THE INFLUENCE OF EDUCATION LEVEL ON THE INCOME OF HINDU HOUSEHOLD HEADS IN KARANGANYAR VILLAGE, TAMANSARI DISTRICT, BOYOLALI REGENCY

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Abstract

This study aims to determine the effect of education level on the income of Hindu household heads in Karanganyar Village, Tamansari District, Boyolali Regency. The research employs a quantitative approach with a causal associative type of research. The population consists of all Hindu household heads in Karanganyar Village totaling 58 people, with a sample of 51 respondents selected using simple random sampling technique. Data were collected through structured interviews using a questionnaire. Data analysis used simple linear regression with classical assumption tests including normality, heteroscedasticity, and linearity tests. The results showed that the education level of Hindu household heads was predominantly at elementary school level (37.25%) with an average income of Rp1,849,941 per month. The regression analysis obtained t count (4.03417) > t table (2.00958 at a=5% and 2.67995 at a=1%), thus Ha is accepted. There is a significant effect between education level and income of Hindu household heads in Karanganyar Village. The higher the formal education level of the household head, the greater the opportunity to obtain better income.

Kata kunci:
Tingkat Pendidikan, Pendapatan, Kepala Rumah Tangga Hindu, Ekonomi Pedesaan, Regresi Linear Sederhana

Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh tingkat pendidikan terhadap pendapatan kepala keluarga beragama Hindu di Desa Karanganyar, Kecamatan Tamansari, Kabupaten Boyolali. Penelitian ini menggunakan pendekatan kuantitatif dengan jenis penelitian asosiatif kausal. Populasi penelitian mencakup seluruh kepala keluarga beragama Hindu di Desa Karanganyar yang berjumlah 58 orang, dengan sampel sebanyak 51 responden yang dipilih menggunakan teknik simple random sampling. Pengumpulan data dilakukan melalui wawancara terstruktur menggunakan kuesioner. Analisis data menggunakan regresi linear sederhana disertai uji asumsi klasik yang meliputi uji normalitas, heteroskedastisitas, dan linearitas. Hasil penelitian menunjukkan bahwa tingkat pendidikan kepala keluarga beragama Hindu sebagian besar berada pada jenjang sekolah dasar (37,25%) dengan rata-rata pendapatan sebesar Rp1.849.941 per bulan. Analisis regresi menghasilkan nilai t-hitung (4,03417) > t-tabel (2,00958 pada a=5% dan 2,67995 pada a=1%), sehingga Ha diterima. Terdapat pengaruh yang signifikan antara tingkat pendidikan dan pendapatan kepala keluarga beragama Hindu di Desa Karanganyar. Semakin tinggi tingkat pendidikan formal kepala keluarga, semakin besar pula

peluang untuk memperoleh pendapatan yang lebih baik.

Introduction

Economic development in rural areas continues to face various challenges, particularly regarding efforts to improve community well-being. Rural areas possess economic characteristics distinct from urban areas, ranging from livelihood structures and access to economic resources to the availability of employment opportunities. The majority of rural populations still rely on the primary sector such as agriculture and livestock farming for their livelihoods, these activities are seasonal and heavily influenced by natural conditions (Gafur, Rahmi, & Ahmadi, 2025). Consequently, the economic stability of rural households tends to be more vulnerable than that of urban communities.

Income serves as a primary indicator for assessing household economic conditions, as it reflects a family's ability to meet basic needs such as food, education, and healthcare. Low income levels can limit purchasing power and increase economic vulnerability, particularly for rural households lacking alternative sources of income. Statistics Indonesia (2022) identifies household income levels as a key indicator of public welfare. Consequently, increasing household income is a crucial focus within the rural economic development agenda.

One factor theoretically believed to play a crucial role in increasing community income is the quality of human resources. Human resource quality reflects an individual's ability to manage resources, make economic decisions, and adapt to changes in the work environment. In the context of economic development, enhancing human resource quality is viewed as a vital prerequisite for achieving sustainable economic growth, particularly in rural areas (Ladiesya et al., 2025). A key indicator for measuring human resource quality is the level of formal education. Formal education is regarded as a strategic means of enhancing individuals' knowledge, skills, and capacity for rational thinking when addressing economic issues (Wulandari & Sultan, 2024).

The human capital theory proposed by Becker (1964) posits that education constitutes a form of long-term investment capable of enhancing an individual's capabilities and productivity. Education enables individuals to acquire superior knowledge and skills, thereby improving work efficiency and quality. Ultimately, this

increase in productivity is expected to provide individuals with greater opportunities to secure employment that offers higher income levels. Human capital theory is premised on the assumption that the labor market is relatively formal and competitive, making educational attainment a key factor in determining wages and job positions.

Consistent with this theory, various empirical studies demonstrate a positive relationship between education levels and income. Research conducted by Julianto and Utari (2019) and Widyastuti et al. (2025) found that education levels influence income at both the individual and household levels. These findings reinforce the notion that formal education plays a strategic role in enhancing the economic well-being of the community. The study by Julianto and Utari (2019), utilizing 2016 SUSENAS data and logistic regression analysis, found that education levels significantly affect individual income in West Sumatra, where higher levels of education correspond to higher earned income. Furthermore, factors such as age, gender, and place of residence (urban versus rural) were also shown to have a significant impact on income disparities.

Research by Widyastuti et al. (2025) employed a quantitative approach using multiple regression analysis on a sample of 100 respondents and found that education level has a positive and significant impact on family income. Meanwhile, the household expenditure variable in the study did not show a significant effect on income. These findings reinforce the argument that formal education plays a strategic role in enhancing the economic well-being of the community, particularly within the context of a competitive formal labor market.

However, the application of human capital theory within the context of rural communities, particularly those still dominated by the primary sector, requires critical examination. Rural labor market structures tend to be informal and based on family enterprises; consequently, rising levels of formal education are not always directly accompanied by increased income (Ladiesya et al., 2025). This situation demonstrates that the relevance of formal education as a primary determinant of income is heavily influenced by the socio-economic characteristics of the community where the theory is applied.

Research by Heriyanto (2023) presented in his thesis titled "The Influence of the Digital Economy and Education Level on MSME Income in Makassar City" offers a different perspective. Employing a quantitative approach with multiple regression analysis on a sample of 44 MSMEs, the study found that the digital economy variable

significantly influenced MSME income, whereas the education level variable did not. These findings indicate that, within the context of micro, small, and medium-sized enterprises, formal education is not always the primary determinant of income. Heriyanto (2023) explains that MSME operators often do not fully utilize knowledge gained through formal schooling; instead, they rely more on learning acquired outside formal education systems and on practical experience to run their businesses. This divergence in results reinforces the argument that the research context plays a crucial role in determining whether or not formal education impacts income.

The study by Linda, Efrina, and Arrosyid (2025), titled "The Influence of Education Level and Income on Household Welfare: A Study in Pekon Marang, West Pesisir," employed a quantitative approach using primary data from 86 heads of households, analyzed via simple and multiple linear regression. The findings demonstrate that education and income levels jointly exert a significant influence on improving household welfare measured by physical housing conditions and asset ownership. As the study shares the same unit of analysis as the present research namely, heads of households in rural areas it serves as a highly relevant methodological reference. The distinction lies in the dependent variable: the cited study treats welfare as the dependent variable with income as a predictor, whereas the present study treats income itself as the dependent variable influenced by education.

Although formal education and income are often assumed to be directly correlated, this relationship does not always hold true particularly in agrarian rural societies, as highlighted by Wahyuni (2019). In communities where the economic structure relies on primary sectors such as agriculture and livestock farming, income is influenced not only by education levels but also by factors such as the ownership of productive assets (e.g., livestock, land), specific technical skills, management efficiency, and consumption patterns. Research by Linda, Efrina, and Arrosyid (2025) indicates that in rural areas, household income is closely linked to welfare conditions and the ownership of economic assets. These findings demonstrate that the role of formal education in determining income is not universal and is heavily influenced by the community's socio-economic context. Susilowati et al. (2020) also note that most rural households derive their income from primary sectors characterized by relatively high economic risk, causing rural household income to be generally unstable and prone to fluctuation.

This situation highlights a research gap: there is a scarcity of empirical studies examining the impact of education levels on income within the context of relatively homogeneous rural communities that rely primarily on the primary sector for their livelihoods and possess distinct socio-cultural characteristics. In particular, research into the relationship between education and income among rural Hindu communities in Java remains rare, despite the fact that these communities exhibit economic and social characteristics that differ from those of typical rural populations. This study aims to address this specific gap by analyzing the relationship between education levels and income among heads of households in Hindu communities within agrarian villages, thereby contributing to a more segmented and contextual body of knowledge.

Karanganyar Village in Tamansari District, Boyolali Regency, serves as a tangible example of this phenomenon. Most heads of households, particularly those who are Hindu, work as farmers, livestock breeders, or laborers, operating within informal systems that are highly dependent on the seasons. Preliminary observations indicate that the level of formal education among household heads in the village remains low; the majority have only completed primary school (SD) or junior high school (SMP). Theoretically, such conditions might be expected to limit income opportunities and household economic stability. However, the reality on the ground reveals a phenomenon worthy of further study, as it diverges from the assumption that formal education is the primary determinant of income. There are Hindu household heads with low levels of formal education (having only finished primary school) who nonetheless enjoy relatively stable economic conditions. A concrete example is a household head who owns approximately five dairy cows as their primary productive asset. This stability appears to be driven by factors other than formal education, such as asset ownership and management, work experience, and practical skills passed down through generations. These circumstances reinforce the notion that the relationship between formal education and income needs to be re-examined within the specific local socio-economic context.

Given these conditions, this study deliberately focuses on the primary variable, education level (Variable X), to examine the extent to which it influences the income (Variable Y) of household heads within a relatively homogeneous agrarian rural community. By limiting the scope to education level, the study aims to provide a clear, measurable empirical picture of the strength of formal education's impact on income,

assuming that other factors remain relatively uniform across the community under study. This research is designed to address a gap in the literature by examining the influence of education level on the income of Hindu household heads in Karanganyar Village, Tamansari District, Boyolali Regency. It holds significance by offering contextual empirical evidence regarding the relevance of human capital theory within an agrarian Hindu rural setting. The findings are expected not only to contribute to theoretical development but also to serve as a reference for village authorities and relevant agencies in formulating community empowerment policies that are better targeted and aligned with local conditions.

Method

This study employs a quantitative approach with a causal-associative research design. A quantitative approach emphasizes the collection of numerical data and analysis using statistical techniques to objectively test research hypotheses. The causal-associative design was selected because the study aims to determine the cause-and-effect relationship between the independent variable, education level and the dependent variable, the income of Hindu household heads in Karanganyar Village, Tamansari District, Boyolali Regency. The study utilizes a survey method, a data collection technique involving direct interaction with respondents through questionnaires and structured interviews. The survey method was chosen for its ability to systematically gather factual data from the study population, thereby enabling the analysis of the relationship between variables using simple linear regression.

The research was conducted in Karanganyar Village, Tamansari District, Boyolali Regency, from April to June 2026. Karanganyar Village was selected as the research site due to its characteristics as an agrarian rural community dominated by the agriculture and livestock sectors and its population of Hindu households, which formed the focus of the study. The timing of the research was aligned with the academic schedule and the availability of respondents in the field.

The population for this study consists of all Hindu heads of households residing in Karanganyar Village, Tamansari District, Boyolali Regency, who were employed and actively working at the time the research was conducted, totaling 58 heads of households. A sample represents a subset of the population's size and characteristics used in a study when it is not feasible for the researcher to include the

entire population due to limitations in time, manpower, and cost (Sugiyono, 2019). The sample size for this study was determined using the Yamane formula with a 5% margin of error, as follows:

$n = N/(1 + N(e^2))$

Note: n = sample size, N = population size, e = margin of error.

Based on the formula, the calculation yields $n = 58/(1 + 58(0.05)^2) = 50.65$, which is rounded to 51 respondents. The sampling technique employed is simple random sampling, a method in which samples are selected randomly so that every member of the population has an equal chance of becoming a research respondent. This technique was chosen because the research population is considered homogeneous regarding key characteristics specifically, being Hindu heads of households in Karanganyar Village making simple random sampling a representative approach.

The study involves two variables. The independent variable (X) is the education level of Hindu household heads specifically, the highest level of formal education completed by Hindu household heads in Karanganyar Village, Tamansari District, Boyolali Regency. This variable is measured using a ratio scale based on the number of years of education completed by the Hindu household heads in Karanganyar Village. Each education level is converted into years of schooling, resulting in numerical data suitable for analysis via simple linear regression. The conversion values used are: Elementary School (SD) or equivalent = 6 years; Junior High School (SMP) or equivalent = 9 years; Senior High/Vocational School (SMA/SMK) or equivalent = 12 years; D1 = 13 years; D2 = 14 years; D3 = 15 years; D4 = 16 years; S1 (Bachelor's) = 16 years; S2 (Master's) = 18 years; and S3 (Doctoral) = 21 years. The dependent variable (Y) is the income of Hindu household heads, defined as the total monthly income received by Hindu household heads in Karanganyar Village from all their occupations, minus production or operational costs. Income is measured using a ratio scale based on the net monthly income amount in Rupiah.

A research instrument is a tool used by researchers to collect data related to research variables. The instrument employed in this study is a questionnaire, selected for its ability to efficiently gather data directly from a relatively large number of respondents. Data collection was conducted through structured interviews using a questionnaire guide prepared by the researcher. During the process, the researcher

read each question to the respondent and recorded their answers directly onto the questionnaire sheet, reflecting actual conditions. The questionnaire consisted of both closed-ended and open-ended questions designed to elicit factual information rather than attitudes or perceptions. This approach aligns with the characteristics of the research variables specifically, the education level and income of Hindu household heads which are objective and measurable. In instances where respondents had difficulty stating their monthly net income, the researcher employed targeted probing by asking for detailed information regarding income components and business expenses. This probing was conducted to obtain more accurate data without altering the substance of the measured variables. As the data collected were factual and objective, validity and reliability testing of the instrument was not performed in the manner typically applied to psychological scale questionnaires.

The research procedure was carried out in several stages. The first stage was research preparation, during which the researcher conducted a preliminary study by reviewing relevant literature on education level and income, drafting the research proposal, defining research variables, and designing the research instrument—specifically, a factual questionnaire. The second stage involved developing the research instrument; the researcher created a questionnaire containing closed-ended questions for the education level variable and open-ended questions for the income variable, tailored to the respondents' characteristics and the research objectives. The third stage was data collection via structured interviews using the prepared questionnaire. The fourth stage consisted of data tabulation and processing; the collected data were tabulated and entered into data processing software, with checks performed for completeness, consistency, and validity prior to statistical analysis. The fifth stage was data analysis using simple linear regression to determine the effect of education level on the income of Hindu heads of households. The sixth stage involved drawing conclusions based on the analysis and discussion to address the established research problem and objectives.

Data analysis in this study was conducted to process the data obtained from respondents in order to address the research problem and test the research hypotheses. The analysis was carried out in three main stages. First, descriptive analysis was used to provide an overview of the education levels and income of Hindu household heads in Karanganyar Village. This analysis aimed to determine the distribution of education

levels among Hindu household heads as well as their average monthly income. The results of the descriptive analysis are presented in the form of frequency distribution tables and mean values, thereby illustrating the general profile of the respondents studied.

Secondly, classical assumption tests are conducted prior to simple linear regression analysis to ensure that the research data satisfy the fundamental regression assumptions, thereby rendering the resulting model BLUE (Best Linear Unbiased Estimator). According to the Gauss-Markov theorem, an estimator is classified as BLUE if it is "best" (possessing minimum variance compared to other linear estimators), "linear" (parameters are estimated as a linear combination of sample data), and "unbiased" (the estimated parameter value approximates the true population parameter value). In this study, the classical assumption tests employed include the normality test, heteroscedasticity test, and linearity test.

A normality test was conducted using the One-Sample Kolmogorov-Smirnov Test with a significance level of 0.05 to determine whether the residuals in the regression model were normally distributed. The decision criterion was that if the significance value (Asymp. Sig. 2-tailed) exceeded 0.05, the residuals were considered normally distributed; conversely, if the significance value was 0.05 or less, the residuals were not normally distributed. This normality test is essential because the assumption of normality is a key requirement in linear regression analysis. If the residuals are not normally distributed, parametric statistical tests such as the t-test and F-test become invalid or tend to yield biased conclusions.

The heteroscedasticity test was conducted using the Glejser method with a significance level of 0.05 to determine whether the regression model exhibited unequal residual variances across observations. The testing criterion dictates that if the significance value of the independent variable exceeds 0.05, heteroscedasticity is absent; conversely, if the significance value is 0.05 or less, heteroscedasticity is present. The Glejser method was selected due to its advantages over alternatives such as the Park or White tests, specifically its ability to detect heteroscedasticity not only in large samples but also in medium-sized samples like the one in this study (n=51).

The linearity test was performed using an ANOVA table by examining the significance value for "Deviation from Linearity" to confirm that the relationship between the independent variable (education level) and the dependent variable

(income) was linear. The testing criterion states that if the significance value for Deviation from Linearity exceeds 0.05, the relationship between the variables is considered linear; if it is less than 0.05, the relationship is considered non-linear. The linearity assumption is a fundamental requirement in simple linear regression, as the model assumes that changes in the independent variable are accompanied by proportional (constant) changes in the dependent variable. If the relationship between the two variables proves to be non-linear, the use of a linear regression model becomes inappropriate and leads to erroneous conclusions.

Third, a simple linear regression analysis was conducted to determine the effect of education level on the income of Hindu household heads. The simple linear regression equation model used was $Y = a + bX$, where Y represents income, X represents education level, a is the constant, and b is the regression coefficient. The regression coefficient (b) was calculated using the formula: $b = [n\Sigma(xy) - (\Sigma x)(\Sigma y)] / [n(\Sigma x^2) - (\Sigma x)^2]$. The constant (a) was calculated using the formula: $a = (\Sigma y - b(\Sigma x)) / n$. The standard error of the estimate (se) was calculated using the formula: $se = \sqrt{[(\Sigma y^2 - a\Sigma y - b\Sigma xy) / (n - 2)]}$. The standard error of the regression coefficient (sb) was calculated using the formula: $sb = se / \sqrt{[\Sigma x^2 - (\Sigma x)^2/n]}$. The calculated t-value was determined using the formula: t-calculated = b/sb.

Hypothesis testing was conducted to determine whether the level of education influences the income of Hindu heads of households. The decision-making criterion is that if the calculated t-value exceeds the t-table value, the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted, indicating that the level of formal education affects the income of Hindu heads of households. Conversely, if the calculated t-value is less than or equal to the t-table value, Ho is accepted and Ha is rejected, indicating that the level of formal education does not affect the income of Hindu heads of households. The hypothesis testing was performed at significance levels of 5% and 1% with degrees of freedom (df) = n - k - 1, where n is the sample size and k is the number of independent variables. The t-table value was obtained from the t-distribution table based on the determined df.

Results and Discussion

Karanganyar Village is located in Tamansari District, Boyolali Regency. Situated on the slopes of Mount Merapi at an elevation of approximately 600 meters

above sea level (masl), the village lies at coordinates 7°18'46.55" S and 110°36'49.36" E (-7.31293, 110.61371). It covers an area of approximately 353 hectares, with a topography dominated by flat to gently sloping terrain (gradients of 0–5%). Administratively, Karanganyar Village comprises 3 hamlets (dusun), 11 sub-hamlets (dukuh), 7 Community Associations (RW), and 25 Neighborhood Associations (RT). Its boundaries are defined by Keposong Village to the north, the Klaten District area to the east, Dragan Village to the south, and Karangkendal, Sumur, and Jemowo Villages to the west. The village's potential is driven by the agriculture and livestock sectors; key commodities include durian cultivation and dairy farming, the latter serving as a primary source of livelihood for the local community. These assets play a vital role in supporting the local economy of Karanganyar Village.

Level of education

Research findings regarding the educational attainment of Hindu household heads in Karanganyar Village, Tamansari District, Boyolali Regency, indicate the following distribution: 19 respondents (37.25%) completed primary education (SD) or equivalent; 12 (23.53%) completed junior high school (SMP) or equivalent; 11 (21.57%) completed senior high or vocational school (SMA/SMK) or equivalent; 2 (3.92%) held a diploma (D1–D4); and 7 (13.73%) held a bachelor's degree (S1). No respondents in this study held postgraduate degrees (S2/S3). Consequently, a total of 42 respondents (82.35%) out of the 51-person sample had only completed education up to the secondary level or lower (primary, junior high, and senior high school). Only 9 respondents (17.65%) had pursued higher education (diploma or bachelor's degree).

This indicates that access to and participation in higher education among the Hindu community in Karanganyar Village remain low. This situation is linked to structural and cultural factors, such as the high cost of education, the family priority of working in the agricultural sector, and a lack of awareness regarding the long-term benefits of formal education. This low level of education serves as a crucial point for further analysis, as, theoretically, human capital measured by years of schooling plays a vital role in determining labor productivity and income levels. The prevalence of primary and secondary education within the study population provides important context for understanding why average community incomes also fall within a relatively low range. These results align with findings by Anjarwati, Mursito, and Sarsono (2020) and Pitaloka et al. (2023), which state that access to higher education in

various rural areas of Indonesia remains limited due to geographical, economic, and socio-cultural factors.

Income

Based on the research findings, the average monthly income of Hindu household heads in Karanganyar Village, Tamansari District, Boyolali Regency, is Rp1,849,941. The highest income among respondents is Rp5,800,000 per month, while the lowest is Rp100,000 per month. This significant variation in income indicates economic inequality among households. As previously explained, the majority of respondents (72.55%) work in the agriculture and livestock sectors, where income is seasonal and unstable. This situation causes rural incomes to fluctuate and vary from person to person. This average income figure remains below the 2026 Boyolali Regency Minimum Wage (UMK) of Rp2,537,949, and is therefore classified as low. The low average income reflects the fact that most Hindu household heads in Karanganyar Village still rely on the seasonal agriculture and livestock sectors. These findings reinforce the data showing that 72.55% of respondents work in agriculture and livestock, explaining why the average income falls below the UMK.

Classical Assumption Test

Prior to conducting linear regression analysis, classical assumption tests comprising tests for normality, heteroscedasticity, and linearity are performed. These tests are essential to ensure that the regression model meets the requirements for statistical validity, thereby ensuring that the resulting estimator is a BLUE (Best Linear Unbiased Estimator).

Normality Test

The normality test aims to determine whether the residuals in the regression model are normally distributed. A good regression model is one in which the residuals are normally distributed. This study employs the One-Sample Kolmogorov-Smirnov Test, utilizing SPSS statistical software, to assess normality. The decision-making criterion is that if the significance value (Asymp. Sig. 2-tailed) is greater than 0.05, the residuals are normally distributed; conversely, if the value is less than or equal to 0.05, the residuals are not normally distributed.

The normality test results show an Asymp. Sig. (2-tailed) value of 0.51. This value is greater than 0.05. Furthermore, the Monte Carlo Sig. (2-tailed) approach yields a value of 0.158 (>0.05), with a 99% confidence interval ranging from 0.148 to 0.167.

Thus, it can be concluded that the regression model residuals in this study are normally distributed. With the normality assumption satisfied, the parametric statistical analysis can proceed to the next stage.

Heteroskedasticity Test

The heteroscedasticity test aims to determine whether the variance of the residuals is unequal across observations within a regression model. A robust regression model is one that is free from heteroscedasticity meaning it exhibits homoscedasticity. This study employs the Glejser test, which involves regressing the absolute values of the residuals against the independent variables. The testing criterion is that if the significance value of an independent variable exceeds 0.05, heteroscedasticity is absent; conversely, if the value is less than 0.05, heteroscedasticity is present.

The heteroscedasticity test results indicate that the Education Level variable has a significance value of 0.051. This value exceeds 0.05. Although it is very close to the critical threshold of 0.05 (a difference of only 0.001), it remains statistically insignificant because 0.051 > 0.05. Therefore, it can be concluded that heteroscedasticity is not present in this study's regression model. Thus, the assumption of homoscedasticity is met.

Linearity Test

The linearity test aims to determine whether the relationship between the independent variable (Education Level) and the dependent variable (Income) is linear. A valid regression model requires a linear relationship between the variables. In this study, linearity is assessed using an ANOVA table by examining the significance value for "Deviation from Linearity." The testing criterion is that if the significance value for Deviation from Linearity is greater than 0.05, the relationship between the variables is considered linear; conversely, if it is less than 0.05, the relationship is considered non-linear.

The linearity test results indicate that the significance value for "Deviation from Linearity" is 0.078. This value exceeds 0.05. Therefore, it can be concluded that the relationship between the Education Level variable and the Income variable is linear. Since the linearity assumption is met, the simple linear regression model is suitable for analyzing the relationship between the variables in this study.

Simple Linear Regression Analysis

Once all classical assumption tests were satisfied, a simple linear regression analysis was conducted to determine the effect of education level on the income of Hindu household heads in Karanganyar Village. The data used in the calculation were obtained from 51 respondents through interviews.

Based on data calculations from 51 respondents, the following values were obtained: $\Sigma X = 495$, $\Sigma Y = 94,347,000$, $\Sigma XY = 1,054,666,000$, $\Sigma X^2 = 5,453$, and $\Sigma Y^2 = 293,922,175,000,000$. From this data, the regression coefficient (b) was calculated as 214,227.00889, the constant (a) as -229,320.96864, the standard error of estimate (se) as 1,352,397.55, and the standard error of the regression coefficient (sb) as 53,103.08669. The calculated t-value was 4.03417.

Hypothesis Testing (t-test)

Hypothesis testing was conducted to determine whether the level of education has a significant effect on income. The hypotheses for this study are Ha, which posits that there is an effect of formal education level on the income of Hindu household heads, and Ho, which posits that there is no such effect.

The decision-making criteria are as follows: if the calculated t-value exceeds the t-table value, the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted (indicating an effect); conversely, if the calculated t-value is less than or equal to the t-table value, Ho is accepted and Ha is rejected (indicating no effect). Hypothesis testing was conducted by comparing the calculated t-value with the t-table value at significance levels of 5% and 1%. The degrees of freedom (df) were calculated using the formula df = n - k - 1 = 51 - 1 - 1 = 49. The t-table value at a 5% significance level with df = 49 is 2.00958, while at a 1% significance level, it is 2.67995. The calculation results show a t-value of 4.03417, which exceeds the t-table values at both significance levels. Consequently, Ha is accepted and Ho is rejected, indicating a significant effect of formal education levels on the income of Hindu household heads in Karanganyar Village, Tamansari District, Boyolali Regency.

This study aims to determine the education level and average income of Hindu heads of households in Karanganyar Village, Tamansari District, Boyolali Regency, as well as the influence of education level on their income. Based on a simple linear regression analysis involving 51 Hindu heads of households in Karanganyar Village, it was found that education level influences income. These findings address the research

problem and confirm the initial hypothesis that the higher the formal education level of the head of the household, the higher the income earned.

The distribution of respondents' educational levels shows that the education of Hindu household heads in Karanganyar Village comprises the following: elementary school or equivalent (19 respondents, 37.25%), junior high school or equivalent (12 respondents, 23.53%), senior high/vocational school or equivalent (11 respondents, 21.57%), diploma (2 respondents, 3.92%), and bachelor's degree (7 respondents, 13.73%). There were no respondents with postgraduate education (master's or doctoral degrees). Consequently, a total of 82.35% of respondents completed only up to the secondary education level, while only 17.65% pursued higher education. These results indicate that educational mobility within the rural Hindu community of Boyolali remains limited to primary and secondary education. Similar conditions are observed in various rural areas of Indonesia, where access to higher education remains restricted due to geographical, economic, and sociocultural factors (Anjarwati, Mursito, & Sarsono, 2020; Pitaloka et al., 2023).

The average monthly income of Hindu heads of households in Karanganyar Village is recorded at Rp1,849,941, with a high of Rp5,800,000 and a low of Rp100,000. This figure remains below the 2026 Boyolali Regency Minimum Wage (UMK) of Rp2,537,949 (Central Java Provincial Government, 2025). Consequently, the income of Hindu heads of households in Karanganyar Village is classified as low, as the average falls short of the government-mandated minimum wage standard for the Boyolali Regency area. This low average income reflects the fact that the majority of Hindu heads of households in Karanganyar Village still rely on the agricultural and livestock sectors, which are seasonal in nature. These research findings reinforce data showing that 72.55% of respondents work in agriculture and livestock, explaining why the average income falls below the UMK.

Based on the results of the simple linear regression analysis, the calculated t-value was 4.03417, whereas the t-table value at a 5% significance level with 49 degrees of freedom (df) was 2.00958, and at a 1% significance level, it was 2.67995. These results indicate that the calculated t-value (4.03417) exceeds the t-table values at both the 5% and 1% significance levels; consequently, the alternative hypothesis (Ha) is accepted and the null hypothesis (Ho) is rejected. Thus, it can be concluded that the level of formal education influences the income of Hindu household heads in Karanganyar

Village, Tamansari District, Boyolali Regency. Theoretically, these findings support the human capital theory proposed by Becker (1964), which posits that education is a long-term investment that enhances individual productivity and ultimately leads to increased income.

The results of this study align with the findings of Julianto and Utari (2019), published in the journal IKRAITH-EKONOMIKA (Vol. 2, No. 2, 2019) under the title "Analysis of the Influence of Education Level on Individual Income in West Sumatra." That study utilized 2016 SUSENAS data and a logistic regression method, finding that education level significantly affects individual income; specifically, higher levels of education correspond to higher earned income. The similarity between Julianto and Utari's study and the present study lies in the core variable examined namely, the relationship between education level and income. The difference lies in the analysis method: Julianto and Utari employed logistic regression at the provincial level, whereas this study uses simple linear regression with a more specific focus on the village level.

Research conducted by Widyastuti et al. (2025) published in the journal Determinasi Vol. 3, No. 3, 2025 under the title "The Influence of Education Level and Household Expenditure on Family Income"also reinforces the findings of the present study. That study employed a quantitative approach using multiple regression analysis on a sample of 100 households and found that education level had a positive and significant influence on family income, whereas the household expenditure variable did not show a significant effect. The t-test results in that study indicated that the significance value for the education variable was below 0.05, signifying a statistically significant effect of education on income. Both studies share the finding of a positive influence between education level and income; however, they differ in the number of independent variables employed (Widyastuti et al. used two variables, whereas the present study utilized only one).

Heriyanto's (2023) study titled "The Influence of the Digital Economy and Education Level on MSME Income in Makassar City" offers a different yet relevant perspective. Employing a quantitative method with multiple regression analysis on a sample of 44 MSMEs, the study found that education level had no impact on MSME income contrasting with the significant influence identified in the present research. Heriyanto (2023) explains that, in the MSME context, business owners often do not

fully utilize knowledge gained through formal schooling; instead, they rely more on learning acquired outside formal education systems and on practical experience to run their businesses. This discrepancy in findings reinforces the argument that the research context is a decisive factor in whether formal education affects income; notably, in an agrarian rural setting like Karanganyar Village, formal education continues to play a significant role.

The study by Linda, Efrina, and Arrosyid (2025) published in the journal Mubtadiin Vol. 11, No. 1 under the title "The Influence of Education Level and Income on Household Welfare: A Study in Pekon Marang, West Pesisir" shares the same unit of analysis as the present study: heads of households in rural areas. That study employed a quantitative approach using primary data from 86 household heads and utilized simple and multiple linear regression analyses. The findings demonstrated that education level significantly influences household welfare, with a regression coefficient of 1.87 and a calculated t-value of 3.45 (significance level of $0.001 < 0.05$). The distinction between that study and the current one lies in the dependent variable, while Linda, Efrina, and Arrosyid treated welfare as the dependent variable with income serving as one of the predictors, the present study treats income itself as the dependent variable influenced by education.

Thus, this study successfully demonstrates that the level of education influences the income of Hindu household heads in Karanganyar Village. These findings support human capital theory, which posits that formal education plays a strategic role in enhancing the economic capabilities of rural communities. Recommendations for future research include incorporating additional variables such as asset ownership and work experience to gain a more comprehensive understanding.

Conclusion

Based on the research findings and discussion, it can be concluded that the educational attainment of Hindu heads of households in Karanganyar Village, Tamansari District, Boyolali Regency, is dominated by primary and secondary education; the majority of respondents (37.25%) completed only elementary school or its equivalent. Overall, 82.35% of respondents completed education only up to the secondary level or lower, while only 17.65% pursued higher education. The average monthly income of Hindu heads of households in Karanganyar Village is Rp1,849,941

an amount considered low, as it falls below the 2026 Boyolali Regency Minimum Wage of Rp2,537,949.

The results of the simple linear regression analysis indicate a significant influence of formal education levels on the income of Hindu household heads in Karanganyar Village. The calculated t-value (4.03417) exceeds the t-table value at both the 5% (2.00958) and 1% (2.67995) significance levels; consequently, the alternative hypothesis (Ha) is accepted and the null hypothesis (Ho) is rejected. The higher the level of formal education attained by the household head, the higher the income earned.

This study demonstrates that human capital theory remains relevant within the context of agrarian rural communities, though it requires integration with approaches that account for location-specific factors. For the Hindu community in Karanganyar Village, it is recommended to advance formal education levels through equivalency education programs and to participate in technical skills training related to agriculture and livestock farming. The Karanganyar Village government is encouraged to allocate village funds for educational scholarship programs and to collaborate with the Boyolali Regency Education Office to provide learning facilities and transportation access for residents wishing to pursue further education. The Boyolali Regency Agriculture and Livestock Offices are expected to provide regular extension services and training on livestock management, as well as facilitate access to superior livestock breeds and affordable feed for farmers in Karanganyar Village. Future researchers are advised to incorporate variables not yet examined such as asset ownership, work experience, and occupation type to provide a more comprehensive explanation of the factors influencing the income of rural communities.

Reference:

Anjarwati, M., Mursito, B., & Sarsono. (2020). Kualitas sumber daya manusia ditinjau dari tingkat pendidikan, pelatihan kerja dan pengalaman kerja di Balai Latihan Kerja (BLK) Technopark Ganesha Sukowati Sragen. Edunomika, 4(01), 218-225. https://jurnal.stie-aas.ac.id/index.php/jie/article/view/857/pdf

Badan Pusat Statistik. (2022). Indikator Kesejahteraan Rakyat Indonesia. Jakarta: BPS. https://www.bps.go.id/id/publication/2022/11/30/71ae912cc39088ead37c4b67/indikator-kesejahteraan-rakyat-2022.html

Becker, G. S. (1964). Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education. National Bureau of Economic Research.

https://www.nber.org/books-and-chapters/human-capital-theoretical-and-empirical-analysis-special-reference-education-first-edition

Gafur, A., Rahmi, S. H., & Ahmadi, F. (2025). Analisis kesenjangan ekonomi daerah perkotaan dan pedesaan di Indonesia. Economica Insight, 2(1), 31–42. https://ejournal.gemacendekia.org/index.php/ecoin/article/view/2013/236

Heriyanto. (2023). Pengaruh ekonomi digital dan tingkat pendidikan terhadap pendapatan UMKM di Kota Makassar. Skripsi. Universitas Islam Negeri Alauddin Makassar.

Julianto, D., & Utari, P. A. (2019). Analisa pengaruh tingkat pendidikan terhadap pendapatan individu di Sumatera Barat. Jurnal IKRAITH-EKONOMIKA, 2(2). https://journals.upi-yai.ac.id/index.php/IKRAITH-EKONOMIKA/article/view/413

Ladiesya, B., dkk. (2025). Kualitas sumber daya manusia sebagai faktor penggerak pertumbuhan ekonomi daerah tertinggal: Studi atas kebijakan Kementerian Desa, PDT, dan Transmigrasi. CAUSA: Jurnal Hukum dan Kewarganegaraan, 15(10). https://cibangsa.com/index.php/causa/article/view/6578/5716

Linda., Efrina, L., & Arrosyid, A. (2025). Pengaruh tingkat pendidikan dan pendapatan terhadap kesejahteraan kondisi rumah tangga: Studi pada Pekon Marang Pesisir Barat. Jurnal Mubtadiin, 11(1). https://journal.an-nur.ac.id/index.php/mubtadiin

Pemerintah Provinsi Jawa Tengah. (2025). Gubernur Ahmad Luthfi Tetapkan UMP Jawa Tengah 2026 Rp2.327.386,07. Diakses dari https://jatengprov.go.id

Pitaloka, S., dkk. (2023). Pengaruh capaian pendidikan terhadap pilihan sektor pekerjaan. Journal of Advances in Accounting, Economics, and Management, 1(1), 1-6. https://economics.pubmedia.id/index.php/aaem

Republik Indonesia. (2003). Undang-Undang Republik Indonesia Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional. Jakarta: Badan Pemeriksa Keuangan Republik Indonesia. https://peraturan.bpk.go.id/Details/43920/uu-no-20-tahun-2003

Wahyuni, E. S. (2019). Pendapatan daerah, pendidikan, dan pertumbuhan ekonomi Indonesia. Jurnal Pendidikan Ekonomi, Manajemen, dan Keuangan (JPEKA), 3(2). https://journal.unesa.ac.id/index.php/jpeka/article/view/5078

Widyastuti, L., dkk. (2025). Pengaruh tingkat pendidikan dan pengeluaran rumah tangga terhadap pendapatan keluarga. Determinasi: Jurnal Penelitian Ekonomi Manajemen dan Akuntansi, 3(3). https://jsr.ums.ac.id/determinasi/article/view/493

Wulandari, A. P., & Sultan. (2024). Pengaruh pendidikan, kesehatan, dan pengeluaran pemerintah terhadap produktivitas tenaga kerja menurut kabupaten/kota di Provinsi Jawa Barat (2018-2022). Jurnal Ekonomi Regional, 16(2), 94–100. https://jurnal.upnyk.ac.id/index.php/jer/article/view/13068/6491