Analysis of Female Labor Participation in Increasing Family Income in Simalungun Regency

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A R T I C L E I N F O

ABSTRACT

The participation of women in increasing family income by working is commonplace, women not only act as housewives, but also can work to help their husbands to increase their income. Pematang Kerasa Village is one of the areas with more female population than male population. Where many women in Pematang Kerasa Village work to help their husbands in increasing family income, this is because the husband's income is uncertain, insufficient, or even has no income at all. This study aims to determine whether or not there is a simultaneous and partial influence of age, education, working hours and the number of dependents on the participation income of women workers in Pematang Kerasa Village, Bandar District, Simalungun Regency. As well as knowing the contribution of women workers' participation income to total household income. The method used in this study is to use the Multiple Linear Regression method with a probability sample design with a sample size of 94 people, where the respondents studied were female workers who participated in increasing family income in Pematang Kerasa Village. The results showed that the income function model for the participation of female workers in Pematang Kerasa was: Y= 2595.584 + 14525.573U + 66874,858P + 47531.455Jk +388444,529M. Taken together, it was found that all the variables studied were age, education, working hours and number of dependents have a positive and significant effect on the participation income of women workers in Pematang Kerasa Village, Bandar District, Simalungun Regency. Meanwhile, the contribution of the participation income of women workers in Pematang Kerasa Village to the total family income is 48.45%.

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1. INTODUCTION

Development is an effort to achieve social welfare growth, namely in the form of activities carried out by a country to develop economic activities and people's living standards. Development can be said to be successful if it is able to increase welfare in a broad sense. The influence of the condition of the population that has adequate quality will encourage economic growth and vice versa people who have low quality will be a burden in development. Economic development is a process that causes the income per capita of the population of a society to increase in the long term (Sadono Sukirno, 2003). One of the important goals in economic development is the provision of sufficient employment to keep up with the growth of the labor force. Population growth will automatically create an increase in the labor force. Problems will arise when population growth is not proportional to the availability of existing jobs, so it will add new unemployment. This will further increase the burden on the welfare of the community. Especially for developing countries, especially Indonesia, where the growth of the labor force is faster than the growth of job opportunities.

Simalungun Regency is one of the autonomous districts in North Sumatra Province, the area of this district is 4,372.50 km² or 6.12 percent of the total area of North Sumatra Province. The population of Simalungun Regency in 2015 was 849,405 people with a population density of 194.26 people/km². This area is divided into 31 sub-districts, 22 sub-districts, and 345 villages/nagori. Since 2008, the capital of Simalungun Regency, which was previously located in Pematang Siantar, has been moved to Raya District. The Central Bureau of Statistics of Simalungun Regency stated that the economic growth of Simalungun Regency in 2014 was 5.33 percent. Simalungun Regency's GRDP in 2014 at current prices is 25,307.05 billion rupiahs and at constant prices is 21,197.54 billion rupiahs. If viewed according to the field of business, the agricultural sector, forestry and fisheries provide the largest contribution to the total GRDP, which is 12,028.85 billion rupiah. Meanwhile, the business fields with the smallest contribution are water supply, waste treatment, waste and recycling, which is 16.82 billion rupiahs.

Women's limitations in education and age cause women to want to work in all types of work and generally work in the informal sector, such as trading, housemaids, farm laborers, laborers and others. This is done in order to be able to divide time between work and family, and does not require special skills and a high educational background. At this time, women's participation in improving family welfare by means of work is common. Women not only act as housewives, but can also work to help their husbands to increase their income due to the demands of the family's economic needs or are called secondary breadwinners. The participation of women in improving the family economy is no less important than that of men. Women are able to do many things, both reproductive which does not produce material or work to earn a living which directly generates (income earning work) for economic continuity and family welfare. In Pematang Kerarasa, many women work to help their husbands in increasing family income. This is because the husband's income is uncertain, insufficient, or even has no income at all. There are still many husbands who only spend their free time relaxing, such as hanging out at coffee shops, fishing and so on. So the time that should be used for work is just wasted. Women are able to do many things, both reproductive which does not produce material or work to earn a living which directly generates (income earning work) for economic continuity and family welfare. In Pematang Kerarasa, many women work to help their husbands in increasing family income. This is because the husband's income is uncertain, insufficient, or even has no income at all. There are still many husbands who only spend their free time relaxing, such as hanging out at coffee shops, fishing and so on. So the time that should be used for work is just wasted. Women are able to do many things, both reproductive which does not produce material or work to earn a living which directly generates (income earning work) for economic continuity and family welfare. In Pematang Kerarasa, many women work to help their husbands in increasing family income. This is because the husband's income is uncertain, insufficient, or even has no income at all. There are still many husbands who only spend their free time relaxing, such as hanging out at coffee shops fishing and so on. So the time that should be used for work is just wasted.

At this time women are required to participate in work and look for additional income because currently meeting the needs of the family is increasingly complex. In other words, spending on households is not only limited to food and clothing needs, but has experienced additions such as

education, health, recreation, lifestyle and others. The number of family members also greatly determines the number of family needs. The more family members, the more the number of family needs that must be met. And vice versa, fewer family members means fewer needs that must be met by the family. So that in a family with a large number of members, there will be many needs that must be met. The larger the size of the household, the more members of the household, which in the end the burden on the household will be heavier to meet their daily needs. Likewise, the number of insured children in the family and family members who are disabled or elderly will have an impact on the size of a family's expenses. They cannot bear their own living expenses so they depend on the head of the family and his wife. Children who are not yet adults need to be helped with education, health and other living expenses. They cannot bear their own living expenses so they depend on the head of the family and his wife. Children who are not yet adults need to be helped with education, health and other living expenses. They cannot bear their own living expenses so they depend on the head of the family and his wife. Children who are not yet adults need to be helped with education, health and other living expenses.

The purpose of this research in addition to completing the author's study, also intends to find useful information, including:

a. To determine whether or not there is a simultaneous and partial influence of age, education, working hours, number of dependents on the participation income of female workers in Pematang Kerasa Village.

b. To find out how big the contribution of women workers' participation income to the total household income in Pematang Kerasa Village.

The hypotheses in this study are:

1) Ho: there is no effect between factors of age, education level, working hours, number of dependents simultaneously on the participation income of women workers in Pematang Kerasa Village.

   Hα: there is an influence between the factors of age, education level, working hours, number of dependents simultaneously on the participation income of women workers in Pematang Kerasa Village.

2) Ho1: there is no influence between the age factor on the participation income of women workers in Pematang Kerasa Village.

   Hα1: there is an influence between the age factor on the participation income of women workers in Pematang Kerasa Village.

3) Ho2: there is no influence between the education factor on the participation income of women workers in Pematang Kerasa Village.

   Hα2: There is an influence between education factors on the participation income of women workers in Pematang Kerasa Village.

4) Ho3: there is no influence between the factors of working hours on the participation income of women workers in Pematang Kerasa Village.

   Hα3: there is an influence between the working hours factor on the participation income of women workers in Pematang Kerasa Village.

5) Ho4: there is no influence between the number of dependents on the participation income of women workers in Pematang Kerasa Village.

   Hα4: There is an influence between the number of dependents on the participation income of women workers in Pematang Kerasa Village.

2. RESEARCH METHODS

2.1 Operational Definition

The operational definition is the theoretical basis used to conduct research where one variable can be connected to another so that research can be linked to the desired data.

The operational definitions of variables are:

a. The dependent variable (Y) is the participation income of female workers (Rp/month).
b. Age of female workers (U), is the age of female workers at the time of the study (years).
c. Education of female workers (F), is the level of education of female workers completed (years).
d. Working hours of female workers (Jk), is the length of time devoted to earning a living (hours/day).
e. The number of dependents of female workers (Jt), is the number of family members that are borne by female workers (persons).

2.2 Population and Sample

In this case, the population taken is all workers in Pematang Kerasa Village, totaling 1,514 people. In this case the researcher uses a probability sample design with a simple random sampling method, that is, each element in the population has an equal chance of being selected. By taking a random sample from the entire population. In this study, the researcher used the degree of error or = 10% with a degree of confidence of 90%, meaning that the researcher believed that in estimating the population parameters the level of truth was 90%. The reason the researcher uses = 10% is because of the limited time, cost, and other resources in conducting the research. By using the Slovin formula, the number of samples can be determined as follows:

$$n = \frac{N}{1 + Ne^2}$$
$$n = \frac{1514}{1 + 1514\ x\ 10\%^2}$$
$$n = 93,80\ (digenapkan\ menjadi\ v94)$$

So the number of samples that will be used as respondents by researchers is 94 people.

2.3 Data Sources and Data Collection Techniques

The sources of data in this study are:
a. Primary data, namely data obtained by direct interviews with respondents in Pematang Kerasa Village.
b. Secondary data, namely data obtained from the Central Statistics Agency, as well as data obtained from the village office.

Data collection techniques used by researchers in this study are as follows:
a. Interview, namely as a direct communication technique to obtain the required data.
b. Questionnaire, which is a data collection technique through the distribution of a list of questions to respondents who are members of the research sample.

2.4 Data Analysis Techniques

a. Classic Assumption

Classical assumption test is a statistical requirement that must be met in multiple linear regression analysis based on ordinary least squares (OLS). The classical assumption tests that are often used are:
1) Normality test
2) Multicollinearity Test
3) Heteroscedasticity Test
4) Autocorrelation Test
5) Linearity Test

b. Multiple Linear Regression Analysis

The multiple linear regression equation is stated as follows:

Y = + b1U + b2P + b3Jk + b4M +

Information:
Y   = Participation income of women workers (Rp/month).
☐   = Constant
b1-b4   = Regression coefficient
U   = Age of female workers (years).
P   =Education of female workers (years).
Jk   = Working hours of female workers (hours/day).

jt   = Number of dependents of female workers (persons).
☐   = nuisance error

2.5 Partial Correlation Test (t)

Used to test each independent variable has an effect on the dependent variable with the following steps:

a. Test the correlation between age and women's participation income.
1) Hypothesis:
   a) Ho1 : rUY = 0 (there is no relationship between the age factor and the participation income of women workers in Simalungun Regency).
   b) Hα1 : rUY 0 (there is a relationship between the age factor and the participation income of women workers in Simalungun Regency).

b. The correlation test used is the t statistic test.

$$t\ hitung = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

Where: r = correlation coefficient

$$r = \frac{n\sum UY - (\sum U)(\sum Y)}{\sqrt{(n\sum U^2 - (\sum U)^2(n\sum Y^2 - (\sum Y)^2)}}$$

Where:
n   = number of samples
U   = age
Y   = participation income of women workers
Will be compared with t table, namely:

$$t\ tabel = \pm t\left(\frac{\alpha}{2}, n-1\right), \alpha = 10\%$$

c. Test Criteria

Accept Ho if –t table t count ≤ t table, otherwise reject Ho. The author in this case uses a regression tool. It is said to be significant (there is a relationship between the observed independent variable and the dependent variable) or reject Ho. If the obtained sig value < = 10%.

To find out the correlation test between education and the participation income of women workers, the correlation test between working hours and the participation income of women workers, the correlation test between the number of dependents and the participation income of women workers, was carried out with the same pattern.

2.6 Multiple Correlation Test (F)

It is used to test whether age, education, working hours, number of dependents are simultaneously on the participation income of women workers with the following steps:

a. Hypothesis
1) Ho : rU,P,Jk,Jt,Y = 0 (there is no influence between factors of age, education level, working hours, number of dependents simultaneously on the participation income of women workers in Simalungun Regency).
2) Hα : rU,P,Jk,Jt,Y 0 (there is an influence between factors of age, education level, working hours, number of dependents simultaneously on the participation income of women workers in Simalungun Regency).

b. The correlation test used is the F statistical test:

$$F\ hitung = \frac{R^2/k}{(1-R^2)/(n-k-1)}$$

Where :
Coefficient of determination   : R²
Number of independent variables   : k
Number of samples   : n
Degree of error   :

The calculated F value is compared with the F table value where F table:

$$F\ tabel = \pm t\left(\frac{\alpha}{2}, n-1\right), \alpha = 10\%$$

c. Test Criteria

Accept Ho if –F table F count ≤ F table, otherwise reject Ho. The author in this case uses a regression tool. It is said to be significant (there is a relationship between the observed independent variable and the dependent variable) or reject Ho. If the obtained sig value < = 10%.

2.7 Coefficient of Determination (D)

The coefficient of determination is a statistical value that can be used to measure the percentage value of the contribution of the independent variables (age, education level, working hours, number of dependents) in explaining the variation in the dependent variable (income of female workers' participation). Mathematically it can be written as follows:

$$D = R^2 \times 100\%$$

Where:

D   = coefficient of determination

R^2 = square of multiple correlation coefficient

3.   RESULTS AND DISCUSSION

3.1 Analysis of the Income Contribution of Women Workers to Family Income.

The total income received by female worker respondents in Pematang Kerasa Village will be divided by the total family income and multiplied by 100% so that the contribution of the respondent's (female) income to family income will be seen. The following is an analysis of the income contribution of female respondents who work to family income. Data on the total family income of female worker respondents are as follows:

Table 1

Data on Total Income of Female Working Families

Respondent's Income (female workers)	Total Family Income (wife and husband)
144,050,000	297.300.000

Based on the data in the table above, the analysis of the contribution of respondents' income to family income is as follows:

$$K = \frac{pendapatan\ pekerja\ perempuan}{total\ pendapatan\ keluarga} x\ 100\%$$
$$K = \frac{144.050.000}{297.300.000} x\ 100\%$$
$$K = 48.45\%$$

The contribution of female workers' participation income is one of the largest sources of family income after husband's income, this can be seen from the percentage level of female workers' participation income contribution to the total family income of 48.45%. Thus this contribution is very important for women working families to increase their family income.

3.2 Partial Correlation Test Analysis (t)

a.   Test the correlation between age and participation income of female workers.

It is said to be significant (there is a relationship between the age factor and the participation income of female workers) or reject Ho. If the sig value obtained is < = 10%, because the sig value is 0.040, it is said to be significant. Conclusion: H0 is rejected and Ha is accepted, (there is a relationship between the age factor and the participation income of women workers in Pematang Kerasa Village).

b.   Test the correlation between education and the participation income of women workers.

It is said to be significant (there is a relationship between the education factor and the participation income of female workers) or reject Ho. If the sig value obtained is < = 10%, because the sig value is 0.009, it is said to be significant. Conclusion: H0 is rejected and Ha is accepted,

(there is a relationship between education factors and the participation income of women workers in Pematang Kerasa Village).

c. Test the correlation between working hours and the participation income of women workers.

It is said to be significant (there is a relationship between the working hours factor and the participation income of female workers) or reject Ho. If the sig value obtained is < = 10%, because the sig value is 0.014, it is said to be significant. Conclusion: H0 is rejected and Ha is accepted (there is a relationship between the working hours factor and the participation income of women workers in Pematang Kerasa Village).

d. Test the correlation between the number of dependents with the participation income of women workers.

It is said to be significant (there is a relationship between the number of dependents and the participation income of women workers) or reject Ho. If the sig value obtained is < = 10%, because the sig value is 0.008, it is said to be significant. Conclusion: H0 is rejected and Ha is accepted, (there is a relationship between the number of dependents on the participation income of women workers in Pematang Kerasa Village).

3.3 Multiple Correlation Test Analysis (F)

In this case the researcher to process the data using computer program tools. It is said to be significant (there is a relationship between the factors of age, education level, working hours, and number of dependents simultaneously on the participation income of women workers in Pematang Kerasa Village) or reject Ho. If the sig value obtained is < = 10%, because the sig value is 0.025, it is said to be significant. Conclusion: H0 is rejected and Ha is accepted (there is a correlation between factors of age, education level, working hours, and number of dependents simultaneously on the participation income of female workers in Pematang Kerasa Village).

3.4 Coefficient of Determination Analysis (D)

From the results of the regression analysis obtained R^2 of 0.709 meaning that the amount of contribution given by the independent variables, namely age, education, working hours and the number of dependents on the participation income of female workers in Pematang Kerasa Village is 70.90%, while the remaining 22.10% is influenced by other variables outside the variable. studied, such as length of work, number of children under five, nature of work, etc.

3.5 Analysis of the most influential variables (Dominant)

So it can be concluded that the education level variable (P) has the most dominant effect on the participation income of women working in Pematang Kerasa Village. A person who has a higher education has a greater desire to work than a person who has a low education in order to lead a better life.

4. CONCLUSION

Based on the questionnaire (questionnaire) collected and analyzed, it can be concluded:
1. The average contribution of the participation income of women workers in Pematang Kerarasa Village is 48.45 percent. Thus this contribution is very important for women working families to increase their family income.
2. Age, education, working hours, and number of dependents have a positive and significant partial effect on the participation income of women workers in Pematang Kerasa Village.
3. Age, education, working hours, and number of dependents have a positive and significant effect simultaneously on the participation income of women workers in Pematang Kerasa Village.
4. The most influential (dominant) factor affecting the participation income of women workers in Pematang Kerasa Village is education.

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