DETERMINANTS OF THE FEMALE LABOR FORCE PARTICIPATION RATE IN THE PROVINCE OF BALI INDONESIA

Anifatul Hanim1, Nanik Istiyani2, Rendra Setya Nugraha3, Riniati Riiati4

1 Doctor in Human Resource Economics and Senior Lecturer, Faculty of Economics, Universitas Jember, Indonesia
2 Senior Lecturer, Faculty of Economics, Universitas Jember, Indonesia
3 Bachelor in Economics, Faculty of Economics, Universitas Jember, Indonesia
4 Doctoral Lecturer in Economics Development, Faculty of Economics, Universitas Jember, Indonesia

Corresponding Author: Anifatul Hanim
Corresponding Author Email: hanim.feb@unej.ac.id

Article Received: 01-06-22          Accepted: 25-06-22          Published: 27-06-22

Licensing Details: Author retains the right of this article. The article is distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 License (http://www.creativecommons.org/licenses/by-nc/4.0/), which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the Journal open access page.

ABSTRACT

National development is closely related to population issues related to employment. Women's decision to participate in the labor market is not only influenced by marital status, but also by education, wages, and economic growth. The purpose of this study is to analyze the magnitude of the influence of education, the number of wages, and the magnitude of the influence of economic growth on the participation rate of the female workforce in Bali Province. This research uses the panel data regression analysis method. The results showed that the education variable and the minimum wage variable had a positive and significant effect on the participation rate of the female workforce in Bali Province from 2016 – to 2020. The economic growth variable had a positive and insignificant effect on the female workforce participation rate in Bali during the same period.

Keywords: Bali Province, Level of Education, Provincial Minimum Wage, Economic Growth.
INTRODUCTION

National development is closely related to population issues related to employment. That has been working, are looking for work and who carry out other activities, such as going to school, taking care of the household and receiving other income. By the rule, the minimum age limit for workers is 15 years without a maximum age limit (Simanjuntak, 200; Mafruhah et al., 2012) Women's decision to participate in the labor market is not only influenced by marital status but also by education, wages, and economic growth (A. Hanim et al., 2019). Generally, women who choose to work have a desire to increase family income or income from their husbands, due to the size of the family's dependents and the large consumption of a household. On the other hand, a woman's experience in working becomes her own consideration for a woman to work in addition to the wages she will receive. The femininity in handling job coloring the management and leadership style (Sudaryanto et al., 2021).

Bali Province is one of the areas that has the fastest growing tourism sector in Indonesia. The development of the tourism sector in Bali Province can create many jobs that can absorb labor in various sectors such as trade, agriculture, lodging, restaurants, and so on. The female workforce has been in the progress of the era of women's emancipation which is marked by the active role of women in the labor market. However, women also have responsibilities in carrying out household chores. This causes women to experience role conflicts between the implementation of tasks in the domestic sector and the public sector. (Anifatul Hanim et al., 2021) shows that the variables of education level and poverty rate in Indonesia affect the participation rate of the female workforce, while the wage level and GRDP of capital formation do not affect the participation rate of Indonesian women's labor force in the 2010-2017 research year period. (Devanto, 2017) shows that there is an influence between education and female labor force participation in Indonesia. Schaner & Das, (2016) shows that young, highly educated women gain access to high-paying jobs. Another factor that can affect women's Labor Force Participation Rate is the level of wages. In Indonesia, it is regulated that every worker/labor has the right to earn an income that fulfils a decent living for humanity. The government establishes a wage policy as one of the efforts to realize the rights of workers/laborer’s to a decent living for humanity (Article 88 paragraph (1) (2) Law No.11 of 2020 concerning Job Creation (Employment Clusters) / (Law No.11/2020 Ciptaker). The wages that will be received by workers depend on the total level of productivity of the workers themselves. Data regarding wage increases in various countries, specially developed and developing countries, show that workers are closely related to increases in workers' wages and productivity increases (Sultana & Fatima, 2017). The research by Simone Schaner and Smita Das (2016) is likely to reflect the welfare gains of young, highly educated women gaining access to high-income and meaningful jobs, while women in poorer families are less likely to use unattractive informal work to make ends meet. Meanwhile, Devanto (2017) found that groups of women with very low education (SD for example), are more likely to have high labor force participation, which is driven by family economic needs that force them to enter the market work. Economic growth is the development of economic activity which causes the goods and services produced to increase so that the prosperity of the community will also increase. Economic growth has a close relationship with the population. If the population continues to increase, the labor force will also increase. To measure economic growth used is GRDP based on constant
prices. By using constant prices, the effect on prices has been removed even though the number that appears is the value of the total output of goods and services. According to Okun's Law introduced by Arthur Okun (Mankiw, 2009).

**Objectives**

Based on the things that have been explained, the problems in this study can be formulated as follows:

1. How is the influence of Education on the Participation Rate of the Women's Workforce in the Province of Bali?
2. What is the effect of the District Minimum Wage on the Participation Rate of the Women's Labor Force in Bali Province?
3. What is the effect of Economic Growth on the Participation Rate of the Women's Labor Force in Bali Province?

**LITERATURE REVIEW**

**Employment**

The definition of labor according to law no. 13 of 2003 Article 1 paragraph 2 states that the workforce is everyone who is able to do work to produce goods and or services both to meet their own needs and for the community. Broadly speaking, the population of a country is divided into two groups, namely workers and non-workers. Meanwhile, workers are residents who are already or are working, who are looking for work, and who carry out other activities such as going to school and taking care of the household. In practical terms, the notion of labor and non-labor according to him is only distinguished by the age limit (Mafruhah et al., 2012).

1. Labor Demand

   de Haas et al., (2020) argues that the demand for labor is influenced by the marginal value of the product (Value of Marginal Product). The marginal value of the product (VMP) is the product of the marginal physical product and the price of the product in question. Marginal Physical Product is the increase in total physical product originating from the addition of one unit of the variable input (labor).

2. Labor Offer

   Customer satisfaction can be obtained through consumption of the expected products with the sacrifice they offer (Davis, 1989; Anifatul Hanim et al., 2021; Sudaryanto & Subagio, 2017). While the obstacles faced by individuals are the level of income and time. Working as controversy from leisure causes suffering, so people only want to do it if they get compensation in the form of income, so the solution to this individual problem is the number of hours of work that they want to be offered at the desired wage and price.

**Labor Force Participation Rate**

The Labor Force Participation Rate is a certain population group that can be calculated from the comparison between the number of the workforce and the population of working age in the same group (Schaner & Das, 2016). The Labor Force Participation Rate concludes that all opinions of working age can also be expressed in the form of a certain group such as the male group, the female group in the city, the educated workforce group, the 10-14 year age group in the village and so on.

The population in working age, the larger the workforce. LFPR is one of the factors that affect the amount of output in an economic activity. Thus, the more productive people are, the higher the amount of output produced which can affect GRDP and per capita income. Increasing LFPR in an area can increase per capita income and consumption levels which can affect economic
growth. The increase in the number of the workforce is considered a positive factor that can stimulate economic growth, meaning that more people will increase the domestic market, provided they have purchasing power so that demand will increase (Mafruhah et al., 2012).

**Adam Smith's Classical Economic Growth Theory**

According to Classical Economic Theory (Adam Smith) capital stock is an element of production that actively determines the level of output. Its role is very central in the process of output growth. The amount and rate of growth of output depend on the rate of growth of the capital stock (up to the “maximum” of natural resources). Second, population growth according to Adam Smith, the population will increase if the prevailing wage level is higher than the subsistence wage level, namely the level of wages that are mediocre to live. If the wage level is above the subsistence wage level, people will marry at a young age, the death rate will decrease, and the number of births will increase. On the other hand, if the prevailing wage rate is lower than the subsistence wage level, the population will decrease. The prevailing wage rate according to Adam Smith is determined by the attraction between the forces of demand and supply of labor.

Wages are high and increase when the demand for labor (DL) grows faster than the supply of labor (SL). The demand for labor is determined by the stock of capital and the level of output of society. Therefore, the rate of growth of demand for labor is determined by the rate of growth of the capital stock (capital accumulation) and the rate of growth of output (Sultana & Fatima, 2017).

**METHODOLOGY**

**Research Design**

Judging from the analytical approach, the approach used in this study is a quantitative approach. This type of research uses explanatory research (explanation), which is a study that explains the causal relationship between variables through hypothesis testing. In this explanatory research method, it explains systematically factual and accurate about the object under study (Hair et al., 2014)

**Unit of Analysis**

The unit of analysis in this study is 9 districts/cities in Bali with Education, Minimum Wage, and Economic Growth as independent variables to see their effect on the dependent variable Women's Labor Force Participation Rate in Bali in 2016 - 2020.

**Types and Sources of Research Data**

The type of research used is a type of research that uses a quantitative approach which will be explained associatively. Associative research is research that aims to determine the effect or relationship between two or more variables. Secondary data were obtained from the National Statistics Agency, the Bali Central Statistics Agency and journals related to the topic in this study.

**Data Analysis Method**

This research method uses panel data regression analysis, where regression analysis aims to measure the strength of the relationship between two or more variables and shows the direction of the relationship between the dependent variable and the independent variable used (Hair et al., 2014).

Theoretically, there are several advantages in using panel data, including: first, the more observations you have for the purpose of estimating population parameters. The increasing
number of observations means increasing the degree of freedom and reducing the possibility of collinearity between independent variables. The regression equation in this study is as follows:

\[ LFPR = \beta_0 + \beta_1 PD_{it} + \beta_2 UM_{Kit} + \beta_3 PE_{t} + e \]

In this study, the researcher used the Eviews 9 software analysis tool. To assist the processing of research data in the form of panel data, Eviews is a very precise analytical tool. The use of appropriate analytical tools will help researchers to solve problems in the research conducted.

1. Multicollinearity Test
   Multicollinearity aims to see whether there is a relationship between the independent variables. The interpretation of the coefficients in a variable with other variables is considered constant or constant. So if there is a correlated variable then the variable is not valid and causes other variables to change.

2. Heteroscedasticity Test
   Heteroscedasticity test is used to determine whether the nuisance error during a certain period of time has the same variance as the nuisance error in other periods.

3. Normality test
   The normality test aims to test whether in the regression model the independent or dependent variables or both have a normal distribution or not (Hair et al., 2014). This concept uses the Jarque-Berra (J-B) Test approach. Comparison of Jarque-Berra X2 where if Jarque-Berra < X2 the residual table is not normally distributed and if the probability is Jarque-Berra \( \alpha \geq 5\% \), then the residual is normal.

RESULTS AND DISCUSSION

Panel Data Analysis
The statistical result of panel data analysis is presented in Table 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>St. Error</th>
<th>t-Statistics</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>258.3874</td>
<td>158.3443</td>
<td>1.61803</td>
<td>0.1104</td>
</tr>
<tr>
<td>X1</td>
<td>2.249957</td>
<td>0.174216</td>
<td>2.434751</td>
<td>0.0158</td>
</tr>
<tr>
<td>X2</td>
<td>23.46263</td>
<td>11.20833</td>
<td>2.093320</td>
<td>0.0452</td>
</tr>
<tr>
<td>X3</td>
<td>0.186699</td>
<td>0.217579</td>
<td>0.858073</td>
<td>0.3958</td>
</tr>
</tbody>
</table>

Based on the analysis of the Fix Effect Model (FEM) approach, the following results are obtained:

1. Constant Value
   Based on the above equation, a constant value of 258.3874 is obtained, which means that if the value of the independent variables Education, District Minimum Wage, and Economic Growth, is equal to zero, then the Women's Labor Force Participation Rate in Bali Province in 2016 - 2020 is a constant of 258.3874.

2. Education (X1)
   The coefficient value of the Education variable is 2.249957 which means that every 1% increase in the Education variable (high school and above), will increase the Women's Labor Force Participation Rate in the Province of Bali in 2016 - 2020 by 2.249957% with the assumption that the Regency Minimum Wage variable and the variable Economic
Growth are constant.

3. District Minimum Wage (X2)
The coefficient value of the Regency Minimum Wage variable is worth -23,46263 which means that every 1% increase in the Regency Minimum Wage variable, will increase the Women's Labor Force Participation Rate in the Province of Bali in 2016 - 2020 by 23.46263% assuming other variables are constant.

4. Economic Growth (X3)
The coefficient value of the Economic Growth variable is 0.186699 which means that every 1% increase in the Economic Growth variable, will increase the Women's Labor Force Participation Rate in the Province of Bali in 2016 - 2020 by 0.186699% assuming the Education variable and the Regency Minimum Wage variable are constant.

DISCUSSION

The Effect of Education on the Participation Rate of the Women's Workforce in Bali Province

The results of the panel data regression analysis t-test against the first hypothesis show that Education has an effect on the Participation Rate of the Women's Workforce in the Province of Bali in 2016-2020. This means that the higher the education, the higher the Participation Rate of the Women's Workforce in the Province of Bali in 2016-2020. Education level the more time is devoted to working. Especially for women, with higher education the greater the tendency to work, the higher (Anifatul Hanim et al., 2021).

Human Capital theory says that the educated population is the population of productive age. Human Capital theory emphasizes how education improves the theory of productivity and efficiency of workers by increasing the level of cognitive stock of the ability of economically productive human workers which is the product of the innate ability of investment in humans. The provision of formal education is seen as an investment in human capital which is considered equal or even more valuable than physical capital (Woodall et al., 2009).

The results of this study are in line with research conducted by Simone Schaner and Smita Das (2016) stating that Most likely reflects welfare gains — young women with higher education gain access to high-income and meaningful jobs, while women in poorer families are less likely to use unattractive informal work to make ends meet. One of the main challenges for policymakers is ensuring that lower-income and more vulnerable women have access to beneficial employment opportunities.

Josephine's research (2019) states that the level of education and the level of poverty in Indonesia affect the participation rate of the female labor force, while the level of wages and GRDP of capital formation does not affect the level of participation of the female workforce in Indonesia in the 2010-2017 research year period.

The Effect of the District Minimum Wage on the Participation Rate of the Women's Labor Force in Bali Province

The results of the panel data regression analysis t-test against the second hypothesis show that the Regency Minimum Wage has an effect on the Women's Labor Force Participation Rate (LFPR) in the Province of Bali in 2016 - 2020. This means that the higher the Regency Minimum Wage, the higher the Women's Labor Force Participation Rate in the Province of Bali in 2016 - 2020. The higher the wage level in society, the more family members are interested in entering the industry or in other words, the higher the LFPR.
According to Classical Economic Theory (Adam Smith) the population will increase if the prevailing wage rate is higher than the subsistence wage level, i.e. a mediocre wage level for living. If the wage level is above the subsistence wage level, people will marry at a young age, the death rate will decrease, and the number of births will increase. On the other hand, if the prevailing wage rate is lower than the subsistence wage level, the population will decrease. The prevailing wage rate according to Adam Smith is determined by the attraction between the forces of demand and supply of labor. Wages are high and increase when the demand for labor (DL) grows faster than the supply of labor (SL). The demand for labor is determined by the stock of capital and the level of output of society. Therefore, the rate of growth of demand for labor is determined by the rate of growth of the capital stock (capital accumulation) and the rate of growth of output (Scott, 2009).

**The Effect of Economic Growth on the Participation Rate of the Women's Labor Force in Bali Province**

The results of panel data regression analysis t-test against the third hypothesis show that Economic Growth has an effect but is not significant on the Participation Rate of the Women's Labor Force in Bali Province in 2016 - 2020. This means that the higher the Economic Growth, the higher the Women's Labor Force Participation Rate in the Province of Bali in 2016 – 2020. The findings also states that along with increasing the efficiency of women's economic and political participation, entrepreneurship regulations are also considered. As entrepreneurial opportunities for women and men are equalized in modern society, differences in entrepreneurial outcomes are increasing (Lee et al., 2021; Perrons, 2017; Schaner & Das, 2016).

**CONCLUSION AND RECOMMENDATION**

Education has a positive and significant effect on the Women's Labor Force Participation Rate in the Province of Bali in 2016 - 2020. This shows that the higher the education, the higher the Women's Labor Force Participation Rate in the Province of Bali in 2016 - 2020.

The Regency Minimum Wage has a positive and significant impact on the Women's Labor Force Participation Rate in the Province of Bali in 2016 - 2020. This shows that the higher the Regency Minimum Wage, the higher the Women's Labor Force Participation Rate in the Province of Bali in 2016 - 2020.

Economic growth has a positive and insignificant effect on the Participation Rate of the Women's Workforce in the Province of Bali in 2016 – 2020.

**References**


**Conflict of Interest Statement**

No conflict of interest has been declared by the authors.