Factors Affecting the Women’s Labor Participation at Home Industry of Rambak Crackers in Tulungagung Regency

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Abstract. This research was conducted at the village of Sembung, Tulungagung subdistrict, Tulungagung Regency from November - December 2017. The purpose of this study was to determine the factors affecting the woman’s labour participation at home industry of rambak crackers in Tulungagung Regency. Around 75 females staff and 30 owners of home industry were selected as respondents by purposive sampling. The research method used was survey method. Data were collected by survey, observation, and direct interviews by using structured questionnaires. Data were analysed by using multiple linear regression and descriptive analysis. The research results showed that the distance and wages were significantly influence the level of labor woman participation. The value of coefficient determination was around 0.669. It means that the contributions effect of X variable to Y was 66.9%. It can be concluded that the variable of distance and the number of wages were giving significant effect on women's labor participation rate.

1. Introduction
The role of agriculture and livestock sector in economic development is very important because most of people in agrarian countries such as Indonesia, rely on their life on those sectors. As a developing country, Indonesia continues to develop the industrial sector. The development process will not run properly if there are no links between the existing development sectors. According to Margarita et al. [1], the industrial sector is a sector that is capable of becoming a basic sector compared to the other manufacturing industry sector which is currently a lot of developed in the community. The industrial classification based on labor is divided into home industries, small industries, medium industries, and large industries.

Small industries, namely industries with a workforce of about 5 to 19 people. In addition, the other characteristics of small industries are the capital used is relatively small, the workforce comes from the surrounding environment and generally there is still a close relationship. One of the home industries in East Java Province that recruits female workers is the rambak cracker industry. Rambak cracker industry is often found in Central Java Province, namely Kendal Regency, Pati, Sleman Yogyakarta, Gunung Kidul, Purworejo, and Boyolali. While, some locations in East Java Province such as Mojokerto, Sidoarjo, Jember, and Tulungagung Regency [2].

Based on the Central Statistics Agency of Tulungagung Regency [3], most number of large/medium industries according to sub districts and commodity groups were in Tulungagung Regency with a total of 40 types of industries including the rambak cracker processing industry. Furthermore, there are
approximately 70 units of the food and beverage processing industry with a total workforce of 1,595. One of the centers for processing rambak crackers is centered in Sembung Village, Tulungagung District, Tulungagung Regency.

The development of home industry nowadays creates jobs for men and women. This condition showed that the development of industrialization in the small or household industry sector in Indonesia is highest in employment. That is because the small industry and home industry relatively do not require high expertise, small capital and even in the countryside. Most of small industries, especially those done at home absorb a lot of female workers. The involvement of women in the home industry is influenced by several factors such as economic pressures, a very supportive family environment at work, and no other job opportunities that match their skills. In addition, Noor et al. [4] also states that the level of labor force participation is influenced by some factors such as demographic, social and economic factors, including the number of residents who are still in school, the number of residents who take care of the household, income level, number of dependents of the family concerned, age, wage level and education. According to this background, this study was aimed to analyze factors affecting the women’s labor participation of home industry of rambak crackers in Tulungagung Regency.

2. Material and Methods
This research was conducted around a month at Sembung Village, Tulungagung Sub-district, Tulungagung Regency starting from November to December 2017. Survey method was used as research method with descriptive quantitative approach. Data were collected through observation, direct interviews to 75 woman workers (female staffs) and 30 people of business owner of rambak crackers household industry by using structured questionnaire. The research samples were chosen by purposive sampling. Data were analysed by using multiple linear regression and descriptive analysis with software of statistical package for social science (SPPS).

Multiple linear regression is useful for getting the effect of two variables criteria or to look for functional relationships of two or more predictors. In other words, multiple linear regression can be used to find out the effect of two variable criterions namely dependent variable (Y) and independent variable (X). The model of multiple linear regression is as follows:

\[ Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_2X_2 + \ldots + \beta_nX_n + \epsilon_i \]

3. Results and Discussion

3.1. The profile of rambak crackers home industry at Tulungagung Regency
Skin/leather crackers or known as rambak crackers are crackers that are not made from tapioca flour dough, but from cattle, buffalo, rabbit, chicken, or dried fish skins/leathers. Buffalo skin/leather used as a raw material for making rambak crackers can be taken from different layers of skin, namely stratum papillare and stratum reticulare.

Sembung Village is known as the center of rambak crackers which was famous since 1990. The Department of Industry and Trade of Tulungagung Regency [3] states that the number of Small and Medium Industries (IKM) or home industries in Sembung Village is 40 SMIs for processing cattle and buffalo rambak crackers. In one month on average a home industry is able to produce 4 to 5 times raw crackers and mature crackers. While the amount of the production depends on the season because it is related to the drying process. If the rainy season the drying process takes about 7 days to dry completely, while if it is sweltering only takes 3-4 days. Therefore, ordering leather raw materials is done a maximum of 2 weeks before production to prevent a shortage of leather supply which can hamper the production.

The price of cattle leather raw material is around IDR. 38,000.00/kg, and IDR. 44,000.00/kg for buffalo leather. The price of buffalo leather is more expensive than cattle leather with a difference of around IDR. 6,000, it because when processed into ripe crackers the tastes savorier, the texture is crisper, the color is whiter compared to cattle leather crackers, and due to the buffalo leather raw material imported from outside of Java Island, such as Sumbawa, Flores, NTT, NTB, Kalimantan, then influence
to higher cost of transportation. Data of the number of home industry of rambak crackers in Sembung Village, Tulungagung Regency according to the Trade and Industry Office of Tulungagung Regency [3] are shown in Table 1 as follows:

**Table 1. The number of rambak crackers home industry in Sembung Village, Tulungagung Regency**

| No. | Name of home industry | Address | Contact No. |
|-----|------------------------|---------|-------------|
| 1   | Utama Super            | Sembung/04/03 | 08125937399 |
| 2   | Sujarno                | Sembung/04/03 | 085791200354 |
| 3   | SM                     | Jln. Moch. Hatta No. 44C | 085258187894 |
| 4   | Misriati               | Jln. Moch. Hatta | 082141524663 |
| 5   | Putra Lestari          | Jln. Moch. Hatta No. 44 | 081230237370 |
| 6   | Miswan                 | Sembung/04/03 | 081333247219 |
| 7   | Supriyadi              | Sembung/04/03 | 081335016559 |
| 8   | Mei Sulistyoo          | Sembung/04/03 | 082143151127 |
| 9   | Harapan Jaya           | Sembung/04/03 | 081359010092 |
| 10  | Wahyu Abadi            | Jln. Moch. Hatta No. 40 C | 082338878694 |
| 11  | Lestari Eco            | Jln. Moch. Hatta | 081359413065 |
| 12  | lestari                | Jln. Moch. Hatta | 081231791315 |
| 13  | Wahyu Abadi            | Jln. Moch. Hatta | 081359751100 |
| 14  | Sami Sari              | Jln. Moch. Hatta | 081359192896 |
| 15  | Asli lesatri           | Jln. Moch. Hatta | 081230237770 |
| 16  | Sami Asri              | Sembung/04/03 | 081359192896 |
| 17  | Lestari                | Jln. Moch. Hatta 04/03 | 081231791315 |
| 18  | Nursiyah               | Jln. Moch. Hatta | 085735281027 |
| 19  | Istimewa               | Jln. Moch. Hatta No. 43B | 085708146711 |
| 20  | Setyo Rahayu           | Jln. Moch. Hatta | 081359061613 |
| 21  | Prima Lestari          | Jln. Moch. Hatta | 081335800421 |
| 22  | Imam Fatomi            | Jln. Moch. Hatta | 081335530301 |
| 23  | nurhadi                | Jln. Moch. Hatta No. 46G | 085790232394 |
| 24  | Eka Jaya               | Jln. Moch. Hatta | 08123434718 |
| 25  | Intan Jaya             | Jln. Moch. Hatta No. 43 | 081335834334 |
| 26  | Prima Sumber Rasa      | Sembung/04/03 | 081350850617 |
| 27  | Sumber Rejeki          | Sembung/04/03 | 082335590090 |
| 29  | Budi Santoso           | Sembung/04/03 | 081234413240 |
| 29  | Katmilan               | Sembung/04/03 | 085769967001 |
| 30  | supriyadi              | Jln. Moch. Hatta | 081235591111 |
| 31  | Kriswanto Basuki       | Jln. Moch. Hatta/04/03 | 08113021150 |
| 31  | katiyem                | Sembung/04/03 | 081359957777 |
The need for leather raw materials in one production is different at each home industry, ranges between 150 kg – 350 kg per month. The highest requirement is 350 kg of raw leather at once production divided into 200 kg for cow leather and 150 kg for buffalo leather. So if in one month there are 5 times production, it required an average of about 1,310 kg of leather raw materials. One sheet of cattle and buffalo leather if processed into raw crackers can be 5 – 6 kg. So, if a home industry produces around 2000 kg of crackers, it takes about 33 pieces of cattle or buffalo leather. The average production of raw crackers is around 23.6 kg for cow leather and 23.3 kg for buffalo leather per production.

The price of raw rambak crackers ranged between IDR 100,000-105,000 / kg (cattle leather) and IDR 110,000-120,000 / kg (buffalo leather). Whereas the price for finished products or mature rambak crackers was ranges between IDR. 130,000-140,000 / kg (for cattle leather) and IDR. 140,000-150,000 / kg (for buffalo leather). The data of total production and leather raw material requirements were shown at Table 2 as follows

| Number of Respondents | Raw skin/leather (Kg/day/production) | Raw crackers (Kg/day/production) | Price of leather raw material (IDR/kg) |
|-----------------------|-------------------------------------|----------------------------------|---------------------------------------|
|                       | cattle | buffalo | cattle | buffalo | cattle | Buffalo |
| 1                     | 150    | 150     | 120    | 120     | 36,000 | 40,000  |
| 2                     | 150    | 150     | 120    | 120     | 35,000 | 40,000  |
| 3                     | 150    | 150     | 120    | 120     | 40,000 | 45,000  |
| 4                     | 125    | 125     | 95     | 95      | 34,000 | 41,000  |
| 5                     | 200    | 150     | 170    | 120     | 40,000 | 46,000  |
| 6                     | 150    | 150     | 120    | 120     | 40,000 | 45,000  |
| 7                     | 100    | 100     | 70     | 70      | 35,000 | 40,000  |
| 8                     | 150    | 150     | 120    | 120     | 45,000 | 50,000  |
| 9                     | 150    | 150     | 120    | 120     | 40,000 | 50,000  |
| 10                    | 100    | 100     | 70     | 70      | 45,000 | 50,000  |
| 11                    | 150    | 150     | 120    | 120     | 37,000 | 45,000  |
| 12                    | 150    | 150     | 120    | 120     | 38,000 | 45,000  |
| 13                    | 100    | 100     | 70     | 70      | 40,000 | 45,000  |
| 14                    | 125    | 125     | 95     | 95      | 40,000 | 50,000  |
| 15                    | 100    | 100     | 70     | 70      | 40,000 | 50,000  |
| 16                    | 150    | 150     | 120    | 120     | 35,000 | 40,000  |
| 17                    | 125    | 125     | 95     | 95      | 38,000 | 43,000  |
| 18                    | 100    | 100     | 70     | 70      | 35,000 | 40,000  |
| 19                    | 125    | 125     | 95     | 95      | 35,000 | 40,000  |
| 20                    | 150    | 150     | 120    | 120     | 42,000 | 46,000  |
| 21                    | 100    | 100     | 70     | 70      | 38,000 | 44,000  |
Based on Table 2, it can be explained that in one month there were 4 (four) times rambak crackers production. The amount of production per month will increase on at certain time/season, such as Muslim religious holidays (i.e, Idul Fitri). In addition, the turnover obtained by the home industry an average of IDR. 18,802,500 for once production and sales.

3.2. Labour profile
Total workers involved in all activities in rambak crackers home industry at Sembung Village, Tulungagung Regency were 213 male and 160 female. While, the average number of male workers is ranges between 5-11 people, whereas the female workers range from 4-9 people per home industry (Figure 1 & 2).

The tasks or main job of the male workers covers some activities, such as unloading leather from trucks, weighing the skin/leather, soaking the skin/leather using lime water, washing, feathering, boiling, frying and distribution of rambak crackers to the point of sale such as outlets and delivering orders to consumers. While, women's labour duties include cutting skin/leather, mixing with herbs, and drying to packaging. All of the workers have 7 hours per day. The number of workers and capacity production of rambak crackers home industry at once production (kg/production) can be seen at Table 3.
3.3. Factors affecting the women's labour participation at home industry of rambak crackers

There are some factors that influence women's work participation in the industry such as age, education level, and the number of family dependents. Furthermore, Wantini and Kurniati [5] also explains that there are socioeconomic factors that influence work participation including age, number of family dependents, wage level, and education level. In addition, Noor, Normelani, and Karunia [4] stated if labor participation is influenced by demographic, social, and economic factors. The variable observed in this research were age, level of education, the distance of residence and home industry, and amount of wage. Multiple linear regression is useful for getting the effect of two variables criteria or to look for functional relationships of two or more predictors. The research result of multiple linear regression analysis can be seen in the following Table 4 as follows:

| Table 4. Coefficient regression |
|--------------------------------|
| **Coefficients**               |
| Model | Unstandardized Coefficients | Standardized Coefficient Std. Error | Standardized Coefficient Beta | t | Sig. |
|-------|-----------------------------|-------------------------------------|-------------------------------|---|-----|
| 1     | (Constant)                  | 183.122                             |                               |   |     |
|       | Age (X1)                    | -0.003                              | 18.204                        | 0.011 | 0.992 |

| Total | 160 | 213 |
|-------|-----|-----|
| Average | 23.6 | 23.3 | 49.5 | 48.16 |
Based on Table 4, the mathematical equation of multiple linear regression analysis as follows:

\[ Y = 183,122 - 0,003 X_1 + 0,265 X_2 + 0,963 X_3 - 0,003 X_4 + 0,671 X_5 + \epsilon_i \]

From the result of multiple regression analysis, there are two variables which gave significantly influence on women’s labor participation of rambak crackers in Tulungagung Regency, namely the distance of residence (X4) and total income/wage (X5). Age (X1) gave negative influence to women’s labor participation. It means that the more increase age of respondent, it would be decreasing the level of women’s labor work participation. Sulistriyanti [6] states that the older a person is, the endurance of the body will be reduced and the intensity of working hours will be reduced in public activities.

The level of education (X2) shows positive influence to women’s labor work participation. It is implying that the more a person's level of education increases, the level of work participation will also increase. It is in line with Rohayati (2014) which states that workers who have higher education will be able to compete for decent work so that decent income is also obtained. The higher education will be able to increase employment opportunities to get jobs in accordance with their education and decent income to meet their daily needs.

The variable of number of family dependents (X3) also shows positive influence to women’s labor work participation. It means that the more the number of family dependents, the level of work participation will increase to meet the increasing needs as well. On the other hand, the variable of the distance residence and home industry (X4) gave negative influence to women’s labor work participation. It might be getting further the distance of residence from the workplace, it could decrease the level of work participation. Widyastuti and Pujiono [7] stated that the distance of the residence to the workplace is the distance that the respondent must travel to work, the more distance is wasted, the more time wasted so the level of time efficiency decreases.

Furthermore, variable of total income/ wage have a positive influence to women’s labor work participation. It shows that the higher wage offered, the higher the level of work participation. So that the workers are more motivated to work because the wages they earn will be enough to meet their needs.

This results in line with Yulianti and Ratnasari [8] which states that the level of wages needs to be sufficient and the high wages must be in line with economic expectations.

3.4. Coefficient of determinant

The coefficient of determination \(R^2\) or R square) is used as information about matches a model. In other words, the coefficient of determination \(R^2\) (R Square) is a measure of the accuracy or suitability of the regression lines obtained from the parameter estimation results. Besides, the coefficient of determination can also be used to measure the proportion of total diversity around the mean that can be explained by the regression line. The value of coefficient determinant ranges between 0 to 1. The research results
shows that the value of R Square was 6.99. It indicated that around 69.9% factors affecting women’s labor work participation on rambak crackers can be explained/influenced by dependent variables measured in this study. While, the remaining 31.1% is can be explained by other factors which not observed in this research.

4. Conclusion and recommendation
Based on the research results, it can be concluded that factors affecting women’s labor work participation on rambak crackers at Tulungagung Regency were the distance of residence and home industry, and the wage received. It can be recommending that product diversification needs to be done by adding some innovations, for example in terms of packaging made more diverse and interesting, as well as making a variety of flavors of rambak crackers. In addition, further research needs to be done by developing other variables outside of the variables used in this study.

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