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Can The Poverty Status of a Household be Influenced by Age? Susenas Data for North Lampung Regency, 2022

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Abstract

This study focused on the poverty status of households in North Lampung Regency in 2022. It used a quantitative research method using primary data obtained from the Badan Pusat Statistik (BPS). The data used is from the national socio-economic survey, with a population and sample size of 735 households. This study sought to ascertain the impact of gender, age, and household size on the poverty status of households. In this study, logistic regression was employed, and the Odds Ratio value was utilized to compare the population's proportion in one category to that in another for the independent variables that affected the dependent variable. The findings of this study show that household size had a substantial impact on household poverty status but that age and gender had no discernible impact.

Keywords: Poverty Status, Number of Household Members, Gender, Age

INTRODUCTION

One measure of welfare in Indonesia is indicated by poverty levels. Therefore, a decrease in poverty signifies an improvement in welfare in a specific region (Ciptawaty et al., 2021). In the 1970s, economic development began to be understood as efforts to reduce poverty, inequality, and unemployment within an increasingly developing economy (Todaro & Smith, 2011). Poverty occurs when household income is insufficient to meet basic needs such as clothing, food, and shelter. Households are considered to

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be living in poverty if their income falls far below the established distribution threshold (Parkin, 2016)

Based on the expenditure side of things, poverty is defined by Badan Pusat Statistik (BPS) as the incapacity to pay for fundamental needs, both food and non-food (Ulfatussaniah et al., 2024). In Nurkse's (1953) "The Vicious Circle of Poverty" theory, it was asserted that poverty is mainly attributed to three factors: firstly, inadequate development of human resources leading to lower levels of education; secondly, market imperfections; and thirdly, the scarcity of capital resulting in decreased productivity (Ayudia et al., 2024).

Based on data from the Badan Pusat Statistik (BPS), Lampung Province is positioned as the fourth province with the highest number of impoverished inhabitants in Sumatra. According to the Lampung Province Central Bureau of Statistics, as stated in official statistical bulletin No. 07/01/18/Th.XVII, dated January 16, 2023, addressing poverty in Lampung Province in September 2022, the poverty rate in Lampung Province decreased compared to March 2022.

The provincial administration of Lampung has taken appropriate action against poverty and has shown promising results. The economic growth that has been witnessed in Lampung Province over the past four years serves as evidence of this, as it has shown an upward trajectory that exceeds both the national and Sumatra averages.

The following is the percentage data of the poor population in Lampung Province by Regency/City in 2022, obtained from the Badan Pusat Statistik :

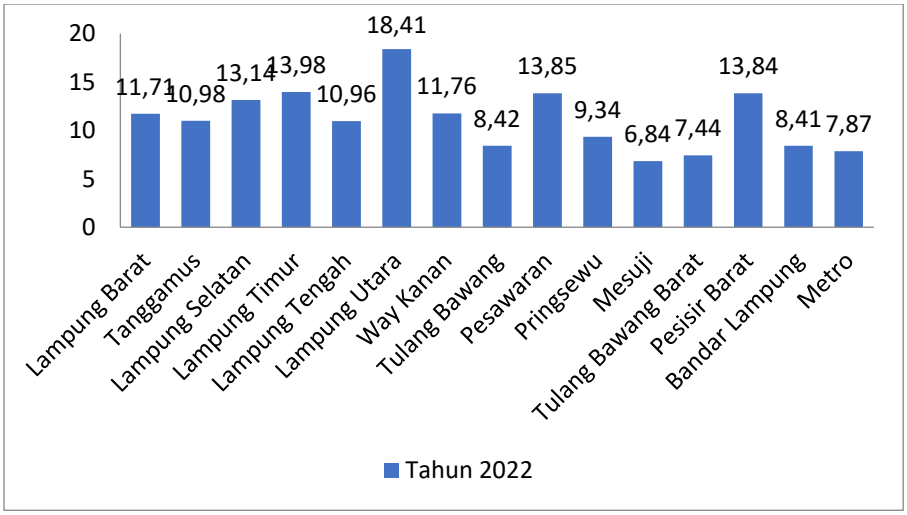


Figure 1: Percentage Of The Poor Population by Regency/City

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Based on Figure 1, It is clear that, when compared to other regencies or cities in Lampung Province, North Lampung Regency has the greatest proportion of impoverished citizens. This could be the result of a number of internal and external factors, including economic growth, inadequate government initiatives, and household size, gender, and age of the head of the home.

The number of household members positively and considerably influences poverty because a larger home requires more requirements, according to Hutahean & Sitorus's study. Inability to fulfill basic needs—which include those for both food and non-food items—defines a person or household as being in poverty (Elvira, 2018).

One generalization that can be made about the poor is that most of them live in rural areas and spend most of their time working in agriculture or other physical labor. Moreover, the composition tends to include more women and children compared to men (Todaro & Smith, 2011).

Women make up the bulk of the impoverished worldwide. This is because there are a lot of homes led by women that have lower income levels. The substantial pay disparity between men and women accounts for a portion of the income difference between households headed by men and households headed by women. Furthermore, because working is seen as a means of escaping poverty, employment and poverty are frequently associated (Hutahaean & Sitorus, 2022). Working is defined as engaging in economic activity for at least one hour (uninterrupted) throughout the previous week in order to generate income or assist in generating income (BPS, 2022).

The age can have an impact on labor productivity. Employees between the ages of 15 and 50 who are productive are still physically robust, have a high degree of adaptability, and have no trouble understanding their tasks. Nonetheless, non-productive workers can have greater challenges because aging impairs their physical capacity to work, adapt to technology, and ultimately lowers production (Studi et al., 2017).

Badan Pusat Statistik reports that North Lampung Regency's three primary industries for employment are manufacturing, services, and agriculture. 54.46% of the workforce is employed in the agricultural industry, 11.22% in manufacturing, and 34.32% in services. According to this data, the majority of people in North Lampung Regency are employed in agriculture, which means that the majority of their income is derived from this industry. Strong physical capabilities are necessary for agriculture because it is a physically hard profession.

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Given the aforementioned justification, the researcher was interested in examining if the age has an impact on a household's poverty status, with two supporting variables being gender and the number of family members.

THEORITICAL FOUNDATION

Poverty

Chambers (Makmun, 2003) asserts that poverty is a multifaceted or multidimensional phenomena with numerous facets (Umi Listyaningsih, 2020). According to Kotze (as cited in Hikmat, 2004), the impoverished possess a fair amount of ability to acquire resources through available means. While outside help is occasionally utilised, it is not always available. The reason this empowerment strategy is seen ineffectual is that communities cannot grow and thrive if they are kept apart from other social groupings. People grow inactive in this solitude, and things get worse (Robert & Brown, 2004).

Poverty is described by Supriatna (1997) as a state of constraints that happen against a person's wishes. If an individual's work productivity, income, welfare, nutrition, health, and other indicators all point to an unbreakable cycle, they are deemed to be poor. Inadequate resources for formal and informal education can contribute to poverty by lowering the latter's standards.

Number of Household Members

A family's need is mostly determined by the number of members. A household's expenses increase with the number of persons in the home. On the other hand, the requirements that must be satisfied inside the family decrease with the number of family members. In a similar vein, the number of dependent children and elderly or disabled family members will influence the household's expenses (Erwin & Karmini, 2012).

All members of the household who share a kitchen and are considered to be employed are included in the number of family members, according to Mantra (2003). This implies that they are regarded as belonging to the household if they share daily needs from the same kitchen. Consequently, everyone who resides under one roof is considered a family member, even those who are unable to provide for their basic requirements due to a lack of employment or advanced age and consequently need support from others.

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Gender

Gender, according to Wardhaugh (2002), is the way that genetic, psychological, social, and cultural factors distinguish males and females (Sa'adah et al., 2021). Differences in gender also reflect differences in personal income. According to Mankiw (2012), women have less work experience than males do as human capital. The rise in women's labor force involvement over the past few decades is one explanation. As a result, compared to male workers, female workers typically experience lower degrees of difficulty.

Moreover, women frequently have their careers interrupted by childcare obligations (see Vera & Sitorus, 2016). However, because of disparities in pay, men and women do not necessarily undertake the same tasks. Gender equality in terms of income should receive special attention from the government because both men and women should contribute to economic progress (Maharani & Albrian, 2020).

Age

Age is the sum of a person's years from birth to their birthday; the older a person is, the more mature and strong they are, and the more mature their thinking and actions will be (Sudarso Widya Prakoso Joyo Widakdo et al., 2021). Among the variables influencing income is age (Cahyono, 1998). The ideal age range for workers is 15–64 years old, as this is the productive age range. In general, during the productive years, income rises with age and also depends on the kind of labor done. Age and a person's physical ability to execute tasks are strongly correlated because as people age past the productive age, their physical ability declines, which lowers labor productivity and revenue (Putri & Setiawina, 2013).

METHODOLOGY

This study employs a quantitative approach and makes use of original data from the North Lampung Regency's National Socio-Economic Survey (Susenas) of 2022, which was gathered directly from the Badan Pusat Statistik (BPS). The demographic and sample size employed in this study consist of 735 households. The type of analysis used in this study was logistic regression analysis, which was carried out using STATA14 software.In this work, tests for model fit, marginal effects, logistic regression analysis, coefficient of determination (Pseudo R Square), and hypothesis testing (partial and simultaneous tests) were employed.

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RESULT AND DISCUSSION

Deskriptive Statistical Analysis

Data analysis that explains the data as gathered without attempting to make generalizations is known as descriptive statistical analysis (Sugiyono, 2016). The mean, minimum value, maximum value, and standard deviation are among the descriptive statistical analyses employed in this study to characterize the variables.

Table 1. Descriptive Statistical Analysis Results

Variabel	Min	Max	Mean	Std Dev
X1	1	9	3.632653	1.438483
X2	0	1	0.110204	0.313357
X3	20	92	49.23946	13.47446

Source : Data managed by the researcher, 2024

Based on Table 1, The mean value of X1, which represents the number of household members, is 3.6326. This indicates that the typical range of household members used in this study is between three and four. Then X2 (gender) has a mean value of 0.1102, which means the gender data used in this study generally falls around 0.11, indicating that the majority of the gender data is male. X3 (age) has a mean value of 49.2394, which means the age data used in this study generally falls around 49 years old.

Logistic Regression Analysis

Table 2. Logistic Regression Analysis Results

	Coef.	Std. Error	Z	P > z	Odds Ratio
X1	0.6612	0.0865	7.64	0.000	1.9371
X2	-0.8443	0.5067	-1.67	0.096	0.4298
X3	0.0162	0.0087	1.86	0.063	1.0164
Constanta	-5.3420	0.6291	8.49	0.000	0.0047

Source : Data managed by the researcher, 2024

From the logistic regression equation testing in Table 2, the regression model obtained is as follows :

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$$Z = -5.3420 + 0.6612_1 - 0.8443_2 + 0.0162_3$$

The regression coefficients can be interpreted as follows after looking at the regression analysis results:

- The constant value of the regression equation above is -5.3420 with an odds ratio of 0.0047.
- Variable X1 has a regression coefficient value of 0.6612 and an odds ratio of 1.9371. This means that if the number of household members increases by 1 percent, the probability of the community being in poverty status increases by 1.9371 times.
- Variable X2 has an odds ratio of 0.4298 and a regression coefficient value of -0.8443. The community's likelihood of living in poverty will be 0.4298 times less likely than it would be for females if the head of the family is a man and their gender increases by 1%.
- Variable X3 has a regression coefficient value of 0.0162 and an odds ratio of 1.0164. This indicates that the likelihood of the community being in poverty increases by 1.0164 times if the head of the family gets older by 1% outside of the productive age.

Goodness of Fit Test

The Pearson Goodness of Fit Test value > 0.05 is taken into consideration when using the model fit test to forecast the ability of observation values. These are the Pearson Goodness of Fit Test scores.:

Table 3. Goodness of Fit Test Results

Pearson Chi-Square	*Prob Chi-Square*
338.27	0.1294

Source : Data managed by the researcher, 2024

Based on Table 3. As can be observed, H0 is accepted since the significant probability value of the Pearson Goodness of Fit is 0.12 ≥ 0.05. This indicates that either there is no discernible difference between the observation values and the model, or the model fits the observation values.

Coefficient of Determination

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Table 4. Coefficient of Determination Results

Pseudo R Square
0.1278

Source : Data managed by the researcher, 2024

Based on Table 4. The Pseudo R square value of 0.1278 can be observed. It may be inferred that the independent variables account for 12,78% of the variance in the dependent variable, with the remaining percentage being explained by variables not included in this research.

Marginal Effect

Table 5. Marginal Effect Results

	Marginal Effect
X1	0.0664
X2	-0.0848
X3	0.0016

Source : Data managed by the researcher, 2024

Based on Table 5, The marginal impact value of variable X1 is 0.0664, as can be seen. According to this, there is a 6.64% increase in the probability of poverty for every 1% increase in the number of household members. Variable X2's marginal effect value is 0.0848. It can be observed that a 1% increase in the proportion of male heads of households results in an 8.48% decrease in the probability of a household being poor. Variable X3 has a marginal impact value of 0.0016. This means that for every year that a person gets older, the chance that their household will be poverty grows by 0.16%.

Hypotesis Testing

Partial Test (t-test)

The hypothesis used in this study is a one-tailed hypothesis with a significance level of α = 0.05. Therefore, the Z table value is 1.96.

Table 6. Partial Test Results

Variabel	Z tabel	Z hitung	Prob.	Kesimpulan
X1	1.96	7.64	0.000	H0 ditolak
X3	1.96	-1.67	0.096	H0 diterima

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X4	1.96	1.86	0.063	H0 diterima

Source : Data managed by the researcher, 2024

Based on Table 6. As observed in variable X1, the predicted Z value has a probability value below the significance threshold (0.000 < 0.05) and is more than the Z table value (7.64 > 1.96). Consequently, H0 is refuted, indicating that there is a significant correlation between the number of household members and poverty status in this sample.

Variable X2 indicates that the probability value (0.096 > 0.05) is more than the significance threshold, indicating that the estimated Z value is less than the Z table value (-1.67 < 1.96). As a result, H0 is accepted and Ha is refused, suggesting that there is no meaningful relationship between gender and poverty status in this study.

Variable X3 indicates that, with a probability value higher than the significance threshold (0.063 > 0.05), the computed Z value is less than the Z table value (1.86 < 1.96). This indicates that there is no discernible relationship between age and poverty status in this study, with H0 being accepted and Ha being denied.

Simultaneous Test (f-test)

Degrees of freedom (df1) = k-1 = 4-1 = 3 and (df2) = n-k-1 = 735-4-1 = 730 are obtained, with a significance level of α = 0.05, for the total number of data points (n = 735) and the total number of dependent and independent variables (k = 4). As a result, 2.61 is the F table value.

Table 7. Simultaneous Test Results

F tabel	F hitung	Prob.	Kesimpulan
2.61	72.82	0.000	H0 ditolak

Source : Data managed by the researcher, 2024

Based on Table 7. As can be observed, the simultaneous test results demonstrate that, with a probability value less than the significance threshold (0.000 < 0.05), the computed F value is larger than the F table value (72.82 > 2.61). This means that H0 is rejected and Ha is approved since it shows that the independent variables included in this study have an overall impact on the degree of poverty.

DISCUSSION

The causes of the poverty rate in North Lampung Regency are investigated in this study. According to the Central Statistics Agency, North Lampung Regency is home to

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the bulk of the province of Lampung's poor population. These results were obtained by performing a logistic regression analysis:

The Influence of The Number of Household Members on Household Poverty Status

The test on the number of household members shows a positive and significant influence of 6.64% with a p-value of 0.000 and an odds ratio of 1.9371, according to the regression results. It is evident that the number of people living in a household has a big impact on how poor a person is. This implies that poverty will keep rising if a home has more than four members. This is due to the fact that the number of family members raises the amount spent on household bills.The results of this study corroborate those of a study by Yohana Madame & Jeffry Raja, which showed that the number of household members raised the risk of slipping into poverty.

The Influence of Gender on Household Poverty Status

Regression analysis reveals a p-value of 0.096 and an odds ratio of 0.4298 for the test of gender's impact on poverty status. Compared to male heads of families, this indicates that female heads of home have a 0.4298-times greater ability to influence poverty status. This research confirms the findings of a prior study by Maharani & Albrian (2020), which found that gender can affect poverty because of the nature and nurture theory's explanation of how men and women earn different amounts of money.

The Influence of Age on Household Poverty Status

The regression analysis reveals that age has a 0.063 p-value and an odds ratio of 1.0164 when testing the relationship between poverty status and age. In other words, an individual's age can have a 1.0164-fold impact on their poverty status. According to a recent study by (Andrianto et al., 2016). The age has little bearing on poverty. This research supports that conclusion.

CONCLUSION

The following conclusions were drawn in light of the study's findings and the debate around the variables affecting North Lampung Regency's poverty rate:

1. In North Lampung Regency, the number of household members positively and significantly affects the status of household poverty.

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2. In North Lampung Regency, gender influences household poverty status in a positive but non-significant way.
3. In North Lampung Regency, age has a favorable but insignificant impact on the level of household poverty.
4. In North Lampung Regency, the number of family members, gender, and age all have a big impact on the state of household poverty.

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