DETERMINANTS OF WOMEN'S PARTICIPATION IN MICROFINANCE INSTITUTIONS

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ABSTRACT

Microfinance institutions are an alternative for women who need business credit loans. Through business credit loans, it opens opportunities for women to increase household income. This study aims to analyze the effect of household income on women's opportunities to make business credit loans in Indonesia. The data used in this study was from SUSENAS in 2016, while the model used in this study is the logit model. Variables in the logit model have a binary nature. The binary dependent variable in this study is women who choose to make business credit loans or not to make business credit loans. The results of the study shows that household income, age of the head of the household, employment status of the head of the household, status of home ownership, and area have a significant effect on the opportunities for women to participate in business credit loans. Through these results, the policy recommendation from this study is to provide support for women to develop microcredit businesses through business credit loans.

Keywords: Household Income, Microfinance, Women Participation

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dalam model logit memiliki sifat biner. Variabel Dependen yang bersifat biner dalam penelitian ini adalah wanita yang memilih melakukan pinjaman kredit usaha atau tidak melakukan pinjaman kredit usaha. Hasil penelitian menjelaskan bahwa pendapatan rumah tangga, umur kepala rumah tangga, status pekerjaan kepala rumah tangga, status kepemilikan rumah, dan wilayah berpengaruh signifikan terhadap peluang wanita berpartisipasi pada pinjaman kredit usaha. Melalui hasil tersebut maka rekomendasi kebijakan dari penelitian ini adalah memberi dukungan kepada perempuan untuk mengembangkan usaha kredit mikro melalui pinjaman kredit usaha.

Kata Kunci: Keuangan Mikro, Logit Model, Pendapatan Rumah Tangga

INTRODUCTION

Poverty is one of the problems that exist in developing countries. One of the efforts to reduce poverty is to encourage women to participate in the labor market. The main objective of encouraging women to enter the labor market is to increase household income so as to encourage poverty reduction. The role of women as the head of household is always increasing, then it causes female workers is also increase (Leach & Sitaram, 2002). On the other hand, the female population is half of the world's population, encouraging women to take part in the labor market in supporting the household economy and the country's economy (Duflo, 2012; Rahman et al., 2017)

Female labor participation is very important to increase household income, but it is also a global challenge because women have traditionally been marginalized in the male-dominated labor market, especially in developing countries, (Duflo, 2012) Based on data from the Bureau Central of Statistics (BPS) in 2020, Indonesia has a total female population in the workforce category (age 15-64 years) of 96,226,300 people. This number is higher than the total male population in the workforce category, which is 94,755,100 people (www.bps.go.id). Therefore, the top priority in increasing household income and reducing poverty in Indonesia is through women's participation in the labor market.

One of the programs to encourage an increase in household income is to participate in microfinance programs, (Mayoux, 2006). Microfinance aimed at women has been a strategy in reducing poverty since the mid-1980s (Leach & Sitaram, 2002). Research described by(Gu & Nie, 2021)said that women's access to credit loans is aimed to supports women to generate income and fight poverty. Microfinance has become an effective financial development tool in the economy by targeting women who need financial assistance through microcredit loans (Al-Shami et al., 2016). Microfinance institutions provide support for women to be able to increase household income through small and medium enterprises, (Rahman et al., 2017)
Microfinance institutions provide services through microcredit, micro savings, insurance, and loans to the less fortunate people. Microfinance institutions support small communities who need loans to build businesses, increase income, increase assets so as to encourage increased welfare of the people who borrow (Brau et al., 2004) (van Rooyen et al., 2012). Microfinance institutions are an effective financial development tool in helping the economy of people in need by providing credit for small and micro businesses (Al-Shami et al., 2016). Through micro credit loans, it will open up opportunities for women to earn independent income thereby increasing household income. In addition, microfinance institutions will provide loans to people in need with smaller interest payments compared to other loan (Al-Shami et al., 2016).

Some of the women who choose to apply for micro and small business credit loans to microfinance institutions are housewives who previously only worked at home to take care of their children and husbands. However, due to the limited income earned by the husband which is not sufficient for household needs, it encourages women to enter the labor market. So that credit loans for businesses are one of the strategies chosen by women (Herath et al., 2015).

Several researchers explained that there were different results in explaining women's participation in making loans through microcredit (van Rooyen et al., 2012). The results of several studies explain that one of the factors causing women to make micro-credit loans to participate in the labor market is due to a lack of household income to meet household needs (Anjugam & Ramasamy, 2007) (Geleta, 2016) (Gu & Nie, 2021). This prompted further research to look at the factors that influence women's participation in the labor market through financial lending institutions.

Empirical studies explain that women's access to microfinance institutions significantly encourages women to increase their empowerment into the labor market (Garikipati, 2012) (Gobbi et al., 2004) (Hashemi et al., 1996) (Kato & Kratzer, 2020) (Pitt et al., 2006) (Winstone et al., 2019). Some researchers explain that there are various factors that influence women to participate in making micro credit loans. These factors have given varied impacts on women's participation in microfinance loans (van Rooyen et al., 2012). The first factor that causes women to participate in microcredit loans is low household income (Haile et al., 2012) explained that low-income husbands encourage their wives to make microcredit loans to open small and medium enterprises. This is done so that wives who previously did not work can
work to open businesses with business credit loans from small and micro financial institutions.

In contrast to what was explained by (Morduch & Graduate, 2002) (Roodman & Morduch, 2014), low income only has a small impact on women in making credit loans. (Cheston & Kuhn, 2019) also found that microfinance institutions may have different effects on each group of women who use the services of these financial institutions. (van Rooyen et al., 2012) revealed that individuals from poor households have varying impacts on women's labor participation through microcredit loans, it can be positive, negative, or no effect on each other.

The second factor influencing women to participate in microcredit loans is the gender of the head of the household. (Leach & Sitaram, 2002) explains that households headed by women encourage women to participate in small and micro credit loans. Women who are the heads of households have more responsibility in meeting the needs of household members thereby encouraging women to enter the labor market. The entry of women into the labor market is through microcredit businesses whose funds can come from credit lending institutions (Guérin et al., 2013). (Geleta, 2016) also explains the same thing, most households headed by women have small businesses whose funds come from small and micro business credit loans.

Home ownership status is also a factor for women to make small and micro business loans. (Anjugam & Ramasamy, 2007) explains that women who do not own assets such as land and houses have a greater opportunity to make micro business loans compared to women who own land and private homes. Women who do not own land or private homes tend to be in lower-middle-income households, so they prefer to apply for micro-credit loans to open small businesses. Other research also explained by (Rahman et al., 2017), He revealed that microcredit programs for women increase the empowerment of women who do not own land personally. Unlike what was explained by (Gwal, 2016), women who are in households that do not have assets such as land, do not get the opportunity to become members of a group of microcredit financial institutions. This is because women who do not have assets find it difficult to repay loans and interest payments.

Herath et al., (2015) in his research explained that education of the head of the household has a negative effect on women's participation in making microcredit loans. The higher the education of the head of the household, the lower the chances of women
participating in microcredit loans. (Maldonado & González-Vega, 2008) explains that increasing access to education will be very important in efforts to improve the quality of life and individual well-being. So that heads of households who are highly educated will tend to earn higher wages so that opportunities to encourage spouses to work and make microcredit loans are lower.

Other factors are also explained by (Herath et al., 2015), where the age variable of the head of the household also influences women's participation in making microcredit loans. He explained that if the age of the head of the household is high, the opportunities for women to apply for microcredit loans also tend to increase. (Herath et al., 2015) explained that the age variable of the head of the household has the greatest influence on women's decisions to borrow microcredit in order to participate in the labor market. The same thing is also explained by (Gu & Nie, 2021) that the age of the head of the household also influences women to enter the labor market through small and micro credit.

**RESEARCH METHODS**

**Data and Samples**

This study aims to analyze the effect of household income on women's opportunities to make small and micro credit loans. Demographic variables are also used to see its relationship to the probability of women applying for small and micro credit loans to participate in the labor market. The data used to achieve this goal is secondary data from the 2016 National Socioeconomic Survey (SUSENAS) in Indonesia.

The sample used is women who participate in business credit loans and those who do not participate in business credit loans. The types of business credit loans that will be examined in this study are the National Community Empowerment Program (PNPM), People's Business Credit (KUR), Joint Business Groups (KUBE/KUB), Cooperative Programs, and Individuals

**Empirical Model**

The empirical model used to analyze the effect of household income on the opportunities for women to participate in making small and micro credit loans is the logit model. Variables in the logit model have a binary nature. The binary dependent variable in this study is women who choose to make business credit loans or not to make business credit loans.
loans. The main independent variable (X1) used is household income (as measured by household expenditure).

The general equation of the logit model is obtained from the derivative of the estimated probability equation. The equation is as follows (Gujarati, 2004):

\[ P_i = E(Y = 1 | X_i) = \frac{1}{2a + e^{-(\beta_1 + \beta_2 X_i)}} \]  

(1)

However, after being derived from several equations, it can produce a logit model as follows:

\[ L_i = \ln \left( \frac{P_i}{1 - P_i} \right) = Z_i = \beta_1 + \beta_2 X_i + u_i \]  

(2)

where, \( L_i \) is log odd ratio which is not just linear with respect to value \( X_i \), but also linear with parameter values \( \beta \), then the equation \( L_i \) called the Logit model.

Thus, to estimate the opportunities for women's participation in making business credit loans or not making business credit loans, the empirical equation model is used as follows:

\[ L_i = \left( \frac{P_i}{1 - P_i} \right) = \beta_0 + \beta_1 \text{Income} \text{RT} + \beta_2 \text{Education} \text{KRT} + \beta_3 \text{Age} \text{KRT} + \beta_4 \text{Job Status} \text{KRT} + \beta_5 \text{Home Ownership} + \beta_6 \text{Wilayah} \]  

(3)

Equation 3 above explains that the opportunity for women to choose to make business credit loans is not influenced by the main variable, namely household income in the household. Dummy dependent variable \( Y=1 \) is the participation of women in making business credit loans, while \( Y=0 \) is women who do not participate in making business credit loans. Other independent variables used were the education of the head of the household, the age of the head of the household, the employment status of the head of the household, the status of home ownership. The definitions of the variables used can be explained as follows:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent Variable</td>
<td>Dummy Women who make small and micro credit loans and those who do not make small and micro credit loans</td>
<td>1 = Credit Loans 0 = No</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>Household income of each household member as measured by household expenses</td>
<td>Skala log natural (Ln)</td>
</tr>
<tr>
<td></td>
<td>Ownership status of the residential building occupied</td>
<td>1 = Privately owned 0 = Rented</td>
</tr>
</tbody>
</table>

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**RESULTS AND ANALYSIS**

**Descriptive Analysis**

The characteristics of women's participation in making credit loans or not are explained in table 2. Descriptive analysis in this study aims to explain the description of the average of each variable studied. Observations in this study were as many as 64,769 samples from 1,109,749 household members spread across all provinces in Indonesia on data SUSENAS in 2016. Of the total observations, 6,915 women made business credit loans, while 57,854 did not make business loans. Women's participation in choosing to make credit loans is due to several reasons, namely household income, home status, education of the head of the household, age of the head of the household, husband's job status, and area of residence, each of which is explained as:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women's participation in business credit</td>
<td>0.106</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Household Income</td>
<td>14.891</td>
<td>12.191</td>
<td>18.225</td>
</tr>
<tr>
<td>Education of The Head of the Household</td>
<td>8.002</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>Age of Head of Household</td>
<td>45.716</td>
<td>16</td>
<td>97</td>
</tr>
<tr>
<td>Job Status of Head of Household</td>
<td>0.270</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Home Ownership</td>
<td>0.850</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Dummy Area</td>
<td>0.319</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: SUSENAS Data Processed with Stata

Women's participation in the microcredit finance used in this study comes from the National Community Empowerment Program (PNPM), People's Business Credit (KUR), Joint Business Groups (KUBE/KUB), Cooperative Programs, and Individuals. The main variable used to analyze women's opportunities to apply for business credit loans or not is household income. In table 2 above, the average household income using the natural logarithm is 14.89, which means that the average household income is IDR. 3,705,470 per month. Based on this amount, the household income with the minimum value used in the
The sample is IDR. 197,062 per month and the maximum amount of income is IDR. 82,200,000 per month.

The education of the head of the household is used in this study. The size used is years of schooling. The highest length of education for the head of the household is 22 years for 131 household heads. This number is less when compared to heads of households who have 8 years of education. The number of household heads with 8 years of education is 49,867 people. The length of education for 8 years is the highest number of household head education in the observations. So that the average length of education of the head of the household under observation is 8 years. The next independent variable used in this study is the age of the head of the household. The observed age of the head of the household in this study was the head of the household aged 16-97 years with an average age of the observed head of household is 45 years and 7 months.

The next variable related to the head of the household is the employment status of the head of the household. Husband's employment status uses a dummy variable with a value of 1, namely the husband works in the formal sector, and a value of 0, the husband works in the informal sector. The formal sector used in this study is the head of the household who works as a laborer/employee/employee. While the informal sector used in this study is the head of the household who is self-employed, trying to be assisted by non-permanent workers, trying to be assisted by permanent workers, casual workers, and unpaid family workers. The employment status of 17,530 household heads in the formal sector, and 47,224 household heads working in the informal sector.

The home status variable is also used in this study. The home status variable used in this study is a dummy variable with a value of 1 when the woman is in a household that has a private house, while a value of 0 is when the woman is in a household with a rented/other house status. The number of observations of women in households with privately owned home status was 55,044, while women in households with rented/other status were 9,710. From these observations, it can be explained that women in households with private ownership status are greater than women in households with rental/other housing status.

The last variable used in this study is the variable of residence. The area of residence variable uses a dummy variable with a value of 1 if the woman is in an urban area and a value of 0 if the woman lives in a rural area. The number of observations of women living in urban
areas was 20,690 people, while 44,064 people were in rural areas. This number explains that only 31.9 percent of women live in urban areas.

**Logit Model Estimation Results**

The estimation results using the logit model explain that by looking at the Pseudo R-square value of 0.0234 and the likelihood ratio test, the independent variable has a significant effect on the opportunity for women to participate in business credit. These results explain that this research can be analyzed further to explain the opportunities for women to participate in business credit.

Using the model equation 3 above, the results are obtained which can be explained in Table 3. The estimation results from this study explain that the variables of household income, age of the head of the household, employment status of the head of the household, status of home ownership, and area have a significant effect on the opportunity women participate in business credit loan.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds Ratio</th>
<th>Std.Err</th>
<th>z</th>
<th>P &gt; z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln Household Income</td>
<td>1.890</td>
<td>0.040</td>
<td>29.94</td>
<td>0.000</td>
</tr>
<tr>
<td>Years of Schooling’s Husband</td>
<td>1.004</td>
<td>0.006</td>
<td>0.59</td>
<td>0.555</td>
</tr>
<tr>
<td>Age of the Head of the Household</td>
<td>0.992</td>
<td>0.001</td>
<td>-6.14</td>
<td>0.000</td>
</tr>
<tr>
<td>Job Status ff the Head of the Household</td>
<td>0.898</td>
<td>0.279</td>
<td>-3.45</td>
<td>0.001</td>
</tr>
<tr>
<td>Home Ownership</td>
<td>1.195</td>
<td>0.048</td>
<td>4.41</td>
<td>0.000</td>
</tr>
<tr>
<td>Area</td>
<td>0.700</td>
<td>0.021</td>
<td>-11.43</td>
<td>0.000</td>
</tr>
<tr>
<td>_Cons</td>
<td>0.001</td>
<td>3.750</td>
<td>-35.42</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Prob > chi2 0.0000  
Pseudo R2 0.0234  
Log likelihood -20818.477

Source: SUSENAS Data Processed with Stata

The estimation results in Table 3 can be explained that the main variable of household income affects women's opportunities to participate in business loans. Based on the estimation results of the per capita income variable as measured using household expenditure, it is explained that the higher the household expenditure, the 1.89 times more women participate in business credit loans. The increase in household expenses has encouraged women to take business credit loans to help meet the needs of household expenses. The loan is used to open a business and increase household income so that it can help meet increased per capita expenditure. (Haile et al., 2012) explains that low income but high household
needs encourage women to make micro-credit loans in order to open businesses and increase household income.

The second variable that has a significant effect on the opportunities for women to participate in microcredit loans is the age of the head of the household. The higher the age of the head of the household, the 0.99 times greater the opportunity for women to apply for business credit loans. The results of this study are supported by the results of research conducted by (Herath et al., 2015). He explained that if the age of the head of the household is high, the opportunities for women to apply for microcredit loans also tend to increase.

The next variable that has a significant effect on the opportunities for women to participate in microcredit loans is the employment status of the head of the household. Women whose heads of households work in the formal sector have 0.89 less chances to apply for business credit loans compared to women whose heads of households work in the informal sector. Heads of households who work in the informal sector will be assisted by women in the household through business credit loans. Credit loans will be used to increase the number of goods from the businesses of heads of households who work in the informal sector and can also be used by women to open new businesses.

The home ownership variable also affects women's chances of participating in microcredit loans. Women who live in households that have private houses have a 1.19 times greater chance of making micro-credit loans compared to women who live in houses with rental status. This research is supported by research conducted by (Gwal, 2016). She explained that women who are in households that do not have assets such as land do not get the opportunity to become members of the group of microcredit financial institutions. This is because women who do not have assets find it difficult to repay loans and interest payments.

The last variable that affects women's opportunities to participate in microcredit loans is the area of residence. The results explain that women who live in urban areas have 0.7 times less opportunity to make micro-credit loans compared to women who live in rural areas. Women in rural areas are more likely to make micro credit loans aimed at opening small and medium enterprises (Anjugam & Ramasamy, 2007). So that with micro credit loans can increase women's income and increase the fulfillment of household needs.
CONCLUSION

Based on the explanation above, the estimation of research using the logit model explains that the variables of household income, age of the head of the household, employment status of the head of the household, status of home ownership, and area have a significant effect on the opportunities for women to participate in business credit loans.

An interesting finding from this research is that the increase in household expenditure used to measure household income encourages women to make microcredit loans. Household expenditures are increasing due to increasingly expensive needs and living costs, but income tends to remain steady encouraging women to open business opportunities through business credit loans. Through these loans, it is hoped that women can increase household income to meet their needs.

Based on the conclusions above, it is suggested to further researchers to expand the use of variables that affect women's opportunities to make microcredit loans. In addition, it is also suggested that further research is conducted to see whether small and micro business credit loans are effective in reducing the level of poverty in Indonesia.

REFERENCE


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