). Given the magnitude of this service deficit, there is a clear need for cost-effective and scalable financing approaches that enable the expansion of ECE provision under existing budget constraints. One promising strategy is the development of integrated ECE-Primary School (PAUD–SD satu atap) systems, which allow primary schools to extend their functions by adding classrooms and age-appropriate learning materials for early childhood education. This approach enables the simultaneous availability of ECE and primary education services, reduces infrastructure costs, and strengthens continuity across education levels.

On the other hand, the empirical findings of this study confirm that coverage of the Family Hope Program (Program Keluarga Harapan, PKH) is significantly associated with higher participation in early childhood education (ECE). This result is consistent with global evidence on conditional cash transfer (CCT) programs. Beuermann, et al. (2025), for example, demonstrate that Jamaican Conditional Cash Transfer Program (PATH) significantly increases the likelihood of completing primary and secondary school. Importantly, PKH is a nationwide program implemented uniformly across districts in Indonesia. This suggests that the observed effect of PKH on ECE participation is not driven by variations in local education spending, but the dominant social factor lies in families' willingness to encourage children's participation in early childhood education. These findings strengthen the importance of explicitly integrating social protection and education policies, rather than treating them as parallel but disconnected interventions. Establishing clear requirements or strong incentives for PKH beneficiary households to enroll their children in ECE services would formalize the role of social protection in advancing progress toward SDG 4.2.

## Conclusion

This study evaluates the effectiveness of the One Village, One Early Childhood Education (ECE) policy in increasing participation rates in early childhood education across Indonesian districts. Using district-level panel data between 2019 and 2024 and using pooled cross-sectional, fixed-effects, and random-effects models.

The empirical results consistently indicate that the policy commitment itself does not have a statistically significant impact on the gross enrollment rate (GER) of ECE for children aged three to six years. In fact, in some specifications, the estimated coefficient for policy adoption is either negligible or negative, suggesting that commitment alone without concrete implementation strategies cannot generate improvement in enrollment outcomes. Those concrete implementation strategies determined by conditional cash transfer programs, increasing the number of ECE, and commitment to local budget spending for ECE.

In contrast, the study finds robust evidence that increasing classroom and financial prioritization plays decisive roles in expanding participation. The number of classrooms at the district level is consistently and strongly associated with higher enrollment rates. Similarly, the proportion of the education budget allocated to ECE emerges as a significant impact on enrollment. At the household level, conditional cash transfer programs such as the Family Hope Program (PKH) are shown to have a positive and significant association with enrollment outcomes.

Taken together, the findings highlight that the effect of the One Village, One ECE campaign alone will not be sufficient to ensure acceleration of increasing participation in ECE. Campaign and political commitment must be translated into concrete strategies. The results also reveal that while Indonesia is increasing fiscal allocations and increasing classroom capacity, these inputs have not yet been sufficient to increase the participation. In short, the policy's current design and implementation framework may explain the stagnation in enrollment rates observed in national statistics. These results strengthen the rationale for Indonesia's strategic move to integrate 13 years of compulsory education within the Long-Term Development Plan (RPJPN) 2025 – 2045 and Mid-Term Development Plan (RPJMN) 2025 – 2029 to push the allocation and cross-sectoral intervention at the national and district level.

Beyond SDG 4 and relevance with the 13-year compulsory education policy, the results also demonstrate that ECE outcomes are closely linked to multiple SDG targets. The Family Hope Program (PKH), which contributes to the achievement of SDG 1 (No Poverty), has a significant impact on increasing ECE participation. Commitment to investing local budget expenditure also reflects the need to achieve SDG 16 (Effective Institutions). Finally, the literature shows that early childhood investments yield the highest returns in improving future labor force productivity, forming a key foundation for achieving SDG 8 (Decent Work and Economic Growth).

**Recommendation**

Based on these findings and according to the discussion section, several policy recommendations are needed for strengthening early childhood education policy in Indonesia: (1) Promote Synergy with Long-Term Education Reforms. Indonesia should integrate ECE expansion strategies with its compulsory education framework, human capital development agenda, and social protection systems to ensure continuity and sustainability. (2). Move Beyond Symbolic Commitment Toward Measurable Implementation. Local governments should be required to provide concrete strategies, such as budgetary commitments, increasing access, and cash transfer for vulnerable children when declaring commitment to the policy. (3). Ensure Adequate Fiscal Prioritization for ECE. The results provide strong empirical evidence that higher budget allocations for ECE at the district level are directly associated with increased participation. (4). Expand and Maintain Educational Infrastructure. Classroom availability is a critical determinant of participation. Investment in both the construction of new classrooms and the maintenance of existing facilities is essential. (5). Integrate Social Protection and Education Policies. Linking conditional cash transfers to ECE participation should be strengthened, both through optimization of PKH function and expanding PKH coverage to vulnerable households with young children. Such integration would reduce economic barriers and enhance the inclusivity of ECE programs.

**Implementation**

An implementation plan is essential to ensure the effective execution of the proposed policy recommendations. First, to promote synergy with long-term education reforms, Indonesia should explicitly institutionalize the commitment to 13 years of compulsory education within the Long-Term and Mid-Term Development Plans (RPJPN and RPJMN), supported by a Presidential Instruction (Instruksi Presiden/INPRES) mandating the acceleration of Early Childhood Education (ECE). Second, to ensure measurable implementation, the government should develop a National Action Plan for accelerating 13-year compulsory education, with clear targets and timelines, while identifying alternative mechanisms for expanding ECE. This should be complemented by technical assistance and facilitation for local governments in formulating aligned regional action plans.

Third, adequate fiscal prioritization is required through increasing the unit cost of the School Operational Assistance (BOS) grant for ECE and ensuring sustainable financing to improve the welfare of ECE teachers. Fourth, the government should strengthen educational infrastructure by mapping the availability and condition of ECE facilities nationwide and prioritizing the construction and rehabilitation of ECE infrastructure. Fifth, stronger integration of social protection and education policies is needed by increasing the Family Hope Program (PKH) benefit to incentivize ECE participation and extending Smart Indonesia Card (KIP) scholarships to children enrolled in ECE.

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