

Economic consequences on early marriage: Correlation with women's employment and education mobility

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ABSTRACT

This study investigates the socioeconomic consequences of early marriage in Bengkulu Province, Indonesia, focusing on women's mobility in terms of education and employment. Drawing on 11,553 microdata observations from the 2024 SUSENAS, the analysis establishes that early marriage is systematically correlated with profound intergenerational disadvantages. The findings indicate that early marriage is associated with lower educational attainment, with only 18 percent experiencing upward educational mobility compared to their parents. In the labor market, women's labor participation tends to be linked to parental employment, as mothers' and fathers' work status is correlated with a 51.6 percent and 33.6 percent higher probability of employment, respectively. Conversely, low parental education and large household sizes were identified as key determinants of economic vulnerability. In conclusion, early marriage is closely linked to intergenerational socioeconomic disadvantages, such as limited educational and employment opportunities. Therefore, policy interventions must strategically focus on expanding educational access and enhancing quality employment opportunities in rural settings to facilitate inclusive human capital development.

Keywords: Early Marriage, Educational Mobility, Employment Mobility, Bengkulu

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1. INTRODUCTION

The practice of early marriage (defined as marriage before the age of 18) is widely documented as having severe negative consequences for women's educational attainment, economic prospects, and overall well-being (Johnson et al., 2019; Wahyudi et al., 2019; Razu, 2018). This issue is particularly acute in countries like Indonesia, which the United Nations Children's Fund identifies as among the top ten countries globally with the highest number of child marriages (UNICEF, 2020). Data from the Central Statistics Agency highlight that a substantial percentage of women still marry before 18, a trend disproportionately concentrated in rural areas and poor households (BPS, 2022). For many families in low- and middle-income countries, economic hardship acts as a primary catalyst for marrying off daughters at a young age. Girls from impoverished households with limited schooling face a significantly elevated risk of early marriage (Johnson et al. 2019). Under severe financial duress, families often view early marriage as a desperate survival strategy designed to lessen the household's economic burden (Wahyudi et al. 2019). This contrasts sharply with women from more affluent backgrounds, who typically marry later because of greater access to education and resources (Rashid et al., 2024). This divergence means that women who marry young are frequently unable to pursue higher education, ultimately perpetuating the cycle of poverty across generations (Razu, 2018; Saleheen et al., 2021; Hotchkiss et al., 2016).

The interplay between education and early marriage is undeniable; lower educational levels are consistently linked to a higher probability of early marriage (Yektaş and Büken, 2019; Yogi, 2020). Once married, young brides are often overwhelmed by domestic responsibilities, which severely impede their ability to continue formal schooling (Razu, 2018). Conversely, educational advancement influences and often delays marriage timing (Torabi, 2023). This clearly indicates that educational interventions are vital for both delaying marriage and enhancing women's future socioeconomic status. Beyond mere knowledge, education cultivates independence, improves health outcomes, and critically influences the socioeconomic mobility of future generations (Arthur et al. 2017). Furthermore, the educational background of parents significantly impacts a girl's risk of early marriage. Highly educated parents are more likely to prioritize their daughters' schooling and actively postpone marriage, thereby creating a supportive environment for educational progress (Sah, 2018; Muharry et al., 2018). In contrast, girls who marry early frequently come from families with less education, suggesting a potential lack of awareness regarding the significant long-term socioeconomic benefits of continued education for their daughters (Laksono et al., 2021).

The prevalence of early marriage shows significant geographic disparities, with studies consistently finding it to be higher in rural areas than in urban settings. Women residing in rural areas often encounter unique sociocultural hurdles that limit their awareness of the available educational and economic avenues (Alem et al., 2020). Conversely, urban women generally benefit from superior access to education and employment, which are powerful factors in delaying marriage (Torabi, 2023; Belachew et al., 2022). Another critical impact of early marriage is the restriction on labor force participation. Young brides frequently face limited job prospects, primarily due to a lack of relevant qualifications or professional experience (Rumble et al., 2018). Women with higher levels of education are more likely to postpone marriage because they are better informed about the socioeconomic benefits of remaining active in the labor market (Daka et al., 2023). Increased educational attainment contributes to marriage delay and significantly improves opportunities for professional advancement (Rashid et al., 2024). Furthermore, higher education enhances women's awareness of the risks associated with early marriage and young parenthood, directly influencing their decisions regarding marriage timing and workforce engagement (Khan et al., 2023).

This issue is particularly relevant in Bengkulu Province, Indonesia, which struggles with a relatively high poverty rate. In 2024, 12.52 percent of its population lived in poverty, making it the second-highest rate in Sumatra. In this context, early marriage is more than just a personal matter; it has serious implications for the region's economic potential. For many economically vulnerable families in Bengkulu, early marriage is often adopted as a seemingly quick, temporary solution, inadvertently reinforcing the

intergenerational cycle of poverty in the region. Given this backdrop, this study was designed to empirically analyze the impact of early marriage on women's mobility, specifically by examining three interconnected dimensions: educational, labor force, and economic mobility. The anticipated findings aim to provide valuable empirical contributions to the gender and development literature. Crucially, this research is intended to serve as a practical foundation for formulating more comprehensive policies focused on preventing early marriage and promoting women's empowerment through strategic investment in education and employment.

2. LITERATURE REVIEW

Early marriage, typically defined as marriage before the age of 18, is a complex social phenomenon shaped by the intersection of cultural, economic, and educational factors. From a theoretical standpoint, Life Course Theory offers a crucial framework for understanding its long-term impact (Elder et al., 2015). This theory posits that major life events, such as marriage, when they occur prematurely, can significantly disrupt critical developmental stages, such as pursuing education and establishing a career. Such disruptions ultimately constrain future socioeconomic opportunities for children. The core idea is that every individual has an expected or ideal sequence of life stages, and deviations from this normative timing are likely to result in substantial negative repercussions for an individual's life trajectory. In addition, Social Role Theory explains that socially ascribed gender roles direct women to enter domestic roles earlier, including early marriage, which subsequently limits their access to education and employment (Eagly & Wood, 2016). Social norms that emphasize women's roles as wives and homemakers often drive early marriage, particularly in communities with lower education levels and limited access to information.

Socioeconomic mobility refers to the movement of individuals or groups from one socioeconomic status to another, either vertically (upward or downward status change) or horizontally (movement within the same social class). Sorokin (2017), in *Social and Cultural Mobility*, explains that social mobility is influenced by structural factors, including education and economic opportunities. Furthermore, three key forms of capital determine one's position in society: economic, cultural, and social capital. Cultural capital, such as educational attainment, values, and knowledge instilled from an early age, significantly impacts an individual's ability to achieve vertical mobility. In the context of early marriage, women who marry at a young age are less likely to complete formal education, which ultimately restricts the accumulation of cultural capital and hinders their social mobility (Nugroho et al., 2021).

The phenomenon of early marriage is deeply rooted in broader issues of gender inequality, a perspective strongly championed by Gender and Development Theory (GAD). This theory emphasizes the critical need to understand how social norms and patriarchal structures actively create and sustain disparities that restrict women's access to resources and their ability to fully participate in the economy (Rathgeber, 2016). GAD emerged to correct earlier development approaches that overlooked the systematic and structural role of gender. It focuses on how societal systems and institutions work to reinforce the subordination of women. Complementing this, Feminist Economics highlights that conventional economic models tend to neglect women's essential contributions, particularly the extensive but often invisible labor performed in the unpaid and reproductive spheres. Consequently, when early marriage forces women out of the educational system and into the domestic realm, it inevitably reinforces existing economic inequality (Seguino, 2020). Therefore, achieving genuinely equitable and sustainable development necessitates a focus on women's empowerment through concerted efforts in education, economic access, and policy reform.

Empirical research on early marriage, while exhibiting some complexity, largely indicates that it is a significant obstacle to women's mobility in both employment and household economic status. It has been firmly identified as a substantial barrier to labor mobility. When women marry young, their career aspirations and professional growth are often curtailed (Sari et al., 2020). Marriage frequently compels them to prioritize domestic responsibilities over their professional lives, severely limiting their job mobility and career ambitions (Beni et al., 2023; Abalkhail & Allan, 2016). For women from lower socioeconomic backgrounds, the pressure to marry early coincides with restrictions on accessing higher education and

skill development necessary to enhance job mobility (Yu & Hara, 2020; Boyagoda, 2020). Adding to this disparity, Piotrowski et al. (2015) found that women who marry young exhibit lower job mobility than their male counterparts who marry at a similar age. Furthermore, women who enter early marriages while in disadvantaged socioeconomic positions face distinct difficulties in identifying and accessing job opportunities, largely due to limited social networks that could otherwise provide crucial social capital (Boyagoda, 2020; Abalkhail & Allan, 2016; Ali et al., 2024).

In terms of economic status, early marriage frequently has devastating consequences for household finances, particularly in developing nations. Women who marry young face severely restricted avenues for both education and employment, a dynamic that regrettably perpetuates the cycle of poverty (Sihombing et al., 2023; Arif & Farooq, 2014). Young brides often possess lower bargaining power within their homes, leading to pronounced financial dependence on their husbands, which further deepens poverty (Siddique & Nosheen, 2021). Furthermore, early marriage typically correlates with lower household income because women are often expected to prioritize domestic duties over income-generating activities. This fundamental shift severely restricts their ability to contribute financially to their families (Carpio, 2016). The implications of early marriage extend beyond the immediate household, critically affecting maternal health and child well-being, thereby creating intergenerational poverty.

Children born to young mothers frequently encounter severe challenges, such as malnutrition and limited educational opportunities, which tragically cement poverty cycles across generations (Silva & Sumarto, 2018). Other studies confirm that children in households led by young mothers are more likely to experience poverty because of restricted resources and support (Farid, 2017). Berlianantiya and Wirawan (2025) directly link early marriage to school dropout, low work skills, and limited access to decent employment, effectively prolonging the poverty cycle in rural areas. Additionally, early marriage contributes to wider societal issues, including domestic violence and child stunting, often fueled by unstable household economic conditions (Prasetya, 2024; Fitriani et al., 2023).

A clear and consistent finding is that higher educational attainment is inversely correlated with poverty. This strong correlation suggests that educated women are significantly less likely to marry early and are better positioned to secure superior employment opportunities (Ncho & Wright, 2013; Sihombing et al., 2023). The interaction of various socioeconomic factors shows that adequate household income, access to resources, and educational opportunities can effectively mitigate the negative impact of early marriage on poverty status (Kuypers & Marx, 2021). Unfortunately, existing socioeconomic inequalities exacerbate the detrimental effects of early marriage. Families struggling with poverty often have few choices and may tragically choose to marry off their daughters early as a desperate measure to alleviate immediate financial burdens (Haldar et al., 2023; Siddique & Nosheen, 2021).

3. METHODOLOGY

This study employed a descriptive quantitative and explanatory research design. Quantitative research focuses on numerical data processed using statistical methods (Wooldridge, 2013). Explanatory research was used to reflect the depth of the data analysis. In addition, this study adopts a multidimensional approach to understanding the impact of early marriage on women's economic mobility, such as employment and poverty status. Therefore, this study conducts an in-depth analysis of the influence of early marriage and its implications for women's economic mobility. The data source for this research is secondary data published by the Central Statistics Agency (Badan Pusat Statistik/BPS) in Bengkulu Province. The data used are micro-level statistical data from the National Socio-Economic Survey (SUSENAS) in the form of cross-sectional data from the 2024 survey. These data include both individual- and household-level information from Bengkulu Province.

These data cover the individual level in the Bengkulu Province. According to the BPS, early marriage is defined as marriage occurring before the age of 18 and 19 years, according to Law No. 16 of 2019. However, the age of 18 has been adopted as the international standard set by the United Nations International Children's Emergency Fund (UNICEF) and the United Nations Population Fund (UNFPA) in the analysis of household socioeconomic indicators. Therefore, the unit of analysis in this study is

women in Bengkulu Province who were married before the age of 18. This study uses cross-sectional data, which refers to data collected from a large number of respondents within a specific region and period. The analytical method employed in this research is logistic regression. Logistic regression is used to analyze the influence of independent variables on the dependent variable, namely poverty, which has a binary response nature (categorical/binary) (Stock & Watson, 2019). The model equation is expressed as follows:

$$P(Y = 1 | X) = 1 / (1 + e^{-(\beta'X)}) \dots\dots\dots(1)$$

Where: $P(Y = 1 | X)$ represents the probability of the event $Y = 1$ occurring given the value of X . The symbol β' denotes the vector of regression coefficients, and X is the vector of independent variables. Furthermore, in addition to the logit model, logistic regression includes the probit model. Based on Equations (1), the regression equation for this study can be written as follows:

$$dMob_educ_i = \beta_{0i} + \sum \beta_{ni} Child_Characteristic_{ni} + \sum \beta_{ni} HoH_Characteristic_{ni} + e_i \dots\dots\dots(2)$$

$$dMob_work_i = \beta_{0i} + \sum \beta_{ni} Child_Characteristic_{ni} + \sum \beta_{ni} HoH_Characteristic_{ni} + e_i \dots\dots\dots(3)$$

Table 1. Operational Definitions of Research Variables

Variable Name	Operational Definition	Data Type	Value/Category
Dependent Variables			
Educational Mobility	Relative (intergenerational) educational mobility between the education level of the child and that of the parents	Categorical	0: No upward educational mobility 1: Upward educational mobility
Labor Force Participation	Employment status of women who experienced early marriage	Categorical	0: Employed 1: Unemployed
Poverty Status	Total household expenditure in the past month divided by the poverty line of Bengkulu Province	Categorical	0: Poor 1: Not poor
Independent Variables			
Age at First Marriage	Age at which the individual first got married	Ratio	
Education	Years of education completed by the individual	Ratio	
Domicile	Classification of the individual's area of residence	Categorical	0: Rural 1: Urban
Employment Status Head of Household	Employment status of the household head whose child experienced early marriage	Categorical	0: Unemployed 1: Employed
Father's Education	Years of education completed by the father of the individual who experienced early marriage	Ratio	
Mother's Education	Years of education completed by the mother of the individual who experienced early marriage	Ratio	

Source: data Processed from SUSENAS data by the author, 2025

Although SUSENAS provides individual-level sampling weights, this study does not apply them in the main regression analysis. The objective of this research is examine associative relationships rather than to produce population-representative estimates. Following the methodological arguments of Solon et al. (2015), unweighted estimations are appropriate when the sampling design is not directly related to the outcome variable and when the model adequately controls for observable characteristics such as residence, education, and household size. Robustness checks using weighted regressions yielded similar patterns, confirming that the main results are not sensitive to the application of sampling weights. Furthermore, based on the research model described above, the next step is to formulate the operational definitions of each variable used in this study. This formulation aims to ensure conceptual clarity, measurement consistency, and accuracy in interpreting analytical results in accordance with the established research framework.

4. RESULT AND DISCUSSION

4.1 Result

This chapter describes the data and regression results based on the analysis method used. Based on the results of processing the SUSENAS data for Bengkulu Province in 2024, there were 11,553 observations of women who married at an early age. The average age at first marriage was recorded at 16 years, with the youngest being 10 years old and the oldest being 17 years old; thus, the entire sample fell into the category of early marriage. This condition has an impact on educational attainment, where the average years of schooling for women is only 6.16 years, equivalent to elementary school completion, and only a small proportion of respondents are able to pursue secondary to higher education levels. This is also reflected in low educational mobility, as only 18 percent of women have achieved a higher level of education than their parents have. See Table 2

Table 2. Research Data Description

Variable	Mean	Std.Deviation	Min	Max
Educational Mobility	0.180	0.384	0	1
Employment Status	0.415	0.493	0	1
Poverty Status	0.096	0.295	0	1
Age at First Marriage	16.00	1.176	10	17
Years of Education	6.161	3.409	0	18
Domicile (1 : Urban)	0.248	0.432	0	1
Employment Status				
Mother	0.294	0.456	0	1
Father	0.839	0.367	0	1
Mother's Years of Education	5.363	4.233	0	22
Father's Years of Education	7.014	3.785	0	23
Household Size	3.702	1.750	1	14
Number of Observations (Individuals)	11553			

Source: Author's processing of SUSENAS data, 2025.

In terms of educational mobility, the findings are stark: a mean value of only 0.180 indicates that approximately 18% of women achieved a higher educational level than their parents. Conversely, the vast majority (82%) were unable to surpass their parents' educational attainment. This strongly suggests that early marriage severely constrains women's educational opportunities. Regarding economic participation, approximately 41.5% of the sampled women were employed. The relatively low rate of labor force participation among the remainder is likely linked to both their limited educational attainment and the overwhelming burden of domestic responsibilities assumed immediately following marriage. Furthermore, a significant segment of this group is economically vulnerable, with approximately 9.6% of households in which early marriage occurred falling below the poverty line.

Socioeconomic characteristics of families also play a significant role. The majority of respondents live in rural areas (75.2 percent), which have relatively limited access to education and employment opportunities compared to urban areas do. Parental education levels are also low, with mothers having an average of 5.36 years of schooling (fifth grade) and fathers 8.76 years (equivalent to junior high school). Fathers dominate as breadwinners, with 83.9 percent of fathers working compared to only 29.4 percent of mothers. The average number of household members is three to four, although there are households with up to 14 members, which can increase economic pressure and be one of the drivers of early marriage. Overall, these statistics show that early marriage in Bengkulu Province is more prevalent among women in rural areas with low levels of education, limited participation in the workforce, and vulnerability to poverty. These conditions reinforce the assumption that early marriage is a major obstacle to women's socioeconomic mobility.

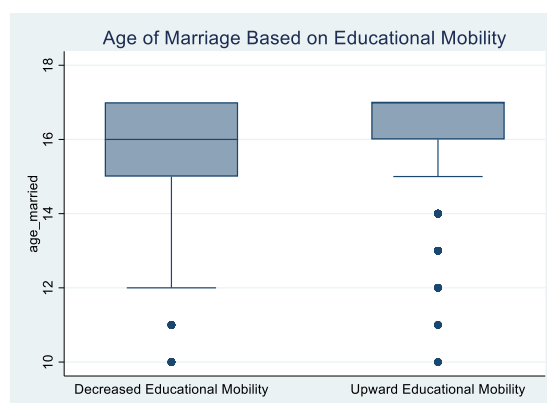


Figure 1. Tabulation of Early Marriage Age and Educational Mobility of Women Who Married Early

Source: SUSENAS data processed by the author, 2025

The boxplot in Figure 1 shows the difference in the distribution of age at first marriage between women who experienced upward educational mobility and those who did not. In the group of women with downward educational mobility, the age at marriage was relatively more varied, with a median of 16 years and an interquartile range of 15–17 years. There are also a number of outliers who married at a very young age, namely 10–13 years old. Meanwhile, in the group of women with upward educational mobility, the median age at marriage is also 16 years, but the distribution is narrower, concentrated at 16 to 17 years old. Outliers who married at a very young age are still found, although their number is smaller than in the group with downward educational mobility. These findings indicate that marriages at a relatively older age tend to be associated with opportunities for women to achieve better educational mobility, while marriages at a very young age have the potential to greatly hinder women’s educational opportunities.

Figure 2 shows the relationship between the age at first marriage and individual welfare, as measured by per capita expenditure. It can be seen that individuals who marry at a very young age, around 10 to 13 years old, generally have low per capita expenditure and are relatively concentrated in the lower class. Conversely, as the age of marriage increases to around 17–18 years, the variation in per capita expenditure becomes greater and tends to be higher. This pattern shows a positive indication that the higher the age of marriage, the greater the chance of individuals having a better level of welfare. This can be explained by the fact that marriage at a more mature age gives women the opportunity to pursue higher education and potentially enter the labor market, thereby increasing household income and welfare.

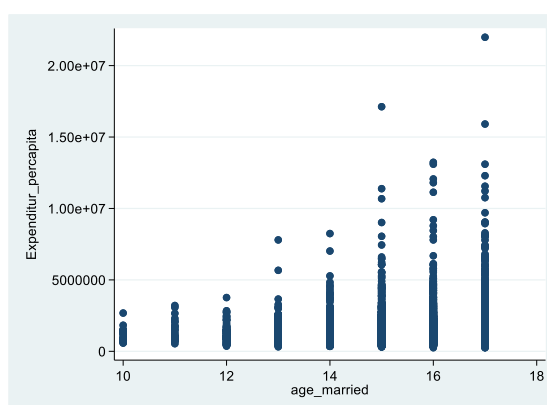


Figure 2. Level of Well-being of Women Who Married Early

Source: SUSENAS data processed by the author, 2025

The data (Figure 3) clearly show a huge gender difference in employment among people who married young. Of the 11, 553 respondents, most (58.51%) were unemployed, and 41.49% had jobs. However, when we look at each gender, the differences are very clear and show that traditional roles are being strengthened: most women who married early were unemployed (6,644 people, or 62.95%), with only 3,911 women, or 37.05%, having jobs. Men showed the reverse trend, as the great majority were employed (882 people, or 88.38%), with only a small number (11.62%) being unemployed. These results strongly suggest that strict gender roles exist among those who marry early. Men are much more likely to join the workforce immediately as expected income earners. In contrast, women are typically moved away from economic work and given a larger role at home. This early focus on domestic life restricts women's ability to earn money from the beginning of their adult lives.

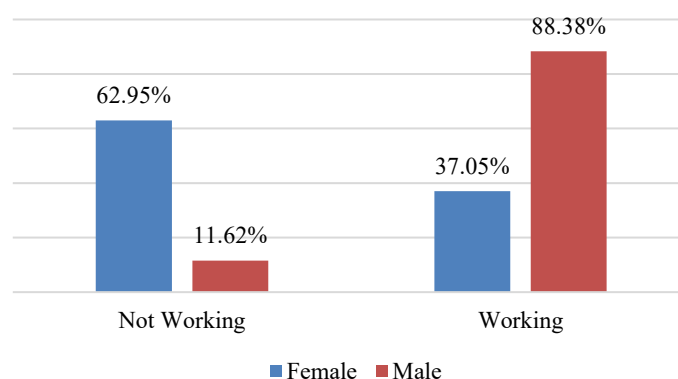


Figure 3. Tabulation of Gender and Employment Status among Women Who Married Early

Source: SUSENAS data processed by the author, 2025

Before conducting the logistic regression analysis, a multicollinearity test was performed to ensure that there was no strong linear relationship among the independent variables in the model. This test is essential to prevent biased coefficient estimates that may arise from high correlations between the explanatory variables. Based on the results of the multicollinearity test presented in Table 3, the Variance Inflation Factor (VIF) values for all variables were below the threshold of 10, and the tolerance values ($1/\text{VIF}$) were well above 0.10, indicating no evidence of high correlation among the independent variables. Therefore, it can be concluded that the regression model is free from multicollinearity issues, and all variables are suitable to be included in the logistic regression analysis. See Table 3

Table 3. Results of the Multicollinearity Test

Variable	Multicollinearity Test	
	VIF	1/VIF
Mother's years of education	2.05	0.4875
Years of education for women who early marriage	1.91	0.5233
Father's yaers of education	1.59	0.6289
Number of household members	1.19	0.8393
Father's employment status	1.18	0.8505
Mother's employment status	1.09	0.9195
Respondents' age	1.04	0.9591
Residence	1.04	0.9680
Mean VIF	1.39	

Source: SUSENAS data processed by the author, 2025

The next step is to conduct a logit regression analysis to identify the effects of early marriage and socioeconomic factors on the three dimensions of female mobility, namely educational mobility, employment mobility, and household economic status. This model was chosen because the dependent variable is categorical (binary), so that logit analysis can provide more accurate probability estimates.

Based on the regression results presented in Table 4, several variables significantly affected the dimensions of women's socioeconomic mobility in Bengkulu Province. In model [1] on educational mobility, the variable of early marriage age had a negative effect, although it was not statistically significant. This indicates that the younger a woman is when she marries, the lower is her tendency to experience increased educational mobility. The domicile variable (urban dummy) has a significant negative effect on educational mobility, indicating that women in urban areas tend to have lower educational mobility than those in rural ones.

In addition, the employment status of mothers and fathers positively and significantly affects children's educational mobility. In Model [1], the variable father's education was excluded from the estimation because its inclusion caused a convergence problem in the logit model. The estimation failed to converge due to quasi-complete separation, where certain combinations of predictor variables perfectly predicted the outcome. This situation leads to an undefined maximum likelihood function and unreliable coefficient estimates. To maintain model stability and interpretability, father's education was therefore omitted from Model [1], but included in alternative specifications to assess robustness.

In model [2] on labor mobility, the variable of early marriage age has a significant positive effect on labor participation. The same is true for the variable of years of education, which again shows a positive and significant effect. This reinforces the fact that education is an important asset for women to participate in productive economic activities. The variable of parental employment status also shows a strong positive effect on children's labor mobility. Meanwhile, in the economic status model [3], the estimation results show that the domicile variable has a significant effect on household economic welfare. Women who live in urban areas tend to be in better economic conditions. Conversely, the father's employment status shows a significant negative effect on the welfare of children who marry early.

Furthermore, the Hosmer–Lemeshow goodness-of-fit test yielded a statistically significant result ($p < 0.05$), suggesting some deviation between predicted and observed probabilities. However, given the large sample size ($N = 11,553$), this test is highly sensitive to minor discrepancies. Complementary diagnostics, including AUC values above 0.75 and classification accuracies exceeding 70%, indicate that the model performs adequately in distinguishing outcomes, implying acceptable practical fit despite statistical significance. See Table 4

Table 4. Logit Regression Results

Variable	Logit Regression	
	Educational Mobility [1]	Work Mobility [2]
Age of Early marriage	-0.035 (0.024)	0.108*** (0.027)
Years of education for women who married early	0.317*** (0.011)	0.376*** (0.018)
Residence (<i>Dummy: urban</i>)	-0.462*** (0.064)	0.112 (0.688)
Mother's employment status (<i>Dummy: working</i>)	0.464*** (0.057)	5.782*** (0.138)
Father's employment status (<i>Dummy: working</i>)	0.377*** (0.093)	3.769*** (0.104)
Total household members	0.118*** (0.016)	-0.224*** (0.021)
Mother's years of education	-0.021** (0.008)	-0.451*** (0.016)
Father's years of education	(omitted)	-0.155*** (0.012)

Total observations	11553	11553
Prob > Chi²	0.0000	0.0000
Pseudo R²	0.1524	0.5598
AUC value	0.7677	0.9370
Prob>Chi2 H-L	0.0040	0.0000

Note: significance levels of 1% (0.01)***; 5% (0.05)**; and 10% (0.1)*. Robustness standard error. Robustness standard error. Father's education was excluded from Model [1] because its inclusion caused quasi-complete separation and prevented model convergence.

Source: SUSENAS data processed by the author, 2025

Next, the magnitude of the influence of independent variables on the probability of increased mobility in the dependent variable is shown by the average marginal effect logit results in Table 5. The marginal effect value shows how much the probability (in percentage terms) of the dependent variable changes when there is a one-unit change in the independent variable, assuming that other variables remain constant. In terms of educational mobility, the variable of years of education for women who marry early has the greatest and most significant positive influence. Each additional year of schooling increases the probability of women who marry early to achieve higher educational mobility by 3.9 percent. The urban residence factor also shows a significant negative effect of -5.7 percent, which can be interpreted as meaning that women who marry early in rural areas have greater potential for relative improvement because their starting point in education tends to be lower. See Table 5

Table 5. Marginal Effects – Logit

Variable	<i>Marginal Effects</i>	
	Educational Mobility [1]	Work Mobility [2]
Early marriage	-0.004 (0.003)	0.0097*** (0.0024)
Years of education for children who married early	0.039*** (0.0012)	0.033*** (0.0013)
Place of residence (Dummy: urban)	-0.057*** (0.008)	0.010 (0.006)
Mother's employment status (Dummy: working)	0.058*** (0.007)	0.516*** (0.0055)
Father's employment status (Dummy: working)	0.047*** (0.012)	0.336*** (0.0075)
Total household members	0.0147*** (0.0021)	-0.020*** (0.0018)
Mother's years of education	-0.0026** (0.0009)	-0.040*** (0.0007)
Father's years of education	(omitted)	-0.014*** (0.0009)
Total observations	11553	

Note: significance levels of 1% (0.01)***; 5% (0.05)**; and 10% (0.1)*. Robustness standard error. Father's education was excluded from Model [1] because its inclusion caused quasi-complete separation and prevented model convergence.

Source: SUSENAS data processed by the author, 2025.

In addition, the employment status of mothers and fathers contributes positively to educational mobility, increasing opportunities by 5.8 percent and 4.7 percent, respectively. These results indicate that family economic support and the role model of working parents have a multiplier effect on the educational

continuity of women who marry early. The number of household members is also a significant positive variable, with each additional family member increasing the chances of educational mobility for women who marry early by 1.5 percent.

In terms of labor mobility, the results show that early marriage has a significant positive effect of 0.97 percent, indicating that women who marry at a younger age have a slightly higher chance of working, most likely due to the economic needs of the household. The analysis reveals the powerful influence of the parental generation on the working life of women who marry young. The single strongest factor is the mother's employment status, which increases the likelihood of their daughters working by a substantial 51.6 percent. This finding strongly confirms the role model effect that passes down through generations of women. Similarly, the father's job status also has a positive effect, increasing the daughter's work probability by 33.6 percent. This highlights how a productive family environment is crucial for encouraging labor participation among women who marry early. Conversely, household demographics pose a challenge: the number of household members shows a significant negative effect (-2.0 percent). This suggests that a larger number of people dependent on the household income tends to reduce the chances for women who marry young to enter the workforce, likely due to increased domestic or childcare responsibilities.

When examining household economic status, the size of the household again shows a significant positive influence (3.9 percent), as does the mother's employment status (1.5 percent). This suggests that the combined economic contribution of family members, particularly the mother's income, plays a vital role in strengthening the household's overall financial condition. However, the educational background of the parents presents a persistent hurdle. While small, both the mother's and father's education levels showed a significant negative influence. This indicates that when parental education is low, it remains linked to limited economic mobility for their daughters who marry young, reinforcing the cycle of disadvantage.

4.2 Discussion

After presenting the regression results, several justifications can be discussed based on the findings derived from the previous data analysis. The differences observed across residence, maternal employment, and household size offer valuable insights when viewed through the lenses of Life-Course, Gender and Development (GAD), and Human Capital theories. The lower probability of educational mobility among women living in urban areas (-5.7 percentage points, Table 5) reflects the GAD perspective that structural and social barriers can still limit women's empowerment, even in environments that seem to provide more opportunities. Meanwhile, the strong positive link between a mother's employment and her daughter's educational (5.8%) and labor mobility (51.6%) highlights the importance of role models within families. Working mothers not only contribute economically but also inspire their daughters to pursue education and productive work, supporting the essence of Human Capital and Life-Course theories about intergenerational learning and empowerment. On the other hand, the finding that larger households are associated with lower labor mobility (-2.0%) and higher poverty risk resonates with Life-Course Theory, suggesting that heavier family responsibilities early in life can constrain women's chances to advance. Altogether, these findings illustrate that women's socioeconomic mobility is shaped by interconnected family dynamics, social norms, and life-course experiences.

4.2.1 The Impact of Early Marriage on Educational Mobility

The regression results indicate that the years of education attained by women who married early, their parents' employment status, and the total number of household members have a positive and significant effect on the likelihood of upward educational mobility among women who married at an early age. The variable of educational attainment shows that each additional year of schooling for women who married early increases their probability of achieving a higher level of educational mobility. Empirically, this finding is consistent with the distribution of data from SUSENAS in Bengkulu Province, where the

average years of schooling among women who married early is only 6.16 years (equivalent to primary school level).

However, there is considerable variation among respondents. Some women who managed to continue their education to the junior or senior high school level demonstrate a marked improvement in educational mobility indicators, that is, their educational attainment exceeds that of their mothers. This suggests that each additional year of education brings substantial consequences for the likelihood of surpassing the educational level of the previous generation, particularly within groups starting from a relatively low baseline, such as women who married early. Table 6 below presents a comparative test between the education levels of daughters and their mothers to examine whether women who married early have achieved higher, equivalent, or lower education compared to their parents (mothers).

Based on the results of the paired *t*-test (see table 6) between the years of schooling of women who married early and their mothers, the average education level of daughters was 6.16 years, while that of their mothers was 5.36 years. The mean difference of 0.80 years indicates that women who married early generally attained a slightly higher level of education compared to their mothers. Furthermore, the *t*-test yielded a value of $t = 24.48$ with a *p*-value = 0.000 (< 0.05), suggesting that the difference is statistically significant. This finding indicates the presence of positive intergenerational educational mobility from mothers to daughters, even among those classified as early-married women. However, considering the relatively large standard deviation (approximately 3.5 years), there exists substantial variation among respondents, implying that not all daughters experienced the same degree of educational improvement.

These findings strongly align with established research by [Behrman et al. \(2019\)](#) and [Chevalier \(2021\)](#), both of whom stress that formal education remains the most effective way to interrupt the transfer of educational disadvantage from one generation to the next. Even though early marriage can restrict learning opportunities, women who manage to continue their education after marriage significantly increase their chances of achieving a higher educational status than their parents did. Theoretically, this outcome is also consistent with the principles of Human Capital Theory. This theory suggests that every additional year of schooling boosts an individual's total human capital, which in turn makes upward social mobility more likely.

Furthermore, the employment status of parents contributes positively to the educational advancement of women who married early. This result points to a multiplier effect where family financial support and the role-model influence of working parents encourage daughters to continue their education. Working parents, especially mothers who have their own income, are better positioned to invest in their daughters' schooling, even after the daughter enters an early marriage ([Brea-Martínez, 2022](#)). Daughters of employed mothers often see higher education and professional careers as achievable goals, which may motivate them to continue studying despite their marital status ([Antman, 2010](#)). Studies by [Emerson and Portela Souza \(2019\)](#) further highlight that a mother's participation in the labor market provides a progressive gender role model within the home, fostering higher educational ambitions in her daughters. Finally, maternal employment increases the overall household income, making it financially easier for daughters to maintain their schooling even after an early marriage. See Table 6

Table 6. Uji Paired t-test – Early Marriage and Mother's Education

<i>Paired t-test</i>			
Variables	Mean	Std. Err.	Std. Dev
Years of education for women who marry early	6.1609	0.0317	3.4091
Years of education for mother	5.3629	0.0393	4.2325
diff	0.7981	0.0326	3.5043
Observasi	11553		
Mean(diff) = mean (Educ – Educ Ibu)			t = 24.4780
H0: mean(diff) = 0		Degree of freedom	11552
Ha: mean(diff) < 0	Ha: mean(diff) != 0		Ha: mean(diff) > 0
Pr(T < t) = 1.0000	Pr (T > t) = 0.000		Pr (T > t) = 0.000

Source: SUSENAS data processed by the author, 2025

Surprisingly, living in an urban area actually shows a negative and significant effect on the educational mobility of women who married young. This means that, despite being located in a city, these women are *less* likely to achieve better educational status than their parents, even when compared to women in rural areas. One possible explanation for this counterintuitive finding is that in urban settings, women who marry early may encounter heightened social pressures and stigmatization, which actively restrict their ability to access further education. This result is particularly noteworthy because it deviates from the common pattern reported in past studies (Glick and Sahn, 2010; Nguyen and Wodon, 2014), which generally found that urban environments offer superior educational opportunities. However, in the specific context of early marriage, it appears that social norms and the immediate pressures of household responsibilities in urban life can unfortunately create even stronger barriers to continued schooling.

4.2.2 The Impact of Early Marriage on Employment Mobility

In the model examining employment mobility, both the mother's and father's education levels show a statistically significant, negative relationship with the probability of their early-married daughters participating in the labor force. This finding aligns with common social trends seen in families with a higher educational background. In these households, daughters are often supported or expected to continue their education, or perhaps prioritize domestic stability, rather than immediately entering the job market. Because better-educated families usually have greater economic capacity, there is less urgent need for the young women to contribute financially to the household right away. Consequently, this negative effect of parental education reflects an intergenerational protection effect. This can be viewed as a form of parental safeguard in educated families, aimed at delaying their daughters' entry into the labor market, allowing them time to pursue further education or ensure household stability (Herawati & Suryadarma, 2018).

Moreover, women who married early can still achieve positive employment mobility if they are able to attain a higher level of education. This is strongly supported by empirical studies (Hanushek et al., 2015; Psacharopoulos and Patrinos, 2018), which consistently show that women with more schooling are more likely to move out of temporary or informal work and secure jobs with better pay and greater stability. For early-married women, education thus acts as a vital pathway, effectively mitigating the long-term harmful effects of early marriage on their outcomes in the labor market.

5. CONCLUSION

This study successfully provides empirical evidence detailing the socioeconomic consequences of early marriage on women's educational and employment trajectories in Bengkulu Province. Using micro-level data from the 2024 SUSENAS survey, the findings strongly confirm that marrying before the age of 18 significantly restricts women's opportunities for upward mobility in both education and the labor market. Women who marry early typically achieve very low levels of schooling, averaging only six years, and consequently face major challenges accessing formal employment. Crucially, however, education remains a critical factor for improvement: every additional year of schooling substantially increases the probability of these women achieving better educational mobility and participating in the workforce. Parental characteristics are also shown to be vital. When mothers and fathers are employed, it positively influences their daughters' educational and employment outcomes. This highlights how strong family economic support and parental role modeling can partially counteract the inherent disadvantages of an early marriage. Conversely, low parental education and large household sizes are clearly linked to persistent poverty among women who marry young. The results clearly point to the necessity of integrated policy interventions. These interventions must combine efforts to improve education access, run effective awareness campaigns about the long-term harms of early marriage, and implement programs specifically designed to enhance employment opportunities for rural women. Ultimately, strengthening women's human capital through education and economic empowerment is essential for breaking the

intergenerational cycle of poverty and fostering inclusive development in regions like Bengkulu that struggle with high rates of early marriage.

Ethical Approval

This study uses anonymised secondary data from the 2024 National Socioeconomic Survey (SUSENAS) conducted by Statistics Indonesia (Badan Pusat Statistik, BPS). The data were accessed through the official BPS microdata request system and used in accordance with BPS data access and confidentiality regulations. As the analysis relies solely on anonymised secondary data, additional ethical approval or informed consent was not required.

Informed Consent Statement

Not Applicable

Authors' contributions

PM conceptualized the research framework, supervised the overall study, and provided critical revisions to the manuscript. RN designed the methodology, performed the statistical analysis, and interpreted the empirical results. HTP contributed to the literature review, theoretical framework, and data validation. NMR assisted in data processing, visualization, and preparation of the initial draft. All authors discussed the results, contributed to the final version of the manuscript, and approved it for publication.

Disclosure Statement

The Authors declare that they have no conflict of interest.

Data Availability Statement

The SUSENAS 2024 microdata are available from Statistics Indonesia (BPS) upon request via the official microdata portal: <https://microdata.bps.go.id/mikrodata/>. All Stata do-files used for data cleaning and analysis are available from the corresponding author upon reasonable request, forming part of the study's replication materials.

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