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The Influence of Socioeconomic Factors on Early Marriage

Waldi Novi Yarsah[1)], Dolly Tanzil[2)], Muhammad Bahrul Ulum[3)], Ahmad Syaifullah[4)]

[1), 2), 3), 4)] *Ekonomi Pembangunan, Universitas Sriwijaya, Palembang*
Email: waldinoviyarsah@fe.unsri.ac.id [1)], dollytanzil@fe.unsri.ac.id [2)], muhammadbahrul@fe.unsri.ac.id [3)], ahmadsyaifullah@fe.unsri.ac.id [4)]

ABSTRACT

The core problem of this research focuses on analyzing the influence of socioeconomic factors on the high of early marriage in Empat Lawang Regency. This study specifically aims to test and analyze the causal relationship between key socioeconomic factors, which include respondent's education level, mother's education level, father's education level, parents' employment status, and household income, on the probability of early marriage occurrence. The primary focus is to identify the strongest predictor variable. This research employs a quantitative approach using descriptive and verification methods, chosen for their effectiveness in statistically measuring and testing hypotheses. The main data were processed through multiple logistic regression analysis. This technique is highly appropriate considering the dependent variable (early marriage) is dichotomous. The sample used consisted of 160 married female respondents, divided into 80 women married under the age of 19 and 80 women married over the age of 20. The empirical analysis results show that several factors statistically influence the probability of early marriage, including the respondent's education level, father's education level, and household income. Nevertheless, the test results indicate that the respondent's education level is the factor with the strongest predictive power and most significant and dominant influence compared to all other independent variables. This finding affirms the crucial role of education as a vital barrier against early marriage and provides a strong foundation for policy intervention.

Keywords: *Early Marriage, Socioeconomic, Adolescent Girls*

ABSTRAK

Permasalahan utama penelitian ini berfokus pada analisis pengaruh faktor-faktor sosial ekonomi terhadap tingginya pernikahan dini di wilayah Kabupaten Empat Lawang. Penelitian ini secara tegas bertujuan untuk menguji dan menganalisis hubungan kausalitas antara faktor-faktor sosial ekonomi yang meliputi tingkat pendidikan responden, tingkat pendidikan ibu responden, tingkat pendidikan bapak responden, status pekerjaan orang tua, dan pendapatan rumah tangga terhadap probabilitas terjadinya pernikahan dini. Fokus utama adalah mengidentifikasi variabel prediktor yang paling kuat. Penelitian ini menggunakan pendekatan kuantitatif dengan metode deskriptif dan verifikatif, dipilih karena efektivitasnya dalam mengukur dan menguji hipotesis secara statistik. Data utama diolah melalui analisis regresi logistik berganda (multiple logistic regression). Teknik ini sangat tepat mengingat variabel dependen (pernikahan dini) bersifat dikotomi. Sampel yang digunakan berjumlah 160 responden perempuan yang telah menikah, yang terbagi atas 80 perempuan menikah di bawah usia 19 tahun dan 80 perempuan menikah di atas usia 20 tahun. Hasil analisis empiris menunjukkan bahwa terdapat beberapa faktor yang berpengaruh secara statistik terhadap probabilitas pernikahan dini, mencakup tingkat pendidikan responden, tingkat pendidikan bapak, dan pendapatan orang tua. Meskipun demikian, hasil pengujian mengindikasikan bahwa tingkat pendidikan responden merupakan faktor yang memiliki kekuatan prediktif dan pengaruh paling signifikan dan dominan dibandingkan semua variabel independen lainnya. Temuan ini menegaskan peran krusial pendidikan sebagai benteng utama dalam mencegah pernikahan dini dan memberikan landasan kuat untuk intervensi kebijakan.

Kata Kunci: *Pernikahan Dini, Sosial Ekonomi, Remaja Perempuan*

1. Introduction

Early marriage is a social phenomenon that occurs globally across many countries and within diverse cultural, religious, and ethnic contexts. This phenomenon constitutes a violation of human rights, as child marriage infringes upon the fundamental rights of children (Kristarina, 2019). The National Population and Family Planning Board (BKKBN) asserts that early marriage brings adverse consequences, including mental health disorders, child abuse, and higher rates of divorce. Similarly, UNICEF (2015) reports that early marriage often results in negative impacts on girls' health, education, economic empowerment, safety, and the well-being of their children, which ultimately leads to a decline in the quality of human resources and contributes to national losses. Several studies have documented the negative consequences of early marriage, particularly those related to reproductive health issues and violence against women. Early marriage is associated with reproductive health problems such as the immaturity of reproductive organs, unintended pregnancies, unsafe abortion practices, and even maternal mortality (Kohno et al., 2020; Maudina, 2019). A growing body of research

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also demonstrates that violence against women occurs more frequently among younger wives. A study conducted in Egypt revealed that women who married before the age of 18 were 1.16 times more likely to experience physical violence and 2.38 times more likely to experience sexual violence compared with women who married at age 18 or older (El-Gazzar et al., 2020). Over the past decade, early marriage practices in Indonesia have declined by 3.5%. However, this reduction remains slow, and more systemic and integrated efforts are needed to meet the national targets of 8.74% by 2024 and 6.94% by 2030 (UNICEF, 2020). The percentage of early marriage remains high in several provinces, particularly West Sulawesi, which reached 17.71% in 2021. According to Statistics Indonesia (BPS, 2022), early marriage—measured by the proportion of women aged 20–24 who married or cohabited before age 18—varies significantly across provinces. Previous studies have found that early marriage is more prevalent in rural than urban areas, as reported by Ali et al. (2014), Berliana et al. (2021), and Pandya & Bhanderi (2015). Cultural norms in rural communities, which often label unmarried young women approaching the age of 20 as "old virgins," contribute to the persistence of early marriage practices. Several studies have identified dominant factors contributing to early marriage. Findings by Dwi Wulandari & Dwi Laksono (2023) indicate that socioeconomic status and educational attainment are significantly associated with early marriage among women aged 19–24 in rural Indonesia.

Women from the poorest households are 2.23 times more likely to marry early compared with those from the wealthiest households. Women with no schooling, primary–junior secondary education, and senior secondary education are also far more likely to marry early compared with college graduates—by 10.34 times, 12.10 times, and 4.52 times, respectively. Education level was found to have a stronger association with early marriage than socioeconomic status. Four determinants were found to be significantly associated with early marriage among adolescent girls. Women who did not complete primary school were more likely to marry early compared with those who completed senior high school. Poorer women tended to marry earlier than those with higher socioeconomic status. In addition, girls living in rural areas were more vulnerable to early marriage compared with those in urban settings. Lastly, girls with greater access to information and media exposure were less likely to marry early than those with limited access (Berliana et al., 2021). According to Ali et al. (2014), early marriage is more frequently associated with women living in rural areas, having low educational attainment, coming from larger families (more than five members), and having parents and husbands with education levels below senior high school. This aligns with findings by Montazeri et al. (2016), who reported that early marriage is often driven by low socioeconomic status, whereby marriage is perceived as a solution to economic hardship, particularly for families with daughters. Based on the aforementioned background and previous studies, it is evident that education and socioeconomic status play crucial roles in the occurrence of early marriage. However, research examining the relationship between these factors in Empat Lawang Regency remains limited, despite the region's distinct socioeconomic characteristics compared with other areas in South Sumatra. Therefore, this study was conducted to analyze the influence of socioeconomic factors on early marriage in Empat Lawang Regency.

2. Theoretical Basis

Human Capital Theory

Human capital, linguistically, consists of two basic terms: "human" and "capital." Capital is defined as a factor of production used to create goods or services without being consumed during the production process. Based on this definition, the "human" element in human capital is considered a form of capital similar to machines and technology. Humans also play roles and bear responsibilities in all economic activities such as production, consumption, and transactions. As the theory has evolved, the concept of human capital can be categorized into three main definitions. The first concept views human capital as an individual aspect. This perspective asserts that human capital refers to inherent human abilities such as knowledge and skills. According to Botev et al. (2019), human capital is a collection of knowledge, skills, and personal characteristics that an individual possesses, which can enhance productivity.

The second concept emphasizes that human capital is formed through various educational and training activities, both formal and non-formal—such as schooling, courses, and work experience—that directly improve the quality of human resources. In the context of this study, human capital theory is essential in explaining how educational attainment influences socioeconomic conditions and social decisions, including early marriage. Higher levels of education represent better-quality human capital, which affects an individual's awareness, skills, and capacity to make informed life choices. Women with higher education tend to have a broader outlook on their future, understand the importance of reproductive health, and are more capable of delaying marriage. Conversely, low-quality human capital is often associated with economic limitations and low literacy, which increase the likelihood of marriage at a young age. Thus, human capital theory provides a conceptual foundation indicating that improving educational quality is a key factor in strengthening individual capacity and reducing the prevalence of early marriage in society.

Human Investment Theory

Investment in human resources refers to the sacrifice of something measurable in monetary terms with the expectation of obtaining better income in the future (Ma et al., 2024). Higher future income reflects an individual's ability to achieve improved levels of consumption and well-being. This investment is closely linked to the concept of human capital previously discussed, wherein the enhancement of knowledge, skills,

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and individual productivity contributes positively to economic growth. Therefore, through sustained investment in human resources, the quality of human capital is expected to continuously improve, fostering inclusive and competitive development. In the context of this study, according to Susilo and Agustino (2022), human resource investment can be realized through improving education, particularly women's education. Education serves as a long-term investment that not only enhances economic capabilities but also plays a crucial role in shaping social decision-making, including decisions related to marriage. Individuals with higher levels of education tend to have broader perspectives, better skills, and greater employment opportunities, enabling them to delay marriage and improve their quality of life. Conversely, limited investment in women's education often results in low literacy levels, economic constraints, and limited bargaining power within the household, which can increase the likelihood of early marriage. Thus, strengthening investment in education is one of the most effective strategies to reduce the prevalence of child marriage and advance comprehensive human development.

The returns on such investment are still influenced by individuals' inherent personal qualities as well as their efforts to improve those qualities. Human capital investment also requires measurement to demonstrate the efficiency of the investment undertaken. One of the methods that can be used is the Internal Rate of Return (IRR). Essentially, the IRR method measures both the indirect and direct costs of an investment. According to Hanapiah (2011), the implementation of IRR in human capital investment can be explained as follows: a. It serves as a basis for decision-making regarding whether an individual should continue their education or not. b. IRR calculations can be used to explain labor market conditions, such as the increasing unemployment rate among educated workers in Indonesia. c. IRR can be used to estimate the additional supply of labor from each type and level of education in the coming years. d. IRR calculations can be utilized in formulating education policies and manpower planning. e. Social IRR calculations are primarily used to determine whether a particular education program is feasible to be implemented and, in this context, to set priorities among various available alternative education programs.

Human Development Theory

Human development is a process aimed at expanding human choices to achieve a better quality of life. According to the United Nations Development Programme (2024), human development is not measured solely by per capita income, but also encompasses health, education, and a decent standard of living. This concept emphasizes that economic growth alone is insufficient to reflect human well-being when disparities between the rich and the poor remain high. UNDP (2024) also asserts that inequality in the distribution of human resources can cause impoverished communities to continue lagging behind, even when national income increases. Thus, human development must be understood comprehensively, covering economic, social, and equity dimensions of welfare.

In the context of this study, human development reflects efforts to enhance the quality of life through education and economic well-being, which in turn influence social behavior within the community. Higher levels of education open opportunities for women to develop their potential and actively participate in economic activities. Enhancing individual capacities through education also promotes awareness of reproductive rights, family responsibilities, and the importance of delaying the age of marriage. A stable household economy supports better access to education and health services, thereby expanding opportunities for women to achieve a more independent and prosperous life. Human development that focuses on strengthening education and economic welfare forms a crucial foundation for reducing the prevalence of early marriage in society.

Sustainable Development Theory

The Sustainable Development Goals (SDGs) are a set of global goals officially adopted in 2015 as a continuation of the Millennium Development Goals (MDGs). This document consists of 17 goals that are more detailed than those of the ICPD and the MDGs. Environmental issues constitute a major focus and are significantly expanded in this framework. The SDGs seek to integrate the concepts of Economic Development Goals, Population Development Goals, and Environmental Development Goals, which together aim to achieve sustainability. Sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. According to Sutamihardja (2004), the objectives of sustainable development include efforts to achieve the following:

a. Intergenerational equity in the distribution of development benefits, meaning that the utilization of natural resources for economic growth must consider ecological limits and prioritize renewable resources, while minimizing the exploitation of non-renewable resources.
b. Protection of environmental sustainability and conservation of natural resources, along with the prevention of ecosystem degradation in order to ensure a good quality of life for future generations.
c. Utilization and management of natural resources to support economic growth, while ensuring equitable and sustainable use of these resources across generations.
d. Maintenance of sustainable social welfare, both for present and future generations.

People Centered Development Theory

People centered development is a concept introduced at the International Conference on Population and Development (ICPD), organized by the United

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Nations Population Fund (UNFPA) in Cairo, Egypt, on 5–13 September 1994. The ICPD marked a significant milestone in the global discourse on population and development issues. A total of 179 participating countries agreed upon the Programme of Action (PoA), which serves as the foundation for designing human-centered development policies and programs.

This concept emphasizes that human beings must be at the center of every development process both as subjects and beneficiaries of development. Improving human quality of life, gender equality, education, and reproductive health are key pillars considered essential for achieving sustainable development. Thus, people-centered development views development success not only through the lens of economic growth, but also through the enhancement of human well-being, dignity, and capacity to make autonomous life decisions. In the context of this study, the concept of people-centered development underscores the importance of placing human beings at the core of social development policies, including those related to early marriage. Increasing access to education, economic empowerment, and gender equality are efforts that can expand women's life choices, enabling them to have greater control over decisions regarding marriage and reproduction. This approach views early marriage not merely as a cultural issue but as a broader developmental concern linked to structural inequalities, limited opportunities, and insufficient fulfillment of human rights, However, early marriage is also a consequence of uneven human development. By placing human beings at the center of development, policies aimed at improving the quality of education and overall well-being are expected to reduce the prevalence of child marriage and promote equitable, human-oriented development.

Definition of Early Marriage (Child Marriage)

Marriage is an important milestone in the course of human life. As social beings (*zoon politicon*), humans cannot live without interacting with others. By nature, humans are equipped with instincts to live together and build relationships with fellow human beings. One way to formalize such relationships is through the institution of marriage.

Marriage is both a social contract and a divine contract, in which two individuals unite themselves in a husband–wife relationship. This union grants both men and women certain rights and responsibilities within a family.

However, not all marriages occur at an ideal age. Early marriage can be influenced by various factors, both individual and environmental. The factors that contribute to early marriage include:

1. Knowledge and information factors: Adolescents who are exposed to pornographic content or adult films tend to be influenced to engage in premarital sexual activity. If pregnancy occurs, marriage at a young age often becomes the chosen solution. Some adolescents marry young with the intention of avoiding sinful behavior such as premarital sex, although this decision is often made without sufficient understanding of the risks and long-term consequences of early marriage.
2. Level of education**:** Low education or school dropout may encourage young women to marry earlier. Limited knowledge regarding the realities and responsibilities of married life leads them to hastily establish a family and bear children without adequate preparation.
3. Lack of parental supervision and peer pressure: Adolescents who receive insufficient parental supervision are more likely to engage in free social interactions that may negatively affect their character and morals. During adolescence a period marked by heightened sexual development and emotional growth young people experience strong sexual impulses. When they lack the ability to control these impulses, they may engage in sexual activity and subsequently marry young as an expression of affection or due to social pressure.

The impacts of child marriage in various countries show alarming conditions. Uddin (2021), in his study in Bangladesh, found that child marriage contributes to increased school dropout rates among girls, particularly those from low-income families. Early marriage also deprives girls of the opportunity to pursue higher education, traps them in economic dependency, and exposes them to a greater risk of domestic violence. Similarly, research by Garcia-Hombrados (2022) in Ethiopia reveals that child marriage has broader negative consequences on family stability and women's reproductive health. Girls who marry at an early age face higher risks of pregnancy complications, poorer health status, and higher infant mortality rates compared to women who marry as adults. In other words, child marriage brings significant social, economic, and health consequences, both in the short and long term.

Early Marriage in Relation to the Marriage Law and the Child Protection Law

In an effort to minimize the negative impacts of underage marriage, Indonesian marriage law has, in principle, imposed age restrictions to prevent excessively early (marriage). The regulation of marriage forms part of the broader ideal of law enforcement aimed at creating conditions of peaceful, orderly, and just social life. As a state founded on Pancasila, whose first principle is Belief in the One and Only God, marriage is closely related to religion and spirituality. Therefore, marriage is not merely a physical or legal bond, but also entails a profound spiritual dimension. The formation of a happy family is closely connected to procreation, which constitutes one of the fundamental purposes of marriage. In order to realize the ideal objectives of marriage, the government has established several legal provisions prohibiting underage marriage. The minimum age for marriage is stipulated in Law No. 1 of 1974, Article 7 paragraph (1), which states that marriage is only permitted if the male has reached the age of 19 years and the female has reached the age of 16

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years. Biological and psychological maturity of the prospective bride and groom constitutes one of the fundamental principles of this law, as marriage is intended to form a sakinah (harmonious) family, to produce offspring, and to realize an ideal, happy, and everlasting household based on the belief in Almighty God.

The existence of this regulation represents a state effort to protect the institution of marriage from potential abuse that could undermine the family as a social institution. Based on Article 1 of Law No. 1 of 1974, several essential requirements must not be violated in the implementation of marriage, one of which concerns the minimum age limit as regulated in Article 7 paragraph (1). Accordingly, any marriage entered into below the stipulated minimum age, whether by the male or female party, is legally classified as a violation of the law because both parties are still considered underage. Nevertheless, the provision in Article 7 paragraph (1) is not absolute. Article 7 paragraph (2) of the same law allows for marriage dispensation, whereby deviations from the minimum age requirement may be authorized by a court or other designated official upon the request of the parents of either party. This provision implies that underage marriage may still be legally conducted if a dispensation is granted by the competent authority. Furthermore, Article 7 paragraph (3) indirectly affirms that such dispensations may be granted based on the provisions of religious law or belief systems that permit the marriage. In other words, underage marriage may still occur with the authorization of the Marriage Law, even when the parties have not yet reached the legally prescribed age. Juridically, differences in age classifications across various laws regarding the definition of a child further complicate the issue of underage marriage in Indonesia.

There is a normative inconsistency between Law No. 1 of 1974, which regulates the minimum age for marriage, and Law No. 35 of 2014, which amends Law No. 23 of 2002 on Child Protection. The Child Protection Law defines a child as an individual under the age of 18 and explicitly obliges parents to prevent early marriage. The minimum age provision for marriage, as also stated in Article 15 paragraph (1) of the Compilation of Islamic Law, is based on considerations of family welfare and household well-being. Meanwhile, the minimum age for marriage under the Indonesian Civil Code (Civil Code of Indonesia, Article 29) stipulates that males must be at least 18 years old and females at least 15 years old. This diversity of legal norms demonstrates the lack of synchronization regarding the minimum age for marriage, indicating that age regulation in marriage remains subject to an open legal policy in Indonesia.

Factors Influencing Early-Age Marriage

The factors that influence early-age marriage include knowledge, education, and free social interaction. Knowledge Factor One of the main factors influencing adolescents to engage in premarital sexual activity is exposure to pornographic materials, such as reading pornographic books and watching explicit films. As a result, when pregnancy occurs due to premarital sexual relations, the solution often chosen is marriage at a young age. However, some adolescents believe that marrying early can help them avoid sinful behavior, such as premarital sex. Unfortunately, this belief is not supported by adequate knowledge regarding the consequences of early marriage. Educational Factor A low level of education or discontinuation of schooling, especially among young women, can encourage them to marry at an early age. This problem arises because they lack knowledge and understanding of marital life, which leads them to hasten into marriage and childbearing. Free Social Interaction Factor Early-age marriage also occurs as a result of insufficient parental supervision, which allows adolescents to engage in unrestricted social interactions that may damage their character. At this developmental stage, adolescents experience increased sexual maturation and are in the process of transitioning into adulthood. Consequently, in their relationships, sexual desire may become strong and difficult to control, leading them to engage in sexual intercourse solely as an expression of love. Impacts of Child Marriage The impacts of child marriage in several countries show unfavorable outcomes.

A study by Field et al. (2004) in Bangladesh revealed several consequences of child marriage, including high school dropout rates, subordination within the family, risk of domestic violence, lack of control over reproductive health, and a high risk of maternal mortality. Meanwhile, a study in Ethiopia (2006) demonstrated negative impacts of child marriage such as marital instability, poor health status, low educational attainment and school dropout, high fertility rates, gender inequality, and reduced child welfare. In other words, child marriage has social, economic, and health consequences in both the short and long term.

Various studies have shown that free social interaction (promiscuity) is a significant factor influencing the occurrence of early marriage. A study by Pohan (2017) on adolescents in North Labuhan Batu Regency found that female adolescents who engaged in free social interaction had a 3.757 times higher risk of early marriage compared to those who did not. This finding is consistent with the study conducted by Priyanti (2013), which concluded that there is a significant relationship between free social interaction and early marriage among female adolescents. The practice of early marriage is also closely related to the legal framework governing marriage. Marriage Law No. 1 of 1974, Article 7 paragraph (1), originally stipulated that the minimum age for marriage was 19 years for males and 16 years for females. For many years, this minimum age limit served as a legal basis that indirectly legitimized the practice of early marriage, particularly due to the provision for marriage dispensation in Article 7 paragraph (2) of the same law. Marriage dispensation could be requested from the court or another authorized institution by the parents of the prospective bride and groom. Subsequently, this provision was amended through Law No. 16 of 2019 concerning the revision of Law No. 1 of 1974, which now stipulates that both men and women must be at least 19 years old to legally marry.

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3. Methodology

3.1 Data

This study employs a quantitative approach using descriptive and verificative methods to analyze the relationships among variables. The research examines the influence of independent variables (respondent's education level, mother's education level, father's education level, parental employment status, and household income) on the dependent variable (level of early marriage).

The sampling method used in this study is purposive sampling. The population consists of women who are married or currently living in marital households in Empat Lawang Regency. A total of 160 married women were purposively selected as respondents. The respondents were drawn from several villages in two underdeveloped subdistricts, namely Ulu Musi, Talang Padang, Sikap Dalam, and Tebing Tinggi.

The data used in this research are primary data obtained from field surveys through questionnaires distributed to the respondents. The data include information on age at marriage, the education levels of the respondents and their parents, parental employment status, and household income

3.2 Methods of Analysis

The analytical method employed in this study is logistic regression, in which the dependent variable is the age at marriage, categorized into early marriage and non–early marriage. The general logistic regression model with k factors (independent variables) is expressed as follows (Hosmer et al., 2013)

$$\pi(x) = \frac{\exp(\beta_0 + \beta_1 x_1 + \ \dots \ + \beta_p x_p)}{1 + \exp(\beta_0 + \beta_1 x_1 + \ \dots \ + \beta_p x_p)}$$

There are two types of tests conducted in the logit regression model, namely the overall model fit test and the partial significance test. The first test, the overall fit test, is performed using the Chi-Square (χ^2) test, the classification results, the Omnibus test, the Hosmer–Lemeshow goodness-of-fit test, and the Pseudo R-Square statistics. The second stage involves partial testing using the Wald test (Badi H. Baltagi, 2020).

4. Result and Discussion

4.1 Result

Binary Logistic Regression Model Testing

1. Number of Observations

Based on Table 1, the data show that the analysis in this study includes 160 cases (included in the analysis) with no missing cases (missing cases = 0). Thus, all respondent data were incorporated into the analysis process. The table also presents the category definitions for the dependent variable along with the variable codes used in the study.

Table 1.
Number of Observations

Case Processing Summary			
Unweighted Cases		N	Percent
Selected Cases	Included in Analysis	160	100.0
	Missing Cases	0	0
Unselected Cases	Total	160	100.0

Source: Processed Data by Author, 2025

2. Simultan Test

Hypothesis testing in this study was conducted using two approaches: partial testing through the Wald test and simultaneous testing through the Overall Model Fit test. The Overall Model Fit test is used to examine whether all independent variables in the logistic regression model collectively (simultaneously) exert an influence on the dependent variable.

Table 2.
Simultan Test

		Chi-square	Df	Sig.
Step 1	Step	136,443	9	,000
	Block	136,443	9	,000
	Model	136,443	9	,000

Source: Processed Data by Author, 2025

Based on Table 2, the significance value of the model obtained is 0.000. Since this value is smaller than the significance threshold of 0.05 (or 5%), it can be concluded that the variables of mother's age at marriage, respondent's education, father's education, mother's education, father's employment, household income, and household expenditure collectively have a significant effect on early marriage.

3. Coefficient of Determination (Nagelkerke R Square)

The coefficient of determination is used to measure the extent to which the variability of the dependent variable (early marriage) can be explained by the independent variables in the regression model. In logistic regression, this coefficient is represented by the Nagelkerke R Square value.

Table 3.
Coefficient of Determination

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	
1		82.864[a]	,619	,801

a. Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.

Source: Processed Data by Author, 2025

Based on the results of the analysis, the Nagelkerke R Square value is 0.801. This indicates that 80.1% of the variability in early marriage can be

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explained by the model, which consists of the variables of education, employment, and income. Meanwhile, the remaining 19.9% is explained by other variables outside the scope of this study.

4. Testing the Feasibility of the Binary Logistic Regression Model

The overall model fit in logistic regression is assessed using the Hosmer and Lemeshow test. This test is used to determine whether the observed empirical data are consistent with the hypothesized model, thereby indicating whether the model can be considered appropriate or well-fitted.

Table 4.
Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	2.267	8	.954

Source: Processed Data by Author, 2025

Based on Table 4, the Chi-Square value obtained is 2.267 with a significance value of 0.954. Since this significance value is far greater than the 0.05 threshold, it can be concluded that the logistic regression model used is acceptable because it fits the observed data and is capable of predicting the dependent variable.

5. The Relationship between Socioeconomic Factors and Early Marriage

Table 5.
Results of the Recapitulation of Socio-Economic Relationships with Early Marriage

Variable	Child Marriage <18 Year (n=80)	>18 Year (n=80)	Total	P Value
Mother's Married Age				
<18 Year	63 (61.2%)	40 (38.8%)	103 (100.0%)	0.001
>18 Year	17 (29.8%)	40 (70.2%)	57(100.0%)	
Respondent's Education				
Low	45 (56.3%)	2 (2,5%)	47 (29,4%)	0.001
Medium	35 (43,85%)	37 (46,3%)	72(54.0%)	
High	0 (0.0 %)	41(51.3%)	41(51.3%)	
Mother's Education				
Low	61 (76.3%)	48 (60.0%)	109 (68.1%)	0.027
Medium	19 (23.8%)	32 (53.5%)	51(31.9%)	
Father's Education				
Low	43(53.8%)	60 (75.0%)	103(64.4%)	0.005
Medium	37 (46.3%)	20 (25.07%)	57 (35.6%)	
Father's occupation				
Not Working	6 (7.5%)	3 (2.5%)	8 (5.0%)	0.003
Farmer	70 (52.6%)	63 (47.4%)	133(83.3%)	
Not a Farmer	4 (21.1%)	15 (78.9%)	19 (11.9%)	
Income				
0 - 1 Million	54 (83.1%)	11 (16.9%)	65 (40.6%)	0.001
1 - 2.5 Million	23 (29.9%)	54 (70.1%)	77 (48.1%)	
>2.5 Million	3 (16.7%)	15 (83.3%)	18 (11.3%)	

Source: Processed Data by Author, 2025

6. Analysis Bivariat

Based on Table 6, the bivariate analysis using the Chi-Square test was conducted to identify independent variables that have a significant relationship with the dependent variable (early marriage) prior to inclusion in the multivariate regression model. The analysis produced six variables that qualified as candidates for further multivariate analysis. The variables identified were mother's age at marriage, respondent's education, mother's education, father's education, type of employment, and household income.

Table 6.
Initial Model Testing

Variable	B	Wald	P-value	OR	95%CI
Mother's Age at First Marriage	.585	.770	0.380	1.795	486-6.634
Respondent's Education	-3.002	16.855	0.000	20.18	4.800-84.315
Mother's Education	.459	1.241	0.265	1.582	706-3.546
Father's Education	-1.140	8.537	0.003	320	149-686
Father's Occupation	-.851	1.258	0.262	2.342	529-10.373
Parents' Income	1.231	4.664	0.031	3.425	1.121-10.469

Source: Processed Data by Author, 2025

The binary logistic regression model used to test the formulated hypotheses is as follows:

$\text{Ln } P/1-P = \beta0 + \beta1x1 + \beta2x2 + \beta3\ x3 + \beta4x4 + \beta5x5 + \beta6x6$

$\text{LnP}/1-P-10.105+0.585X1-3.002X2+0.459X3-1.140X4-2.851X5+1.231X6$

The multivariate analysis in this study was conducted using binary logistic regression to examine the influence of socioeconomic factors on early marriage. The independent variables analyzed include mother's age at marriage, respondent's education level, mother's education level, father's education level, father's occupation type, and household income. The analysis was processed using SPSS statistical software version 22.

Based on Table 7, the results of the Wald test indicate that four variables have a significant influence and are accepted in the model (P-value < 0.05). The four significant variables are respondent's education (0.000), father's education (0.003), father's occupation type (0.012), and household income (0.031), as presented in Table 7.

Table 7.
Seleksi Variabel

Variable	Sig	Exp(B)	Keterangan
Mother's Age at First Marriage	0,380	1.795	Bukan Kandidat Model
Respondent's Education	**0.000**	**20.118**	**Kandidat Model**
Mother's Education	0,265	1.582	Bukan Kandidat Model
Father's Education	**0.003**	**0.320**	**Kandidat Model**
Father's Occupation	**0.012**	**5.364**	**Bukan Kandidat Model**
Parents' Income	**0.031**	**3.425**	**Kandidat Model**

Source: Processed Data by Author, 2025

The Wald test is used to examine the partial (individual) effect of each independent variable on the dependent variable (early marriage) within the logistic regression model. The results of the Wald test are presented in Table 8 below.

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Table 8.
Final Model Testing

Variable	P-Value	B	OR	95% CI
Respondent's Education	0,00	-3415	30.429	7.057-131.199
Father's Education	0,004	-1.002	0.367	0.186-0.727
Parents' Income	0,00	1.742	5.707	2.142-15.209

Source: Processed Data by Author, 2025

Based on Table 8, the binary logistic regression equation derived from the final model is as follows:

Y = -8,396 – 3,415* Respondent's Education – 1,002* Father's Education – 1,256* Father's Occupation + 1,742* Parents' Income + e

Subsequently, the results of the partial (individual) tests presented in the table are interpreted as follows:

4.2 Discussion

Mother's Age at First Marriage and Its Influence on Early Marriage

The variable of mother's age at first marriage (UKP) shows a significance value of 0.380, which is greater than the significance level of 0.05. Therefore, it can be concluded that H0 is accepted, meaning that the mother's age at marriage has no significant influence on early marriage. This finding is not consistent with Widiantara and Yuhan (2019), who stated that a mother's age at first marriage affects the likelihood of early marriage among daughters. The odds ratio value of 1.795 indicates that mothers who married at an age below 19 years increase the likelihood of their daughters marrying before the age of 19 by 1.795 times compared to mothers who married at an age above 19 years.

Respondent's Education and Its Influence on Early Marriage

The variable of women's education or respondent's education has a significance value of 0.00 < 0.05, thus rejecting H0, which means that the respondent's education has a significant effect on early marriage. This finding is consistent with the study conducted by Soler-Hampejsek et al. (2021), which suggests that early marriage is often perceived as a better option for girls' future compared to continuing their education when employment opportunities become increasingly limited. The low school participation rate among girls in the four study villages is attributed to the lack of supporting infrastructure, such as the absence of nearby junior high schools (SMP) and senior high schools (SMA).

According to the findings of Girls Not Brides (2020), the more years girls spend in school, the greater their chances of reducing the risk of early marriage. This can be achieved by addressing barriers to accessing education, such as ensuring affordable school fees and improving access to schools through closer proximity or better transportation options.

Mother's Education on Early Marriage

The variable of mother's education has a significance value of 0.265 > 0.05, thus H0 is accepted, meaning that the respondent's mother's education does not have a significant influence on the likelihood of early marriage. The odds ratio of 1.582 indicates that lower maternal education increases the likelihood of early marriage (<19 years) by 1.582 times compared to mothers with medium or high levels of education. Mother's education does not significantly influence early marriage because the decision regarding a daughter's marriage is typically made by the father as the head of the household. Information exposure can shape an individual's knowledge even when formal education is limited. Individuals with moderate education may still possess adequate understanding if they receive quality information from various sources, such as mass media, printed media, or healthcare workers (Syepriana et al., 2018).

Moreover, the insignificant effect of mother's education is also linked to gender norms within the household, in which the father holds greater authority in decision-making, including determining the timing and choice of marriage partners for daughters. Low maternal education is closely tied to employment status. The majority of mothers of girls who married early are unemployed. Bitew et al. (2024) found that education level, employment status, and economic conditions of women have a significant relationship with their autonomy in household decision-making. Women who are employed and come from households with higher welfare levels tend to have greater control over decisions related to household expenditures and resource allocation for their children. Conversely, women with low education and poor economic conditions have limited autonomy, resulting in greater decision-making authority for fathers, including matters related to the timing and partner selection for their daughters' marriages.

Father's Education on Early Marriage

The father's education level has a significant influence on early marriage, as indicated by the Wald test results showing a significance value of 0.003 < 0.05; therefore, H0 is rejected. Education plays an important role within a household. The odds ratio of 0.367 indicates that fathers with no schooling or low levels of education increase the likelihood of early marriage (<19 years) by 0.367 times compared to fathers with junior high school (SMP) or senior high school (SMA) education.

According to Junedi et al. (2024), a father's educational background can influence his attitudes and behaviors in family life. As the head of the household, the father holds a key position in family decision-making, including decisions regarding the marriage of his children. The risk of early marriage among girls decreases as the parents' education level increases. Education shapes perceptions and judgments regarding early marriage; the higher an individual's level of education, the better their understanding of the negative impacts of early marriage, enabling them to prevent it (Soler-Hampejsek et al.,

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2021).

This condition is further supported by the study of DP (2017), which found that the education level of the head of household influences income levels. Very poor and poor households are more prevalent among families in which the head of household has a low level of education. This economic condition can contribute to the incidence of early marriage within the family.

Father's Occupation and Early Marriage

The significance value of the Wald test is 0.012 < 0.05. Therefore, H0 is rejected, meaning that the father's occupation has a significant influence on early marriage. The odds ratio of 7.876 indicates that lower occupational status (unemployment) increases the likelihood of early marriage (<19 years) by 7.876 times compared to fathers who are employed.

A study by Getu et al. (2022) in Ethiopia found that parental economic status and type of occupation have a significant relationship with the occurrence of early marriage; the higher the household's welfare, the lower the probability of child marriage. These findings align with Wulandari and Laksono (2023) in Indonesia, which showed that girls from low-income families are more likely to marry young than those from higher-income households. Moreover, Delyka et al. (2023) explained that parents' education and occupational status influence adolescent girls' knowledge of the risks associated with early marriage. The better the parents' education and occupation, the greater the child's awareness of the negative consequences of marrying at a young age. Thus, the father's occupation not only functions as a source of household income but also affects parental perspectives and decisions regarding their daughters' marriage age.

The frequency of illness and mortality is closely related to occupational type and age, where professional occupations such as physicians, teachers, and lawyers are associated with lower prevalence of early marriage. This is consistent with the findings of Ayuwardany and Kautsar (2022), who reported that families with high economic status (wealthy) have an early marriage probability of only 2.5%, which is significantly lower than families with low economic status (poor). This trend remains evident in Indonesia, where parents with low economic status often encourage their daughters to marry early because they perceive the cost of raising a girl to be high. Once the daughter is married, parents believe that they are relieved of the financial responsibility associated with her upbringing.

Parental Income on Early Marriage

The Wald test results show a significance value of 0.000, which is smaller than the significance level of 0.05. Therefore, H_0 is rejected, meaning that household income has a significant influence on early marriage. The odds ratio of 5.707 indicates that households with low income (0–1 million rupiah category) increase the likelihood of early marriage (<19 years) by 5.707 times compared to households with higher income levels.

Consistent with the view of Rahman et al. (2005) in Pratiwi (2020), income level is closely related to poverty status, which is one of the key determinants of early marriage in Bangladesh. According to DP (2017), household income significantly affects poverty because it determines the family's economic condition. Such conditions may encourage family members to seek a better livelihood, and for families with low socioeconomic status, early marriage is often perceived as a means to reduce economic burden.

The study by Nurhikmah et al. (2021) also found that households with low income have a higher percentage of early marriage cases compared to high-income households. Marriage is still viewed as a pathway out of poverty and as an opportunity for a better life among young individuals. Adolescents' perception of physical readiness based on signs of puberty may trigger behavior leading to early marriage. Additionally, the belief that early marriage can help prevent sexual violence provides further motivation, particularly for girls who may feel vulnerable or afraid (Wibowo et al., 2021).

5. Conclusion

Based on the multiple logistic regression analysis conducted on 160 married female respondents, it is concluded that the respondents' level of education is the most significant and dominant socioeconomic factor influencing early marriage. Specifically, women with lower educational attainment (elementary school or below) are more likely to marry at an early age compared to those with higher education levels. Other variables such as parental education, parents' employment status, and household income also show an influence, but with lower levels of statistical significance.

The findings of this study imply that policy interventions should prioritize improving the quality and accessibility of education for girls in Empat Lawang Regency. This study recommends that the local government strengthen the implementation of the 12-year compulsory education program, especially in areas with high school dropout rates and high prevalence of early marriage, since the respondent's education level is empirically proven to be the most influential variable. In addition, the study recommends that relevant stakeholders integrate economic empowerment programs and reproductive health literacy into school curricula to enhance young women's understanding of the risks associated with early marriage.

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