

CHAPTER I

INTRODUCTION

1.1 The Problems Identification

The development of competitive human resources is based on the high school level (Teixeira, 2014). This stage is not only an advanced stage but also a bridge key for students to acquire the skills needed for higher education and the formal job market (Sun Education Group, 2024). A region that does not increase its participation at this level will be caught in a low productivity trap and will have difficulty competing globally. Empirical evidence shows that completion of high school level increases individual's opportunities to escape from extreme poverty through access to more stable formal employment (World Bank, 2024). In this modern digital era, high school level education has become the minimum standard for the workforce to adopt new technologies that are necessary for regional economic growth (Hanushek & Wößmann, 2020). In addition, attending higher secondary school directly contributes to lower youth unemployment and to the avoidance of inefficient allocation of human resources at the level of the province (OECD, 2023).



Figure 1. 1 Indonesian's High School Participation Rates 2015 – 2025

Source: Indonesian Bureau of Statistics, 2025

The trend of school participation in Indonesia with a population of more than 281 million according to BPS (2024) has shown positive results. As shown in

Figure 1.1, the senior high school participation rate is still increasing year on year. This phenomenon reflects greater access and a shift in public preference toward the value of completing secondary education as a basic level of competency.

Figure 1.1 shows a steady rise in the participation rate in secondary school. Although the trend demonstrated positive growth, data shows that the level of high school enrollment in every province in Indonesia remains low. BPS records that only around 50-75% of school-age Indonesians continue on to high school. This situation suggests that an increase in the national average has the potential to mask the still significant gap in secondary education between regions. Therefore, provincial-level analysis is crucial to identify the factors that contribute to differences in secondary education participation in Indonesia.

Despite the consistent improvement in Indonesia's Senior High School Participation Rate and the continuous decline in poverty at the national level, regional disparities remain a critical issue that has not been fully addressed in previous studies. Most existing literature focuses on aggregate national trends, which tend to mask substantial heterogeneity across provinces. As a result, the persistence of educational inequality between regions is often overlooked in empirical analysis. First, previous studies largely emphasize the relationship between poverty and education outcomes, while neglecting the multidimensional nature of educational participation. In reality, school participation is not only determined by economic constraints but also influenced by structural factors such as educational environment, spatial accessibility, and demographic pressure. However, limited studies simultaneously incorporate these multidimensional determinants within a unified econometric framework. Second, most empirical studies in Indonesia analyze education determinants using cross-sectional or short time-series data, which are unable to capture long-term structural changes across provinces. This creates a methodological gap in understanding how educational participation evolves over time under different provincial characteristics, especially in the context of decentralization policy after Law No. 23 of 2014. Third, there is still limited empirical evidence that explicitly examines the role of spatial inequality, particularly the difference in educational access between urban and less

urbanized provinces. Although urbanization is widely recognized as a key factor in education accessibility, most studies treat it as a secondary variable rather than a structural determinant in shaping high school participation rates. Fourth, demographic pressure measured by school-age population is often underexplored in previous research. While the population growth is frequently discussed in general development studies and its direct impact on educational participation especially at the senior secondary level remains insufficiently analyzed in the Indonesian context.

Therefore, this study fills these gaps by integrating economic (poverty), human capital (average years of schooling), spatial (urban households), and demographic (school-age population) factors within a unified panel data framework using Fixed Effect LSDV estimation. In addition, this study contributes methodologically by employing lagged variables and controlling for unobserved provincial heterogeneity, allowing for a more robust estimation of causal relationships in educational participation.

Although the government has tried to solve this problem by launching a *wajib belajar 12 tahun* program since 2015. However, in reality this policy has not been effective enough to accelerate the increase in the average number of years of national schooling to reach the expected target. The government has also made secondary education free since the start of the program. However, this has not been able to increase the average years of schooling for the population in Indonesia. Therefore, this study was performed from 2015 to 2025 to evaluate the effectiveness of this policy in 10 years of its implementation.

In addition to this, the implementation of UU Number 23 of 2014 about regional government has also made changes to the authority of handling secondary education from district/city authorities to provincial authorities. The change in authority requires urgent analyses at the provincial level to measure the effectiveness of regional autonomy policies in facing school participation problems. It is necessary to examine the capability of the authorities in every province in handling secondary education affairs considering the different demographic and socio-economic conditions of people in each region.

With the change in the authority of handling high schools, this research will conduct its analysis using data on 34 provinces in Indonesia. This study will examine the factors that affect the high school education level in 34 provinces in Indonesia. Even though there are 38 provinces in Indonesia, there are four new provinces formed since 2022 (UU no. 14-16 and 29 of 2022). As a result, the four provinces lack consistent data throughout the period of observations. Thus, this study will only use data from the other 34 provinces.

The success of these policy management processes cannot be separated from socio-economic determinants of each region, one of which is poverty. Poverty in a certain region can affect people's mindsets about education (Becker, 1964).

Besides, household locations play an important role in shaping the participation rate in education. Urban residents benefit from having better access to a variety of education compared to residents of rural areas (Bakri & Setiadi, 2024). Such inequality in education opportunities is a burden on provincial development since the latter tends to focus more on urban areas. Demographic factors, namely, the number of school-age population also need to be considered. School-age population had shown a requirement for sufficient financial capacity of provincial authorities in order to ensure access to education for their residents (Bakri & Setiadi, 2024).

Necessity of conducting research arises from the need for critical evaluation of the performance of the provincial authority regarding education inclusiveness during the last decade. Failure to understand these variables make it challenging to develop appropriate provincial education policies concerning high schools. The absence of such knowledge increases risks of formulating misleading policies. Results of analysis can also contribute to the development of effective human resource development strategy according to Indonesia's socioeconomic peculiarities. Focusing on 2015–2025 time frame helps to analyze the process of transition from old education system to the current one.

Previous studies on school participation in Indonesia predominantly rely on cross-sectional household surveys or national aggregate analyses, providing limited evidence on how provincial structural characteristics shape senior high school

participation over time under Indonesia's decentralized education system. Moreover, existing studies generally examine only a limited set of determinants, leaving the combined roles of economic, social, spatial, and demographic factors insufficiently explored. This study contributes to the literature in several ways. First, it employs balanced provincial panel data covering all 34 Indonesian provinces during 2015–2025, capturing a decade of the implementation of the 12-year compulsory education policy. Second, it integrates economic, social, spatial, and demographic determinants within a unified analytical framework by incorporating poverty, average years of schooling, urban households, and school-age population. Third, the study estimates a Fixed Effect Model with lagged explanatory variables to account for unobserved provincial heterogeneity and mitigate potential simultaneity between educational attainment and school participation.

1.2 The Problems Formulation

Based on the explanation above, several problems can be formulated that will be thoroughly explored in this research. The problem formulations are as follows:

1. Does the poverty level at the province level influence the high school participation rate?
2. Does the average length of schooling in a province impact the high school participation rate?
3. Are households that living in urban areas more likely to participate in senior high school at province level?
4. Does the school age population in a region have an impact on high school participation rate at province level?

1.3 The Research Objectives

The aim of this research is to solve the puzzle and answer the questions in the problem formulation, namely:

1. To analyze the effect of poverty rates on children's participation in high school at province level.
2. To determine the impact of the average length of schooling of the population on high school participation rates at province level.

3. To analyze whether households living in urban areas are more likely participate in senior high school at province level.
4. To determine the impact of the school age population in a region on high school participation rate at province level.

1.4 The Benefits of Research

It is hoped that this research will provide benefits to readers, both for academic purposes and practical literacy, namely as follows:

a. Academic Benefits

This research will contribute to the literature on senior high school participation rates in each province in Indonesia. This study will expand the available literature by providing readers with empirical study results related to the determinants of senior high school participation in each province in Indonesia. Furthermore, this study will address the research gap regarding senior high school participation rates in each province in Indonesia. Most previous studies only identify a few micro factors that influence senior high school participation rates. However, this study analyzes the determinants of senior high school participation at the macro level, using variables such as poverty level, average years of schooling, households residing in urban areas, and senior high school population. This will complement existing findings.

b. Practical Benefits

This research can serve as a basis for evaluation by local governments and the Ministry of Education and Culture regarding high school participation rates. It can serve as a reference in formulating policies to encourage residents to participate in formal education, at least to the point of completing high school.