THE HUMAN CAPITAL OF WORKING MOTHERS IN PUBLIC SECTOR IN PALEMBANG CITY, SOUTH SUMATRA

by Lukmanul Hakim

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Abstract: *This study analyzes the economic value of time allocation of mothers who work in the public sector in helping the family. The essence of this research is the contribution of working mothers in the city of Palembang, South Sumatra, Indonesia. This study aims to explore the contribution of working mothers on family economics and responsibilities as a mother through the allocation of time in the public sector using the semi-log regression, cross-tabulations. Respondent's mother who worked as a laborer, office, and other food sellers, 400 people spread in South Sumatra, Indonesia. The results of the analysis are:* First, *the economic value of the average of the time allocated to the public sector Rp. 3.189.000, - per month, above the minimum wage of Rp. 2.294.000, - per month.* Second, *the average of the time allocation of mother in the public sector for 37 hours per week more than 35 hours per week.* Third, *to improve maternal higher revenue, the need to increase the time allocated to the public sector and education and work experience.*
  Keywords: *Economic Value, Time Allocation, Public Sector, Domestic Sector, Working Mother.*

I.   Introduction

In Indonesia the number of working mothers in 2013 amounted to 44.006.692 people, this number decreased 1,91% in 2014 to 43.164.719 people. Different conditions occurred in southern Sumatra and especially in Palembang, the number of working mothers has increased. In South Sumatra, an increase of 9,1% while in 2013 as many as 1.296.695 people, and in 2014 to as many as 1.414.769 people. Whereas in Palembang increased by 13,7% of 233.191 people in 2013 to 265.791 people in 2014 (CBS, 2014; 2015).

The urgency of this study regarding the allocation of time working mothers are basically caused by several things: ***First,*** increased maternal education and a skill over the years has caused the value of public sector working time becomes higher. ***Second***, the role of the mother's education is currently more advanced in the process of reproduction causes the number of children born on the wane, so that the overall available time is potentially increased. ***Third,*** technological advances causing a reduction in the domestic sector task which resulted in the allocation of time needed for working mothers in the home (domestic) decreased, thus encouraging mothers to more work outside the home (public) (Bachtiar,N., Fahmy,R and Ismail,R, 2015).

Nurlina Research (2003) in South Sumatra with the respondent's mother as family workers (perdefinisi workers who contribute to household income but not wages), found that if the mother does not work then the resulting output decreased, in the rice farming sector was down 5,84%, in the rubber sector 1,34%, in the coffee sector 5,16% and in the pepper agricultural sector down 5,11%. In this study does not specify the domestic sector, but from this study can be seen that how big the role of a mother in raising the economic value of family.

Specificity of this study is another time you have to be in for; public employment time, domestic work time and time fully to rest. Rest time is their time to rest and not in value as the opportunity cost as in the state in Revenues Theory – Leisure (Nurlina, 2012). Allocating time for working mothers in the public sector is relatively high, it will reduce the time in the domestic sector or the opposite. The relation between maternal employment and domestic public sector can be interpreted from the point of elasticity. There is a tendency when there is an increase in wages, will increase working hours in the public sector and lower hours of work in the domestic sector.

But in addition to the capital allocation wages in both sectors also depends on education, age, number of dependents and work experience. It depends on education, age, and number of dependents. Age and time allocation in the public sector has the inverted U-shaped relationship as pointed out by Borjas (2005) marginal revenue of the efficiency of human capital which initially rose and then will decline as we get older worker mother. The level of work experience a mother can contribute to the allocation of time in the public sector. The duration of work experience will impact on productivity better than ever. So that workers will have more opportunities to increase their income.

Among the factors above, the factors of economic value allocation of time working mothers in both the public sector and in the domestic sector needs to obtain consideration: How large is the economic value of the allocation of time in the public sector and the domestic sector produced a working mom, how influences the level of education, number of dependents, work experience and age on the allocation of the time the mother worked in the public sector, the influence of education level, number of dependents and the age of the value of the allocation of time working mothers in the domestic sector.

II.   Research Methods

The scope of this study on the economic value of the allocation of time working mothers in the public sector. The use of time in this study, especially for jobs at home are not paid, and is known as housework, research locations 16 districts in Palembang, South Sumatra, Indonesia by the year 2015.

The populations used in this study are mothers who work in districts in Palembang, South Sumatra, Indonesia. Mother works in question is a working mother who helped her husband to work for a living in the public sector and also work in the household. Therefore the primary data that is needed is the data working mothers who live in the city of Palembang.

The sample is part of a number of characteristics of the population. To study the population too much will we take to be sampled in the hope we take the number of samples that can represent the population. To determine the sample size can use the Issac and Michael formula.

Isaac and Michael Formula

$$s = \frac{\lambda^2 . N . P . Q}{d^2 (N-1) + \lambda^2 . P . Q}$$

Where:

S   = Number of Samples
λ^2 = Chi square which value depends on the degree of freedom and the error rate for the degree of freedom 1 and 10 percent error Chi Square value= 3,841. See the table Chi Square.
N   = Total of the Population (544843)
P   = Right Opportunity (0,5)
Q   = False Opportunity (0,5)
d   = Deviation between the samples is expected to occur, the difference. The deviation can be 1 percent, 5 percent and 10 percent. (5 percent).

The data obtained as many as 544.843 working mothers in the city of Palembang and the sampling using the formula Issac and Michael then the sample obtained of 400 respondents.

2.1   Data Collection Technique

The data collected in this study are primary data and secondary data. The primary data obtained from the survey by way of observing, home visit and interview through a questionnaire that has been prepared. Primary data includes data on education, work experience, number of dependents, age, allocation of public time, domestic time allocation, the economic value of time allocation and other supporting data. Secondary data was taken from his office in South Sumatra, Sumatra In figures, BPS Palembang, Palembang in Figures, Manpower Office of Palembang city, Sub-districts of Palembang and others. Secondary data include data on the number of women workers in Indonesia, South Sumatra, Palembang and District, age and others.

2.2   Data Analysis Technique

The data obtained in the field will be processed and analyzed descriptively and quantitatively. Descriptive analysis is used to obtain an overall picture of the observed variables, while quantitative analysis is used to identify independent variables affect the dependent variable using cross tabulation and semi-log regression equation where the economic value of the allocation of public time (NEP) or the amount of wages received Mother's of the public sector as the main work as laborers, office, food sellers and other jobs, is the dependent variable, while the education (PDK), work experience (PGL), the number of dependents (JT) and age (USIA) is an independent variable.

2.3   Economic Value Equation of the Time Allocation of Mother in the Public sector

The economic value of working mothers in the public sector (NEP) is income respondents from the public sector and is a function of education variable (PDK), working experience (PGL), number of dependents (JT) and the age (USIA), mathematically models the revenue equation working mothers in the public sector is as follows:

NEP = f (PDK, PGL, JT, USIA)

The function of the equation (3.1) is transformed into a linear equation natural shape for ease of viewing responses independent variable on the dependent variable so as to estimate the economic value of the allocation of time working mothers in the public sector expressed in semi-log regression of the equation model becomes:

Ln NEP = α_0 + b$_1$ PGL + b$_2$JT + b$_3$ USIA + b$_4$D$_2$ + b$_5$D$_3$ + e

Where:
Ln NEP   = Natural Log of Economic Value of the Time Allocation in the Public sector.
PDK   = the Education
PGL   = the work experience
JT   = the number of dependents

USIA	= the Age
D_2 (Dummy)	= 1 if Graduated high school; and 0 if other.
D_3 (Dummy)	= 1 if College Graduated; and 0 if other.
α_0	= Constanta; b_i = (i = 1, 2, 3, 4) is a parameter
e	= the error rate

The limitation of variables to be measured and analyzed in this study includes:

a. Education (PDK) is a formal education that has completed the respondents. This variable was measured by using dummy variables, namely D_2 (Dummy) 1 if high school graduation; 0 if Other, D3 (Dummy) 1 if passed College (PT); 0 if other.

b. Experiences (PGL) are the length of the working mothers work at jobs to pursue the world as: labor, office, food sellers, and others, the ratio measuring scale.

c. The number of dependents (JT) is the number of children and other families are being supported by the respondents, the ratio measuring scale.

d. Age (USIA) is the ages of the respondents were calculated from birth up to the time the observation is made, interval measuring scale.

e. Allocation of working time working mother public sector (AWP) is the number of working hours in a month that is used for public work, interval measurement scale.

f. Allocation of time working mothers in the domestic sector (AWD) is a lot working hours in a month of working mothers who used to work in domestic, such as: setting up the consumption of food, clothing care, home care, child care and care for the elderly, an interval measuring scale.

g. Economic Value of the allocation of time for working mothers in the public sector (NEP) is revenue (the value of the rupiah received) from a job as a labor, office, food sellers and other jobs, a ratio measuring scale.

h. Economic Value of the allocation of time working mothers in the domestic sector (NED) is the exchange rate / price equivalent of money from domestic work, for example the presentation of the consumption of food, clothing care, home care, child care and care for the elderly. The economic value of the domestic sector is calculated by the opportunity cost (the market wage in the city of Palembang), a ratio scale measuring.

i. Family income (PK) is the average income in a month of all family members, whether from their husbands, mothers revenue public sector, revenue income children and other members of the family derived from work and not from the workplace. Family income is calculated based on household expenditure approach, a ratio scale measuring.

III. Discussion

Referring to the purpose of research that has been said it will be discussed a study of cross tabulation analysis, estimation and analysis of the influence of; education (PDK), work experience (PGL), the number of dependents (JT), the age, to the economic value of time allocation of public (NEP) in Palembang. The discussion will include semi-log regression that includes the economic value of the time allocated of the public sector, the economic value of the domestic sector, cross tabulations, the results of model estimation.

3.1 Income

The income received by working mothers, coming from; work as labor, office, sales and other foods, either in the form of money or non-money. Average income per month working mothers by education shows the following, the average income of working mothers by education of the public sector is Rp 3.340.844 while the average contribution of the largest public revenue in College and High School for domestic revenue. It meaningful revenue contributions working mothers on domestic public sector and is large enough to support his family needs.

3.2 Estimation Models of The Public Economic Value

The estimation results obtained from public Economic value function equation mother works in the city of Palembang is as follows.

$$\text{Ln NEP} = 14{,}414 + 0{,}051 \text{ PGL} + 0{,}042 \text{ JT} - 0{,}008 \text{ USIA} - 0{,}160 \text{ } D_2 + 0{,}156 \text{ } D_3$$
$$(88{,}661) \quad (10{,}349) \quad (1{,}608) \quad (-1{,}927) \quad (-1{,}773) \quad (1{,}932)$$

R-Square	= 0,317
Adjusted R-Square	= 0,308
F- Statistical	= 36,510
D-W statistical	= 1,535

Results of regression models with the determination coefficient R2 is 0.317. This shows that the proportion of 31.7 percent of the independent variables that is used to explain the dependent variable in the model, while the remaining 68.3 percent is explained by the other independent variables outside the model. Variable work experience positive and significant impact the economic value allocation of time working mothers in the public sector in Palembang, this can be seen from the

value of t-count larger than t-table 10,349 > 1,652 with a significance level α = 5 %. It appeared that the working mother with work experience longer will have the skills, the skills and capabilities are increasing or in other words that each increase of 1 year experience impacted the increase in public economic value of 0,051 million, This will determine the size of the economic value in the public sector will be accepted working mothers in Palembang.

Variable number of dependents has a positive effect and are not significant to the economic value of the time allocated to public sector workers in the capital city of Palembang as t-count value is smaller than t-table 1,608 < 1,652 with the level of significance α = 5 %. This means that any increase in the number of 1 dependent will impact on the allocation of time working mothers in the public sector, it is not rational if the number of dependents increases, the allocation of time working mothers in the public sector increased as well.

The age variable has negative and significant impact to the economic value allocation of time working mothers in the public sector in Palembang, this can be seen from the value t count is greater than t-table 1,927 > 1,652) with the level of significance α = 5 %. It showed that working mothers with growing old age will have a high income in a certain extent and decreases in other words have a negative relationship or age into adulthood this will determine the size of the economic value in the public sector.

D_2 Variable (High school education) as measured by a categorical variable to be negative and significant impact on the economic value of the time allocated to public sector workers in the capital city of Palembang as t-count value is greater than t-table 1,773 > 1,652 with the level of significance α = 5 %. This means that 1,773 high school graduates less than the other education.

D_3 Variable (College education) as measured by categorical variables were positive and significant impact on the economic value of the time allocated to public sector workers in the capital city of Palembang as t-count value is greater than t-table 1,932 > 1,652 with the level of significance α = 5 %. This means that 1,932 university graduates are greater than any other education.

3.3 The Analysis of Time Allocation of Working Mother in the Public Sector

Time allocation in the public sector is one of the main topics in this discussion, the allocation of time working mothers in the public sector because many working mothers who enter the labor market, in addition to economic necessity as well as the impact of the movement of emancipation of working mothers and the desire to achieve a better life.

In this case the education variable big impact due to the conditions, certain jobs require specialized knowledge as the foundation of its work. Referring to expert opinion that education is also an aspect for women will increase the demand and supply on their workforce.

Work experience variable has a positive and significant impact the economic value allocation of time working mothers in the public sector in Palembang, this means that working mothers with experience of working longer will have the skills, the skills and capabilities are increasing or in other words that work experience this will determine the size of the economic value in the public sector.

3.4 The Analysis of Time Allocation Value of Working Mother in the Public Sector

The research estimation results of showed that the total value of the average allocation of work time mothers working in the public sector amounted to Rp 3.189.326,- per month to the economic value is greater than the Palembang minimum wage of Rp. 2.294.000,- per month. The total economic value of the allocation of time working mothers in the public sector is larger than the total economic value of the allocation of time working mothers, in the domestic sector is based on the minimum wage of Palembang. Contribution of mothers income in the public sector is to support their families, it is an assumption that the economy needs more deserving families preferred.

3.5 The Analysis Model of Family Income

Revenues negatively affect the number of hours worked (Ehrenberg et.al, 2003), this means that if total revenue increase will be followed by a decrease in the number of working hours. Another factor affecting is also the education, experience and age. Allocation of time working mothers work in the public sector will also greatly affect the proportion of the contribution of each member worked for the family income.

The study's findings portray that the average monthly value of the allocation of time working mothers in the public sector contributed Rp 3.189.326,- from an average family income of Rp 6.393.802, approximately 49.8 percent.

The essence of this *First* study supports the concept of Household economics that triggered by Backer in 1981 the continuity between education and the number of dependents. *Second,* bring up the concept of individual profit and social profit where mothers who work in public is an advantage for herself and the family benefit in households as an advantage for her husband, children and families even others.

IV. Recommendations

Some suggestions or recommendations to be submitted based on the research results and conclusions are described as follows: *First,* one of the focuses of attention is how to increase the income of mothers obtained by providing employment and business opportunities, create marketing conditions are spacious with a more coordinated and conducive and appropriate

provision of business capital targets was facilitated by the Government. **Second,** the need to improve education, either education in schools, or education outside of school (skills in entrepreneurship) that the ultimate objective to acquire and supplement the family income.

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