

Analysis of Women Labour Force Determinants in the Formal and Informal Sectors



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ABSTRACT: This study aims to analyze the effect of age, marital status, education, and income on women's decisions to work in the formal and informal sectors. The population in this study are women working in the formal and informal sectors in West Nusa Tenggara Province in 2021. The data used is secondary data, namely SAKERNAS data taken from the Central Statistics Agency (BPS) of West Nusa Tenggara Province. The data analysis method uses logistic regression through the Stata 16 program. The results of this study indicate that the variable marital status has a positive and significant effect on the decision of women to work in the formal and informal sectors while the variables age, education, and income have a negative and significant effect on the decision of women to work in the formal sector. formal and informal. These findings indicate that the older the age of the female workforce, the less likely they are to have an education to work in the formal sector, and the more likely they are to have an education to work in the formal sector, and the more likely they are to be female workers who have an increased income. working in the formal sector decreased.

KEYWORDS: Age, Marital Status, Education, Income, working women, formal, informal

INTRODUCTION

The participation of labor in an economy determines the success of a development. According to the International Labor Organization (ILO) in 1999 in the framework of promoting productive work and can be chosen freely, income in accordance with education, security at work, guaranteed rights at work, social protection, freedom to organize and create social communication are a basic condition for the health and well-being of workers and their families, decent work, defined by the International Labor Organization (ILO) in 1999 in relation to promoting productive and freely chosen work, fair pay, security at work, ensuring rights at work, providing social protection, freedom of association and creating social dialogue, are basic conditions for the health and well-being of workers and their families (Benavides, Silva-Peñaherrera and Vives, 2022) . Both men and women have the same potential to enter and participate in the world of work . The labor force in rural areas often lacks sources of income strong against weather shocks, and diversification for forms of work other than agriculture limited by their inability to invest (Menon and van der Meulen, 2011) . Especially in rural areas where the condition of poverty is caused by various problems such as the low quality of human resources , there are no assets in the household , and there are limited job opportunities according to their skills and education (Afifi and Latifah, 2021) , apart from that cultural factors also influence the work ethic of the community (Elbadiriaty, Gemilang and Handalucia, 2022) . With the increasing economic needs of families, of course the workforce in rural areas is motivated to get more decent jobs and be able to meet the economic needs of the family. Women's workforce is seen as a significant resource for strengthening socio-economic development (Yuzon, 2005) . Opportunities for women to get a job have the same portion as men, when women have to participate in supporting household needs, of course it will have an impact on the number of jobs available. The formal and informal sectors are the choice of female workers in entering the world of work. When the formal sector is no longer able to absorb labor, the informal sector is the choice. More than 2 billion people make a living in the informal sector and 47% of those working in the service sector have an informal job (Bonnet F, Joann K, 2019) .

For married women, of course, they have various considerations in entering the labor market, and the decisions made are family decisions, not individual decisions. Acosta *et al.* , (2020) conducted research on decision makers in the household, including decisions made jointly by spouses. decisions can be taken jointly or not related to women's empowerment. Many women struggle for life and are oppressed by financial problems and have been deeply affected. as the sole decision maker. Reported joint decision-making includes a range of practices from no conversation between partners to conversations in which the woman's partner's ideas are considered but the man has the final say. Given the background of a low-income family and the fact that the

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motivation for women in Indonesia tends to be workers in the informal sector, when they get older, have lower education, are married/ widowed, have never attended job training and usually live in rural areas (Agusdin, Meitasari and Furkan, 2021; Wandaweka and Purwanti, 2021).

West Nusa Tenggara (NTB) province consists of 8 (eight) regencies, namely West Lombok, Central Lombok, East Lombok, North Lombok, Sumbawa Besar, West Sumbawa, Dompu and Bima and 1 (one) Mataram city. In this province, the working-age population of women is larger than that of men, but its TPAK shows that women's labor force participation is far below that of men. So it can be concluded that those who are economically active are still half of the women who are of productive age (BPS, 2021). This can be seen in the table which shows the ratio of the population of working age and the labor force according to sex in West Nusa Tenggara as shown in the table below:

Table 1. Population of Working Age and Labor Force by Gender in West Nusa Tenggara Province in 2021

Description	Gender	
	Man	Woman
Working age population	1,890,023	1,992,437
workforce	1,560,836	1,179,054

Source: Central Bureau of Statistics, SAKERNAS August 202 1

From the table above it can be seen that the absorption of labor is still not optimal, this can be seen from the number of working age population compared to the number of the labor force. And looks the most dominant in the female sex. Lack of information, women's responsibilities in the household, gender discrimination in the employment sector and high costs (education). Thus causing delays for women to enter the labor market (Kemenpppa, 2016). This can be seen in the involvement of women themselves in the labor market in the formal and informal sectors. In the formal and informal sectors, men still dominate. It is based BPS data in the figure as follows :

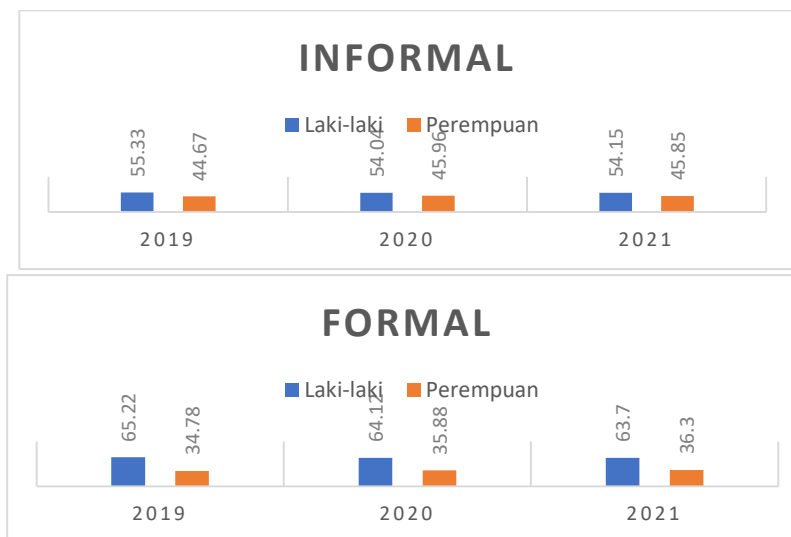


Figure 1. Percentage of Population Working in the Formal/Informal Sector by Gender in West Nusa Tenggara Province in 2019 – 2021

Source: Central Bureau of Statistics, 2021

From the table above, the gender difference from the August 2021 SAKERNAS data shows that the population working in formal activities is still dominated by men, who make up 63.70 percent. This condition is similar to August 2019 and August 2020 with the respective proportions reaching 65.22 percent and 64.12 percent. Likewise in informal activities, the proportion of the male population working in the informal sector is also greater than that of the female. In August 2021, the proportion of the male population working in informal activities was 54.15 percent, while that of women was 45.85 percent. The proportion of the male population working in informal activities has increased compared to August 2020 which was 54.04 percent. The importance of

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non-formal education in community development and the impact of non-formal education and training on knowledge and skills to increase the knowledge and skills of workers (Kotzé, 2012)

Based on the background and data mentioned above, regarding inequality in women who work in the formal and informal sectors far below men who work in the formal and informal sectors, it is necessary to know more deeply the causes of women's decisions to work in the formal sector. and information l.

RESEARCH METHODS

This type of research used in is quantitative research. The quantitative research method is a type of research whose specifications are systematically planned and clearly structured from the start to the creation of the research design. Where the data used is National Labor Force Survey data (SAKERNAS) which includes data on the age of working women, data on the marital status of working women, data on the education of working women, and data on the income of working women.

The data analysis method in this study used the logistic regression analysis method and used the Stata 16 program to estimate women's decisions work in the formal and informal sectors based on the determinants that affect them, namely age level, marital status, education, and education.

model in general can be defined as follows:

$$Y = \left(\frac{P_i}{1-P_i} \right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_3 X_3 + \beta X_4 + \dots e$$

Information:

- Pi : For each variable being sought or the probability variable with a qualitative weight of 1
- 1-Pi : For each variable that is sought or the probability of a variable that has a qualitative weight of 0
- Y : The decision of women to work in the formal and informal sectors. A score of 1 if working in the formal sector and a value of 0 if working in the informal sector
- Bo : Constants in the regression equation
- β_1 _ : Age
- β_2 _ : Marital status
- β_3 _ : Education
- X1 : Age
- X2 : Marital status
- X3 : Education
- X4 : Income
- E : Error

Linear regression cannot be forced into models with variables that have dichotomous or dummy properties. Then the regression tool that can be used to test whether the independent variable affects the dependent variable is the logit equation. Statistical tests are used to see the effect of the independent variables on the dependent variable significantly, then with statistical tests it can be seen the direction and influence as well as the significance coefficient of each independent variable. In this case there are several assessment criteria which show that the results or output of an equation model can be said to be good or not. The assessment criteria :

The interpretation of the coefficients in the logit model uses *marginal effect analysis* to know the dependent variable changes when the particular independent variable changes. Meanwhile, other covariates are considered fixed and constant. If the dy/dx results show a negative result, then the independent variable has a negative tendency towards the dependent variable. Conversely, if the dy/dx results show a positive result, then the independent variable has a positive tendency towards the dependent variable.

To measure the magnitude of the simultaneous influence of several independent variables on the dependent variable. In logistic regression, the term Pseudo R Square is known, namely the value of Pseudo R Square which means the same or identical. The pseudo R2 value is used when the outcome variable is nominal or ordinal so that the coefficient of determination R2 cannot be applied as a measure of the goodness of fit. In linear regression, multiple squared correlation, R2 is used to assess the goodness of the aligned because it represents the proportion of variance in the criterion explained by the predictor.

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RESULTS

Logistic Regression Model Test

Analysis of the logistic regression method was carried out to determine the extent to which the profitability of the occurrence of the dependent variable can be predicted with the independent variable. So it is necessary to test this analysis. The following are the results of data processing using the logistic regression method:

Table 2. Logistic regression results

Variable	Coefficient	SE	Odd Ratio	P- Value
Age (X1)	-0.365	0.426	0.425	0.392
Marital Status (X2)	0.951	0.205	0.532	0.000
Education (X3)	-0.157	0.192	0.164	0.000
Revenue (X4)	-6,830	0.008	6,808	0.261

Source: Primary Data r, 20 23 (processed)

Marginal Effects

The table below shows the results of *the marginal effect* of logistic regression to find out the variables influencing women's decisions to work in the formal and informal sectors . These variables consist of age, marital status, education, and income. Following are the results of Marginal Effect calculations from the Stata program:

Table 3. Marginal Effects

Variable	dy/dx	Std. error	p> z
Age (X1)	-0.618	0.721	0.392
Marital Status (X2)	0.137	0.241	0.000
Education (X3)	-0.265	0.319	0.000
Revenue (X4)	-1,158	1,508	0.261

Source: Primary Data, 20 23 (processed)

DISCUSSION

Effect of Age on Women's Decisions to Work in the Formal and Informal Sectors

Age (X1) has no significant effect on women's decisions to work in the formal and informal sectors. This means that there is no influence on the age variable on women's decisions to work in the formal or informal sectors.

The Effect of Marital Status on Women's Decisions to Work in the Formal and Informal Sectors

Marital status has a positive and significant effect on women's decisions to work in the formal and informal sectors. The regression coefficient of 0.951 means that married women have the probability of choosing to work in the formal sector compared to unmarried women, with the possibility of assuming other factors of 0.532 or 53.2%.

The results of this analysis are in accordance with the research conducted by Acosta *et al.* , (2020) explains that the decision holders are taken in the household, including decisions made jointly by the couple. decisions can be made jointly or not related to women's empowerment. The results of the study show that women tend to make joint decisions more than men, who present themselves as more of a single decision maker. Reported joint decision-making includes a range of practices from no conversation between partners to conversations in which the woman's partner's ideas are considered but the man has the final say. The results of this analysis are also supported by research conducted by (Hartoko, 2019) which conducted research on the effect of education, training, gender, age, marital status and area of residence on the length of time looking for work for workers in Indonesia . The results show that marital status has a significant effect and has a regression coefficient with a negative direction, which means that the length of time looking for work for married workers is shorter than for single/non-married workers.

The Influence of Education on Women's Decisions to Work in the Formal and Informal Sectors

Education has a negative and significant effect on women's decisions to work in the formal and informal sectors. The regression coefficient is -0.157 meaning that if women's education increases by 1 year with the possibility of assuming other variables are constant, the probability of women working in the formal sector will decrease by 0.164 or 16.4%.

The results of this analysis are in accordance with the research conducted by Ariani *et al.* , (2014) who conducted research on the impact of education on the labor market in the mining sector, which consists of formal mining sector workers, informal mining

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sectors, and non-mining workers. The results show that at the tertiary level, education has a negative effect on employment in the formal mining sector. But at the high school level and vocational education have a positive and significant impact on employment in the formal mining sector. Meanwhile, education has a significant influence, especially for employment in the formal mining sector. But theoretically, the higher a person's level of education, the higher the opportunity to be able to work in the formal sector. The level of education has a significant effect on the level of individual income, where the higher the level of education, the level of income will also increase (Julianto and Utari, 2013).

Basically in the concept of *Human Capital* theory states that formal education is an investment in relation to job opportunities to obtain easier jobs for those who have a higher level of education. This is because in general the level of scarcity of graduates with higher education is also more accurate, so that the level of competition for suitable jobs is also easier. Job opportunities for graduates of higher education are more open, so that theoretically the unemployment rate in groups with higher education tends to be smaller than groups with lower education (Arifin and Firmansyah, 2017). However, along with the increasing number of higher education graduates, of course it will reduce opportunities in employment opportunities. Because the number of jobs is not as much as the number of educated graduates. As a result, absorption of labor in the formal sector is reduced. So that job seekers who have higher education turn to the informal sector in order to get jobs to support their families. In fact, this can be seen from the condition of the workforce in Indonesia, based on data released by the Central Statistics Agency, showing that there are still highly educated workers working in the informal sector (BPS, 2020). So that it can be said that higher education cannot guarantee that someone will definitely work in the formal sector.

The Effect of Income on Women's Decisions to Work in the Formal and Informal Sectors

Income has no significant effect on women's decisions to work in the formal sector. The regression coefficient is -6,830. Basically women look for work to meet household needs. When the family's economy is in a downturn, women in the end have to help their family's economy. As described by Acosta *et al.*, (2020) which states that decisions made in the household are joint decisions and are more dominated by women as decision makers to enter the world of work.

CONCLUSIONS

Based on the results of the data analysis described in the previous chapter, the following conclusions are obtained:

1. From the results of the analysis it can be seen that marital status and education significantly influence the decision variables of women working in the formal and informal sectors.
2. The dominant variable influencing the workforce's decision to work in the formal sector is the marital status variable (X₂) which is an independent variable. has the highest beta in absolute terms, which is equal to 0.137. So that Marital status variable is the dominant variable influencing women's decisions to work in the formal and informal sectors.

RECOMMENDED

The suggestions that can be recommended based on the findings of this study are:

1. Age, marital status, education, income which are the focus of this study are a small part of the factors that influence women's decisions to work in the formal and informal sectors, therefore future research can add other variables which are determinants of women's decisions to work in the formal and informal sectors.
2. This study only uses SAKERNAS data so that future researchers will also use different data.

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