FEMALE PARTICIPATION IN THE LABOR MARKET IN BENGKULU CITY

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Abstract

The purpose of this study was to analyze the differences of female worker participation rates in the city of Bengkulu. The data used in this study was primary data by distributing questionnaires to the respondents. Respondents were 130 people of married working women. Sampling method used was purposive sampling. Analysis tool used was discriminant analysis. Dependent variable was the level of female worker participation. Independent variables consisted of income of the husband, age, education, and family size.

Results shows the majority of respondents working as merchants (45% of 111 people) and the civil servants (38.7%), with age between 35 to 46 years, under graduated and senior high school, with the number of children 3 or 4 people. Work participation rate of respondents ranged from 60-270 hours per month with the average work participation of 163.9 hours a month. Incomes received by the respondents are among 0.25 million and five million rupiahs per month, with the average income of 1.795 million rupiahs. The majority of respondents earn incomes approximately from 1.50 million to 2.74 million rupiahs. Then, the husband's income of respondents earn from 0.35 million to 10 million rupiahs, with the average income is 2.011 million rupiahs.

Using of discriminant analysis, discriminant model formed in this study is valid. Group of female workers with low work participation differ significantly from the group of female workers with high work participation. Three variables that discriminate these two groups are education level, age, and income of the husband. Group of female workers with high work participation have higher education level, older age and husband's earnings greater than the group of female workers with low work participation. The variable that discriminating most is education level, while the variable discriminates the least is the husband's income. Implications of the study is that family income is higher if the husband and wife both working. With higher incomes, of course, needs of family life could become more fulfilled. With more and more women working in the community, so the family income also increased, therefore it will improve people's standard life. To reach that condition explained before, the married women should work with the high participation rate (full-time worker). To be full-time female workers, it is necessary efforts to improve the education level of women.

1. INTRODUCTION

The involvement of women in economic activities is familiar especially to the economically weak people or those living in rural areas. At first women's activities was in agriculture sector. Along with the economic development, more women are turning work into other sectors such as services, trade, industry and other sectors.

Since the job opportunities outside the role of the household opened for women, women began to carry out dual roles as housewives as well as breadwinners. Female workers managed their work by reducing the time for housework. Women, in addition to be responsible with the housework, were also working to earn money that has been limited in order to meet the survival of their families. In other words, the female worker participation of course led to the addition of family income.

Today more jobs and occupations are available for women; areas that previously were dominated by men slowly begin to be filled by women. This causes more women work outside the home. The increasing involvement of women in economic activity can be seen from the increasing number of women who work. In the city of Bengkulu, the percentage of working women steadily increased until 38% in 2007 and reached 41.5% in 2008, whereas economic development in the city of Bengkulu was not as good as other regions. It means that jobs in the city of Bengkulu were less than other regions. With the few jobs and occupation in the city of Bengkulu, but the female worker participation increased, of course, it is interesting to be analyzed. Several studies showed that there were positive relationship between female worker participation rates and family income, education level, and age of those female workers. But, those studies did not reveal explicitly about the amount of devoting hours used by female workers to work outside; whether high participation rate (full time) or low participation part time workers. This is important to be analyzed, because there are different consequences of it. Full time female workers have to go outside for long time every day. So, they have to consider several factors before deciding to be full time worker or part time worker. Some of them could not work full time because of their low education level even though they are already old. Furthermore, they could not work in the formal sectors; they work in the informal sectors such as housemaid. So, the purpose of this study was to analyze the differences of female worker participation rates in the city of Bengkulu.

2. LITERATURE REVIEW

Female worker participation was women involvement to work outside the home as the workforce to supplement family income and for a woman who learned to run their respective careers (Soewondo, 1998). By involving women in the labor market, the role of the pattern that occurs not only in domestic sector but also becomes widespread in the public sector. In this case, by working, the male domination in the family began to be balanced by the economic power of women. And the economic power of women more or less will affect its position in the family. Therefore the phenomenon of the increasing female worker participation in devoting their time to work is quite important effects on women's labor market dynamics.

Many factors cause the increasing female worker participation. One of the factors influencing women to enter the labor market is family income (Tumanggor and Effendi, 2009). The phenomenon of women working occurs in all levels of society, both upper class people, middle, or bottom. For the upper class society, usually working women are for self-actualization. As for the lower and middle class people, they work primarily to supplement the family income (Soewondo, 1998).

Dellyana (1998) describes the phenomenon of an increasingly wealthy family in the village, the fewer wives who do work together. Similarly, in urban areas, the poor wives in the family (low income) always work together. Mustaniroh (2005) also said that women working in devoting their time to work are influenced by family income. This is caused when the husband income is not enough for the needs of the family then the wife can assist her husband to fulfill the needs of families by working.

This information was supported by Simanjuntak (2001). He stated that a family whose income is large relative to the cost of living tends to minimize the number of family members who work. Conversely families who earn relatively small share of the cost of living tend to increase the number of family members working.

Some studies found negative effect of household income on time allocation of wives to work (Mangkuprawira, 1994; Nurwitri, 1996; Yulmardi, 2002; etc Cebula, 2006). These studies indicated that the lower the household income the higher the wife's allocation of time to work. This means that the allocation of work time of female workers becomes more if their family income is lower. In other words, for low-income families that would encourage women to work in a longer time. In contrast to families with higher incomes, women are not interested to work in a long time, even tend to not interested to work outside the home.

Although considerable amount of research revealed the negative influence of family income on female work participation, a few empirical studies explained the contrary results; that the family income affects the female labor participation positively (Hadianto, 2003, Volda, 2006, Rusmelia, 2011). Positive influence of income of households towards the participation of female workers may explain that the higher income family heads will cause more women to devote their time to work.

Age also has an influence on female work participation. For ages, various studies have shown that at a certain age, many women enter into the world of work (Goodman, 1994; Hayghe, 1994). Women are entering into the labor market with average age of 20-24 years old, and then this amount is reduced by the age of 25-34 years old. Majority of women are going into labor market at the age of 35-64 years old.

However there are also studies that found no negative influence of age factors on the allocation of women's work time (Hadianto, 2003). Conversely, there is also research that reveals the positive influence of age towards the levels of female labor force participation (Riyadi, 2001).

Another factor that becomes the determination factor of the female worker participation rate is the education level of woman. Rusmelia (2011), Faridi, Chaundhry and Anwar (2009), and Riyadi (2001) mentioned that the level of education has a positive impact on the participation of female workers. Women with higher education tend to not want to just stay at home; they prefer to have jobs that match their education.

In addition, the number of family members also determines the level of female worker participation. There is a positive influence on the number of family members toward female labor participation rate (Mustaniroh, 2005; Yulmardi, 2002; Volda, 2006; Rusmelia, 2011; Cebula, 2006). The number of family members is one factor affecting the allocation of time working women. This is because the greater number of dependent family members in the family will involve a woman as a wife to help husband's income whose income is low. Women will allocate more time to work if they have a lot of family size while the husbands have low income.

Meanwhile, Fadah and Yuwanto (2004) explain several factors affecting the intensity of working women who are married; those are the number of family members and the distance of residence to the workplace. The closer their homes to the workplace, the more time they work.

3. DATA AND METHODOLOGY

The data used in this study were the primary data. Primary data were obtained by distributing questionnaires to the respondents. The populations in this study were female workers in Bengkulu city. The samples were 130 married working women. Sampling method used was purposive sampling. Special purpose use of this method is to trace the empirical evidence from previous studies that one of the factors that determine female worker participation is the husband's income. Therefore, the selected respondents were married working women.

Analysis tool used was discriminant analysis. By using discriminant analysis, it can be found whether there is a difference between groups of part time female workers than another group of full time female workers. Furthermore, if there is a difference, it also found the independent variables which make the difference.

Discriminant model in this study is as follows
$$Y = X_1 + X_2 + X_3 + X_4$$

Dependent variable (Y) is a grouping of time allocated to work; it is divided by two groups; a group consists of part time female workers (low work participation rate) and another group includes the full time female workers (high work participation rate). Meanwhile, the independent variable (X) are consisting of husband income (X_1), age (X_2), education level (X_3), and the number of family members (X_4)

The hypothesis stated that "there is a difference between a group of part time female workers and another group of full time female workers in terms of family income, age, education level, and family size".

Hypothesis testing was done by the F test ($\alpha = 5\%$), centroid numbers, and matrix structures by using stepwise stage. This testing is known by using SPSS 16.0 version.

4. FINDING AND DISCUSSIONS

A total of 111 respondents returned the questionnaires of 130 questionnaires distributed to respondents (the response rate is 85.3%). The characteristics of respondents can be seen in Table 1 describing the job, age, education and family size of respondents. Based on the jobs, it is known that the majority of respondents are working as merchants (45% of 111 people) and the civil servants (it is called PNS) in various institutions (38.7%). For the age of the respondents, it could be argued that the majority of respondents are between 35 to 46 years old (60.3% of the total respondents).

Table 1. Characteristics of Respondents

No	Demographic characteristics	Number	Percentage
1.	Jobs		
	Housemaids	14	12.6
	Merchants	50	45.0
	Civil servants	43	38.7
	Chief	2	1.8
	Honorary at local government	2	1.8
2.	Age (years)		
	23-28	14	12.6
	29-34	22	19.8
	35-40	36	32.4
	41-46	31	27.9
	47-51	8	7.2
3.	Education level		
	Junior high school	21	18.9
	Senior high school	40	36.0
	Under graduated level	43	38.7
	Graduated level	7	6.3
4	The number of family members (persons)		
	1-2	1	.9
	3-4	51	45.9
	5-6	58	52.3
	7-8	1	.9

Other demographic characteristics shown are the education level and family size of respondents. In education level, the respondents have a higher education level because most of them are under graduated level (38.7%), followed by the Senior high school (36%). There are even few respondents had completed their graduated school who work as lecturer at university (civil servants). However, there are also several respondents who only took the junior high school those work as housemaid. Then, in terms of the number of family members, it can be said that the majority of respondents have a family member 5 or 6 people including the parents. Thus, the majority of respondents have 3 or 4 children (52.3%). Respondents with 1 or 2 children are also quite a lot with the percentage of 45.9% from 111 people.

Next, three variables; time allocated to work, income and husband's income of respondents; are displayed in Table 2. Time allocated to work describes the number of hours of respondents allocated to work; it is classified as full time and part time female worker. Table 2 shows that the respondents work at range from 60 hours to 270 hours in a month. By Indonesia legal working hours at least 40 hours a week to be assessed as full workers (that means 160 hours a month), then the majority of the respondents can be said as full worker because most of the respondents work 160 hours or more in a month. This is demonstrated by the average working hours of respondents in a month as much as 163.9 hours. There are 71.2% of total respondents who work full time; although not all of them are working in the formal sector.

Table 2. Time allocated to work, income level of respondents and their husband

No	Demographic characteristics	Number	Percentage
1.	time allocated to work (mean = 163.90 hours)		
	60-110 hours	15	13.5
	111-160 hours	17	15.3
	161-210 hours	65	58.6
	211-260 hours	9	8.1
	261-310 hours	5	4.5
2.	Respondents' income (million rupiahs)		
	0.25 - 1.24	34	30.6
	1.25 - 2.24	33	29.7
	2.25 - 3.24	35	31.5
	3.25 - 4.24	3	2.7
	4.25 - 5.24	6	5.4
3.	Husband's income (million rupiahs)		
	0.35 - 2.34	73	65.8
	2.35 - 4.34	32	28.8
	4.35 - 6.34	3	2.7
	6.35 - 8.34	1	.9
	8.35 - 10.34	2	1.8

Furthermore, Table 2 also describes the respondents' income earned from work. Respondents earn at least 0.25 million rupiahs and the largest five million rupiahs per month. With an average income of 1.795 million rupiahs, some respondents get high income; however some others get low income. Besides that, husbands' incomes of respondents are displayed too in Table 2. Husband of all respondents work; some of them work in formal sector but some others working in informal sector. This is reflected in the lowest income husbands is only 0.35 million rupiahs, and the highest income is 10 million rupiahs. Most respondents received income from 0.35 million rupiahs to 2.84 million rupiahs, and 2.011 million rupiahs is their average income.

The results of Discriminant Analysis

Hours of work which are applicable as full workers in Indonesia are 40 hours per week or 160 hours per month. Thus, for the using of discriminant analysis, the work participation rates are divided into two groups; namely group of part time female worker (the allocation of work time at most 40 hours per week or 160 hours per month) and group of full time female worker (the allocation of working time over 40 hours a week or over 160 hours per month). Subsequently the first group are called part time group, while the second group is called the full time group.

Using SPSS 16.0, there are some calculations to be discussed. The first is a test to see the equality of group means (F test and the number Wilk's Lambda). Using the level of significance 5%, there are only three significant variables that have equalities within each group, namely husband's income, age and education of respondents. This is shown by Table 3.

Table 3. Tests of Equality of Group Means

Variables	Wilks' Lambda	F	df1	df2	Sig.
Husband's income	0936	7435	1	109	0.007
Age of respondents	0765	33,436	1	109	0.000
Education	0751	36 108	1	109	0.000
The number of family members	0990	1077	1	109	0.302

Furthermore, from eigenvalues table, it is known the canonical correlation of 0.614; and 0.377 is its' squared. This means that 37.7% of variance of time allocated to work (as dependent variable) can be explained by the discriminant model formed by three significant independent variables (husband's income, age and education).

Then, to test the hypothesis, it is shown in Table 4. This table shows that the centroids for these groups (part time and full time) are different. This number indicates that the null hypothesis (H0) is rejected. It means that the part time group is significantly different from another group.

Table 4. Centroid for each group

Group	Function (1)
Low	-1.120
High	0.606

Next discussion is about the classification results; it is used to demonstrate discriminant validity of the model. Classification results can be seen in Table 5. For the part time group, the initial number of respondents was 39; but it can be grouped by the discriminant model as a part time group is only 32, the remaining seven respondents are classified as full time group. Conversely, for the full time group, with the initial number of 72 respondents; there are only 54 respondents classified as full time group, the remaining 18 were grouped as part time group. Then the model prediction accuracy was 77.5%.

Table 5. Classification results

Group			Predicted Group Membership		Total
			Low	high	
Cross-validated	Count	part time	32	7	39
		full time	18	54	72
	%	part time	82.1	17.9	100.0
		full time	25.0	75.0	100.0

The last result of discriminant model revealing is the structure of the matrix. Through the matrix structure can be known the *discriminant loadings*. Discriminant loadings significant of this model are the variable of education level (0.699), age (0.667), and the husband's income (0494). This is shown by Table 6.

Table 6. Structure Matrix

Variables	Discriminant loadings
Education level	0.699
Age of respondent	0.667
Husband's income	0.494
Number of family members[a]	0.195
a. This variable not used in the analysis.	

Interpretation of Discriminant Model

Based on the structure matrix, it is known that the independent variables those significantly differentiate the part time and full time groups are education level, age, and income of the husband. Thus the discussion will focus on these three variables. To find out how the difference between these two groups, Table 7 describes the means and discriminant loadings of three independent variables.

Table 7. Means and discriminant loadings

Variables	Means		Discriminat loadings
	Part time	Full time	
Education level	2.74	3.64	0.699
Age	2.23	3.38	0.667
Husband's income	1.05	1.65	0.494

Based on Table 7, the means of each variable are significant for the part time group compared with the full time group. The first variable, education level, mean of the part time group is 2.74. It means that majority of respondents finish the junior high school, but part of them completed the senior high school. While the mean of education level of the full time group is 3.64 (it means that majority of respondents completed the senior high school, and some of them also finish the undergraduate program). This indicates that the education level mean of full time group is greater than the part time group's; so this variable is inserted into the full time group.

For the second variable, age, mean of age of the part time group is 2.23. In this study, age is divided into 5 age classes (range from 23 to 51 years old); so Mean of 2.23 is included in the second class of age 29-34 years old. This shows that the average age of respondents in the low group is between 29-34 years old. While the mean of age of the full time group is 3.38, which is included in third age class (35-40 years old). This shows that the average age of respondents is between 35-40 years old. Thus, this second variable is also owned by the full time group.

Then, the mean of the variable husband's income is also displayed. Mean of husband's income of the part time group is 1.05. This research classifies the group husband's income into five groups. Mean of 1.05 shows that the average husband's income is in the first class of income (from 0.35 million rupiahs to 2.34 million rupiahs). Similarly for the full time group, with mean of 1.65, it is included into the first class (0.35 million rupiahs - 2.34 million rupiahs), however, some of them are included into the second class (from 2.35 million rupiahs to 4.34 million rupiahs). Therefore, this third variable also belongs to the full time group.

In other words, group of full time female workers have higher education level, older age and husband's earnings greater than the group of part time female workers. Furthermore the variable that discriminates these two groups the most is education level (by highest mean of this variable). Vice versa, the variable discriminates these two groups the least is the husband's income (by lowest mean of the variable).

There are several earlier studies supporting this study. For the education variable, the result of this study is parallel with the studies of Rusmelia (2011), Faridi, Chaundhry and Anwar (2009), and Riyadi (2001) which revealed the positive effect of education on the participation of female workers. This study shows that the women with higher education level, although already married, tend to not want to just stay home. They would rather have jobs that match their education level. Besides her husband also support them to work.

Next, the results of the study explained that full time female workers have older age. It is also similar to research of Riyadi (2001) which explained the positive influence of age on female labor participation. The older age of the woman is then the higher labor force participation. This study also reveals that the age of female workers with high work participation is between 35-40 years old. This research supports Goodman (1994) and Hayghe (1994), which describes the period of women into the work force; it starts at the age of 20-24 years old, and then decreases by the age of 25-34 years. The largest number of women going into labor force is at the age of 35-64 years. This condition implicitly explains why many women began to work full time at the age of 35-64 years old is because at that age period, their child had entered school age and begin to be an independent person (not a child).

Husband's income is also a motivation for married women to work. As described by Hadianto (2003), Volda (2006), and Rusmelia (2011), husband's income has a positive effect on female labor force participation. This study also supports the results of these studies. Respondents in this study feel high motivation to work even if their goals do work not solely to earn more money. It is also supported by the education level of women is quite high and the age of the children they have entered the age of independence.

5. CONCLUSIONS AND IMPLICATIONS

The group of part time female workers differs significantly from the group of full time female workers. Three variables discriminating these two groups are education level, age and income of the husband. The most discriminating variable is education level, whereas, the least variable discriminating is the husband's income.

Implication of the study is that family income becoming higher if the husband and wife both working. With higher incomes, of course, needs of family life could become more fulfilled. With more and more women work in the community, so the family income also increased, therefore it will improve people's standard life.

To reach that condition explained before; the married women could be full time worker, it is necessary efforts to improve the education level of women. As the most discriminating variables, most women with higher education level can obtain jobs in the formal sector which are fully employed. Therefore, women should continue their education to higher level when they are not married yet, so later, after marriage, they can work full-time.

6. REFERENCES

Cebula, etc. 2006. Determinant of Female Labor Force Participation: Preliminary Evidence. *Business Renaissance Quarterly.* Summer

Dellyana, Shanty. 1998. *Women and Children in the Eye of Law.* Yogyakarta. Liberti

Fadah, Isti., Yuwanto, IB 2004. Demographic and Socioeconomic Characteristics of Women Workers and the Contribution Against Family Income (Case Study on Tobacco Workers In Jember regency). *Journal of Management & Entrepreneurship. Vol. 6, No. 2, September. pp 137-147*

Faridi, MZ., Chaundhry, IS., Anwar, Mumtaz. 2009. The Socio-Economic and determinants Work Participation of Women in Pakistan: Evidence from Bahawalpur District. *A Research Journal of South Asian Studies.* Vol. 24, No. 2, July, pp. 351-367

Goodman, William. 1994. Women and Jobs in Recoveries: 1970-1993. *Monthly Labor Review.* July, pp. 28-36.

Hayghe, Howard V. 1994. Are Women Leaving the Labor Force. *Monthly Labor Review.* July, pp 37-39

Hadianto. 2003. Factors Affecting Time allocation of Women in Rural Employment. Unpublised Thesis. Bengkulu. FE Unib.

Mangkuprawira, Syafri. 1994. *Time Allocation and Contribution of Family Members In Household Economic Activities.* Jakarta. Economic Forum.

Nurwitri, et al. 1996. *Employment for Women.* Jakarta. Dharma Wanita.

Riyadi, Slamet. 2001. Analysis of Factors Affecting Labor Force Participation. *Equity.* Vol 5 (1), March: 32-44.

Rusmelia, Veni. 2011. *Analysis of Factors Affecting Paritisipasi Female Workers in the city of Bengkulu.* Unpublished Thesis. Bengkulu. FE Unib.

Simanjuntak, Payaman J, 2001. *Introduction to the Economics of Human Resources.* Jakarta. LFE UI.

Soewondo, Nani. 1998. *Status of Indonesian Women in Law and Society.* Jakarta. Yudhishthira.

Tumanggor, Sa'ir, Effendi, Solomon. 2009. Factors Affecting Women's Labor Force Participation Rate in Medan. *Journal of Social Sciences (d / h Madani).* Volume 10 No. 1. February: 98-110.

Volda, Tri. 2006. *Analysis of Factors Affecting Women's Work Hours Transmigrants.* Unpublished Thesis. Bengkulu. FE Unib.

Yulmardi. 2002. *Factors affecting the outpouring of Women in Rural Employment.* Unpublished Thesis. Bengkulu. FE Unib.