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Determinants of labor force participation and its impact on the standard of living of working age individuals in Indonesia, a gender perspective

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Abstract

The purpose of this study is to examine what determines the labor force participation and its influence on the standard of living. Since individuals are not randomly selected in the sample, the Heckman selection model was used in which two equations were sequentially estimated. A data set on individuals was sourced from the 2018 Indonesian National Labor Force Survey. The results show that there are striking differences in the effects of major determinants of work participation between men and women in various age cohorts. Marital status is a major determinant that positively affects men's work participation, whereas for women it is mainly influenced by their education. The authors also observed the existence of an inverted U-shaped pattern in the effects of various determinants of labor force participation for men and women. Educational attainment, especially in the secondary and tertiary levels, as well as training is an important factor that determines the achievement of a decent standard of living. Nevertheless, the positive effect of educational attainment is lower in regions where poverty incidence is high. The authors suggest that the government need to provide more scholarships for tertiary education, both for men and women equally. Accordingly, the government can ultimately improve the well-being, a decent standard of living, of the society at large.

1. Introduction

A decent standard of living is a measure of quality of life where a worker is able to meet basic material requirements to achieve welfare for himself or herself and their family. In developing countries where many workers earn low incomes, this welfare issue is a crucial problem. In this regard, several factors have been identified by researchers as important determinants of well-being, among which the most often studied are education and experience. However, these two factors require one necessary condition, that is an individual's participation in the labor force. But it is not sufficient if participation in the labor force does not lead to improved well-being. In other words, the achievement of a decent standard of living involves two-step decision making. First, one decides whether or not to participate in the labor force. Second, he or she has to earn income sufficiently at a level that meets the needs for a decent standard of living.

Several recent studies suggest that maximizing labor force participation accelerates the economic development of a country, and hence its standard of living (Khaliq 2019). However, a high labor force participation is a necessary but not sufficient condition for a high standard of living. Although having jobs is a prerequisite for achieving well-being, the achievement of a decent standard of living depends on individual characteristics of workers. Human capital theory asserts that education, which is both achieved through schooling and training, has a positive influence on an individual's welfare (Psacharopoulos and Patrinos 2004). Similarly, Mincer (1974) suggests that experience has a positive influence on wages, and hence an individual's well-being. While on the one hand education and experience positively affect well-being, on the other hand gender differences may also influence an individual's decision to participate in the labor force. A gender perspective about this issue may lead to a better understanding of how male and female decisions may differ and how their education and experience affect their labor force participation and standard of living.

This study aims to estimate the determinants of individual participation in the labor force and how it then affects individual opportunities to reach a decent standard of living. This is to answer the question of how educational attainment, marital status, fertility, and health status explain men's and women's decision to participate in the labor force, and subsequently how educational attainment, in addition to training and experience, lead to their ability to meet a decent standard living. There have been scant studies that take into account the likelihood that this may affect individual's opportunities to gain a decent standard of living. This study is aimed at filling this gap.

2. Literature Review& Previous Studies

A decent standard of living is instrumental in achieving physical and social well-being of humans, and yet it is ranked the lowest in the list of basic material requirements deemed necessary to meet basic needs and basic capabilities of people, regardless of their relative values or status in society (Rao and Min 2018). Meanwhile, the living wage is the minimum income needed by a worker to meet his or her basic needs, which include clothing, food and shelter, and other needs in modern society such as health care and transportation (Clary 2009). The purpose of a living wage is to enable a worker to meet the needs for a decent living. The concept of a living wage refers to a family concept, in the sense that the amount must be based

on the monthly standard and cost of living with his family in the location where the individual works (Anker and Anker 2017).

Few studies have examined the opportunities for achieving a decent standard of living for individuals. One such study suggests that a certain level of education would give individuals a likelihood of being employed which in turn enables them to enjoy a decent standard of living (Callander et al. 2012). It is commonly assumed a priori that individuals who get a job would be able to enjoy a decent standard of living. This study provides a contribution in complementing such studies by looking into additional factors that may influence an individual's opportunity to achieve a decent standard of living. Several factors that influence an individual's decision to participate in the labor force have been examined in the literature (Burk and Montes 2018; Shields 1987; Standing 1978). They include educational attainment, marital status, fertility proxied by the number of children under five in the household, and health status proxied by the existence of health problems or disabilities.

3. Data& Methodology

This research was conducted using micro data from the results of August 2018 National Labor Force Survey (NLFS) sourced from Indonesian Central Agency of Statistics (BPS). NLFS is a survey specifically carried out to collect employment data in the form of individual information from household members aged 5 years and over. However, only information from individuals aged 15 years and over is published and presented in NLFS publications is. The sample size of Indonesian August 2018 NLFS is 508,460 individuals surveyed from 200,000 households living in all regions of the Republic of Indonesia.

The achievement of a decent standard of living is assumed to involve a two-step decision, namely the decision to participate in the labor force and actually work to earn an income that meets the needs for a decent living. In this study, an individual's participation in the labor force participation (LFP) - is represented by a binary variable to indicate the membership of individuals who work, that is by giving a value of 1 for individuals who participate in the labor force and a value of 0 otherwise.

Educational attainment (EA) is represented by a categorical variable where each individual is assigned a particular level of educational attainment, beginning with the value of 0 for those who have not completed primary education, the value of 1 for those who completed primary education, and so on, up to the value of 8 for those who have completed a doctoral degree. In Indonesian formal education system, there are eight levels of education, beginning from primary schools with a duration of six years. However, for the purpose of this study, individuals with uncompleted primary education are also included. These individuals may also participate in the labor force. Primary schooling in Indonesia is equivalent to level 1 of the International Standard Classification of Education (ISCED 2011) established by the UNESCO (2011). The next level is junior high schools (ISCED 2011 level 2) with a length of study period of three years. The high schools level (ISCED 2011 level 3) takes three years of study period. The twelve-year education up to high schools level is a free compulsory education with government funding. This twelve-year compulsory education begun in 2015 has successfully resulted in a high net enrollment rate at 97.58% for primary schooling, junior secondary schooling at 78.84%, and senior secondary schooling at 60.67% (BPS 2018). The tertiary education

comprises Diploma 1 and Diploma 2 (ISCED 2011 level 4), baccalaureate degree (ISCED 2011 level 5), bachelor degree (ISCED 2011 level 6), masters degree (ISCED 2011 level 7), and doctoral degree (ISCED 2011 level 8).

Marital status (MAR) is represented by a binary variable indicating the marital status of an individual. The value of 1 is assigned to married individuals and 0 otherwise. The number of children under five (KID) variable is a proxy for fertility rate of the household. The health status is proxied by several types of health problems suffered by individuals. They consist of difficulties in vision, difficulties in hearing, difficulties in mobility, i.e. when walking or climbing stairs, difficulties in using or moving fingers or hands, difficulties in communicating with others, and other disabilities in the form of concentration difficulties, emotional disturbances, and the like. Thus, DIF variable indicates the total number of types of disability suffered by an individual.

Building upon Mincer (1974) that states wage is a function of education and experience, we construct the hypothesis that education, training, and experience determine a decent standard of living. This is based on the stylized facts about the positive effects of education and training (Black and Lynch 1996; Himaz and Aturupane 2011) as well as of experience (Eraut 2004; Medoff and Abraham 1980). In this study, the decent standard of living is treated as the dependent variable DSL, defined as the ratio of an individual's monthly earnings distributed to each household member to the amount of the family living wage distributed to a reference family. DSL has a value greater than or equal to 1 if the amount of the individual monthly earnings distributed to each household member is greater or equal to the family living wage distribution with a four members household, in accordance with the reference family size suggested by Anker and Anker (2017). It is important to note that decent standard of living is, in accordance to Adams (2017), achieved through living wages and not minimum wages. *Trading Economics*, a provider of economic data and information, discloses an estimate of the value of family living wages in Indonesia in 2018 at 2,954,800 rupiahs per month. This means an average distributed income of 738,700 rupiahs per month per family member. Thus the DSL variable is valued at 1 if an individual is able to distribute his monthly income to each of his family member in the amount of at least 738,700 rupiahs per month.

In this study the term monthly income refers to the value of money from income earned in a month by individuals whose employment status falls within the category of own-account workers and casual workers, or alternatively the value of money from wages and benefits received in a month by individuals who belong to the status of employees. One should note that with DSL variable being so defined, one implication is that it is observed only if the individual is working, but unobserved if otherwise. As a determinant of decent living standards, education is aggregated so that it is categorized into three groups of educational attainment by level; primary education level (ISCED 2011 level 1), secondary education level (ISCED 2011 level 2 to 4), and tertiary education level (ISCED 2011 level 5 to 8). Thus, for the purpose of specifying the selection equation described in Section 4, in the outcome equation the education variable is broken down into PEL (Primary Education Level), SEL (Secondary Education Level), and TEL (Tertiary Education Level). Adopting the method of Greene (2012), the educational attainment variable at each level is defined as a binary variable which is assigned the value of 1 for the highest level of education attained by an individual. Furthermore, training is defined as a form of skills acquisition, so that individuals are equipped with specific skills specific to certain individuals, and therefore they gain competitive advantages in the labor market. Training can take place in the workplace to improve work-related skills for individuals. In this study we define the training variable (TRA) as the one of the above-mentioned type.

The purpose is to distinguish it from more generally defined training. In this context, training is based on an individual's participation in work-related training programs, either certified or not. Finally, with regards to experience variable, this study directly follows Gardeazabal and Ugidos (2004), where experience is proxied by age, assuming that individuals tend to gain more work experience with age.

4. The Model

The achievement of a decent standard of living involves a two-step decision, namely the individual's decision to participate in the labor force, and actually work to earn income that meets the needs for a decent living. The Heckman (1979) method is employed to correct the bias caused as is commonly used when non-randomly selected samples is existent in an estimation of behavioral relationships. The model - also called the Heckit model - consists of two equations. The first is the selection equation to determine whether the variable of interest is observed. The first sample of this study, denoted by N, consists of 508,460 observations, but since the variable of interest was observed only for 331,346 individuals, so the latter, denoted by n, is less than N. The selection equation is then expressed in the latent variable, which in this case indicates the individual's decision to participate in the labor force. It is bound to several explanatory variables. Based on the literature cited in Section 2, we argue that an individual's decision to participate in the labor force is determined by their educational attainment (EA), marital status (MAR), number of children under five in the household (KID), and disability status (DIF).

In addition, age cohort is also considered a demographic factor that may influence differences in the patterns of work participation of men and women. We therefore added a categorical variable ACO that represents individual's age cohort to investigate the likely variations in the labor force participation due to gender differences for various age groups. We used 9 age cohorts, consisting of age cohort 1 for individuals aged 15-24 years, and so on up to age cohort 9 for individuals aged 95-100 years. The selection equation is then given as follows:

$$LFP_i^* = \gamma_1 + \gamma_2 ACO_i + \gamma_3 EA_i + \gamma_4 MAR_i + \gamma_5 KID_i + \gamma_6 DIF_i + u_i \tag{1}$$

$$i = 1, ..., N$$

The latent variable is not observed, but it can be observed as a binary variable as follows:

$$LFP_i = \begin{cases} 1 & LFP_i^* > 0 \\ 0 & otherwise \end{cases}$$

Then, in the second step a linear model is specified with the variable of interest being treated as the dependent variable. We assume that the opportunity for individuals to afford a decent standard of living (*DSL*) is dependent on educational attainment - broken down into primary education level (*PEL*), secondary education level (*SEL*), tertiary education level (*TEL*); training (*TRA*), and experience - proxied by age (*AGE*). Opportunities for having a decent standard of living for individuals are assumed to be affected by regional economic conditions where an individual lives. Following Grunewald (2006) that uses regional poverty rates to proxy for regional economic conditions, we add a categorical variable POV, assumed to vary across provinces. Therefore, for the purpose of this study the provincial poverty rates of 2018 were used and classified into three categories from low cluster to medium and high clusters of

poverty. Cluster 1 consists of the regions with low poverty rates, cluster 2 medium, and cluster 3 high. Thus, the outcome equation is first specified as follows:

$$DSL_i = \beta_1 + \beta_2 POV_i + \beta_3 PEL_i + \beta_4 SEL_i + +\beta_5 TEL_i + \beta_6 TRA_i + \beta_7 AGE_i + e_i \qquad (2)$$

$$i = 1, ..., n \qquad N > n$$

Selectivity problem may arise if *DSL* is observed only when *LFP* = 1 and if the error terms of the two equations are correlated. Ordinary least squares estimation would give unbiased but inconsistent estimates of β_i. Adkins and Hill (2011) suggests that a consistent estimator can be obtained through the conditional regression function as follows:

$$E[DSL_i|LFP_i^* > 0] = \beta_1 + \beta_2 POV_i + \beta_3 PEL_i + \beta_4 SEL_i + +\beta_5 TEL_i + \beta_6 TRA_i + \beta_7 AGE_i +$$

$$\beta_\lambda \lambda_i \qquad (3)$$

$$i = 1, ..., n$$

where λi is the Inverse Mills Ratio (IMR)] obtained by the following calculation:

$$\lambda_i = \frac{\phi(\gamma_1 + \gamma_2 ACO_i + \gamma_3 EA_i + \gamma_4 MAR_i + \gamma_5 KID_i + \gamma_6 DIF_i)}{\Phi(\gamma_1 + \gamma_2 ACO_i + \gamma_3 EA_i + \gamma_4 MAR_i + \gamma_5 KID_i + \gamma_6 DIF_i)} \qquad (4)$$

where $\phi(\cdot)$ denotes the standard normal probability density function, and $\Phi(\cdot)$ denotes the cumulative distribution function for a standard normal random variable. The parameters γ_i can be estimated using the Probit model based on the observed *LFP* binary outcome. Then the estimated IMR becomes:

$$\widehat{\lambda_i} = \frac{\phi(\widehat{\gamma_1} + \widehat{\gamma_2} ACO_i + \widehat{\gamma_3} EA_i + \widehat{\gamma_4} MAR_i + \widehat{\gamma_5} KID_i + \widehat{\gamma_6} DIF_i)}{\Phi(\widehat{\gamma_1} + \widehat{\gamma_2} ACO_i + \widehat{\gamma_3} EA_i + \widehat{\gamma_4} MAR_i + \widehat{\gamma_5} KID_i + \widehat{\gamma_6} DIF_i)} \qquad (5)$$

This estimated value is then entered into the outcome equation as an additional explanatory variable. Harou, Walker, and Barrett (2016); Lennox, Francis, and Wang (2012); Zaefarian et al. (2017) state that the IMR is a means to correct biases arising from the correlation between the error terms of the selection equation and the outcome equation. Therefore, after these adjustments the outcome equation is then specified as follows:

$$DSL_i = \beta_1 + \beta_2 POV_i + \beta_3 PEL_i + \beta_4 SEL_i + +\beta_5 TEL_i + \beta_6 TRA_i + \beta_7 AGE_i + \beta_\lambda \widehat{\lambda_i} + v_i \quad (6)$$

$$i = 1, ..., n \qquad N > n$$

The least square estimation of this equation would give a consistent estimate for β_i. We used the Stata software which specifically provides the Heckit module and this is important to avoid incorrect standard errors and t-statistics that is generated after estimation. Following Hardy and Reynolds (2009), we employed a regression technique for an estimation that involves categorical information in the model.

5. Results and Discussion

5.1. Descriptive statistics

Table I presents a brief summary descriptive statistic of the variables used in the study. Since most of the dependent variables and independent variables are binary and categorical, they are observed to have relatively small standard deviations, implying that the observed values are less spread out from their means. Using large sample size also implies a small variability in observed values of most of those variables.

TableI. Descriptionofthe variables

Variables	Mean	S.D.	Min	Max	Definition	Source
Dependent Variables						
LFP	0.68	0.47	0	1	Labor Force Participation, binary	BPS
DSL	0.53	0.97	0	67.69	Decent Standard of Living, ratio	Trading Economics & BPS, calculated
Independent Variable						
POV	1.60	0.65	1	3	Provincial poverty rates, categorical	BPS
PEL	0.24	0.43	0	1	Individuals with primary education, binary	BPS
SEL	0.48	0.50	0	1	Individuals with secondary education, binary	BPS
TEL	0.09	0.29	0	1	Individuals with tertiary education, binary	BPS
TRA	0.09	0.28	0	1	Training, binary	BPS
AGE	40.57	16.48	15	98	Experience of individuals (proxied by age)	BPS
ACO	3.13	1.64	1	9	Age cohort, categorical	BPS
EA	2.02	1.63	0	8	Educational Attainment, categorical	
MAR	0.66	0.47	0	1	Marital status, binary	BPS
KID	0.32	0.57	0	5	Number of children under 5 years old in household	BPS
DIF	0.24	0.80	0	6	Score of total disabilities	BPS
FEM	0.51	0.50	0	1	Female individuals, binary	BPS

Source: Authors' computation

5.2. Labor Force Participation: the first stage analysis

Tables II and III and Figure 1 present the predictive value of individual labor force participation decisions based on the results of Probit regression estimation analysis for the selection equation (1) by gender and for various age cohorts. The educational attainment positively explains the labor force participation of men aged 15 to 74 years. The positive effect of educational attainment was found to be weakest (0.02) in men aged 15-24 years which indicates the presence of a tendency previously discovered by Mohan (1985) that better access to secondary

and tertiary education has led many more young people to stay longer at schooling before entering the labor market. We also found that for men aged 75 years and older, the educational attainment does not have a positive influence on their work participation.

Table II. The predicted value of male labor force participation
for each determinant by the age cohort

Indep. Var.	Male								
	A1	A2	A3	A4	A5	A6	A7	A8	A9
EA	0.02	1.43	1.45	1.29	0.65	0.17	-0.18	-0.38	-0.42
MAR	0.81	2.22	2.25	2.09	1.44	0.97	0.62	0.42	0.37
KID	0.07	1.48	1.51	1.34	0.70	0.23	-0.13	-0.32	-0.37
DIF	-0.32	1.09	1.12	0.96	0.31	-0.16	-0.51	-0.71	-0.76

Note: A1 – A9 = ACO1 – ACO9
Source: Authors' computation

Table III. The predicted value of female labor force participation
for each determinant by the age cohort

| Indep. Var.	Female								
	A1	A2	A3	A4	A5	A6	A7	A8	A9
EA	-0.51	0.33	0.52	0.59	0.40	-0.02	-0.47	-0.64	-0.90
MAR	-0.73	0.10	0.29	0.36	0.18	-0.25	-0.69	-0.87	-1.13
KID	-0.75	0.08	0.27	0.34	0.16	-0.27	-0.71	-0.89	-1.15
DIF	-0.81	0.03	0.22	0.29	0.11	-0.32	-0.77	-0.94	-1.20

Note: A1 – A9 = ACO1 – ACO9
Source: Authors' computation

Meanwhile, for women the positive effect of education only applies to those in the 25-64 age range. although the magnitude of that effect is smaller than that obtained by men of the same age range. In other words, the educational attainment does not positively explain the labor participation of young (15-24 years) and old (> 65 years) women. In general, the educational attainment is a major determinant of women's work participation in Indonesia and this is consistent with the finding of Psacharopoulos and Tzannatos (1989) that education is a potential driver of women's labor participation in developing countries.

Furthermore, we find that marital status is a major determinant of male work participation in all age cohort. The magnitude of the positive effects of marital status on male work participation was found to be highest (2.25) in the age cohort of 35-44 years, although it declines with age, where the value reaches 0.37 in the 95-100 years age cohort. In line with Hill (1979), this finding reflects the strong influence of patriarchal culture in Indonesia which gives men a role as the main breadwinner for their household. Meanwhile for women, marital status has a negative effect on work participation of those who are still quite young (15-24 years) and those who are old (> 65 years). Marital status has a positive effect on women's work participation when they enter the age range of 25-64 years, but with a smaller magnitude of effect compared to those of men. The participation of married women in the labor market could indicate that their support is needed to improve family income that are deemed inadequate if they only rely on their spouses, as in Belle and Tebbets (1982). This argument is also based on the compensating differentials hypothesis proposed by Grossbard-shechtman and Neuman (1988) which states that married women will participate in the labor force if their material needs are not satisfied by marriage.
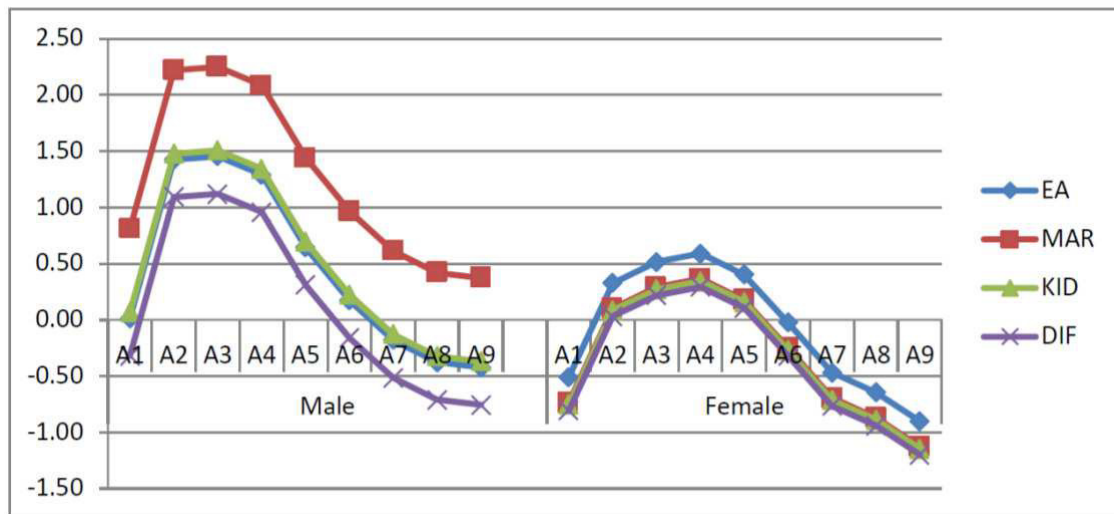
Figure 1. Variation in the predictive value of male and female work participation
for each determinant by age cohort

The presence of children under five (KID) in the household positively explains the work participation of men in the age range of 15-74 years, but it is negative for men aged 75 years and older. This finding implies that marriage motivates men's labor participation. It can be influenced by a patriarchal culture in which men are viewed as breadwinners responsible for the material needs of their dependents, especially those who are in an economically productive age range. Meanwhile, for women the presence of children under five in the household would hamper the participation of those who are relatively young (15-24 years old) and those who are old (> 65 years), where increased number of children under five in the household would prevent them from participating in the labor market. Nevertheless, there is still a positive effect of the presence of children under five in the household on the labor participation of women, especially of those in the age range of 25-64 years. These results corroborate the finding of Duncan, Prus, and Sandy (1993) that the presence of toddlers in the household would prevent women's work participation. However, it does not necessarily hold true for women of any age group.

Furthermore, health problems or disabilities negatively affect the labor force participation of men and women aged 15-24 years. This negative effect was also found in men over 65 years, and women over 75 years. In other words, for men in the age range of 25-64 years and women in the age range of 25-74 years, these health problems do not hamper their work participation. The positive sign of the influence of health problems on work participation is higher in men than in women. This again implies that men tend to be more responsible relative to women in providing livelihood support for their families even in the event of health problems they may face. In general, an inverted U shape patterns (Figure 1) describes the relationships between the predictive value of labor force participation and its determinants. A similarity in the relationship patterns for men and women can also be seen, except the fact that there exist differences at which age cohort men's and women's maximum values occur.

5.3. Decent Standard of Living: the second stage analysis

In the second stage, the OLS model was employed to analyze the influence of the level of education, training, and experience on individual opportunities to reach a decent standard of

living. Wald test results which show significant values indicate good suitability of the model. The correlation between error terms of the selection equation and the outcome equation, which is indicated by the significance of the value of the Wald test results on the independence of the two equations, provides justification for the use of the Heckman selection method. The estimation results of the Heckman model can be seen in Appendix. The negative sign of the IMR coefficient indicates that the estimation of the determinants of a decent standard of living would be downward biased without this kind of correction. Table IV presents the predicted values of the ratio of decent standard of living for each determinant according to gender and poverty rates. Figure 2 shows the patterns of the effects of various determinants of decent standard of living for men and women by provincial poverty rates.

Table IV. Predicted values of the ratio of decent standard of living
for each determinant by provincial poverty rates

Indep. Var.	Male			Female		
	POV1	POV2	POV3	POV1	POV2	POV3
PEL	0.37	0.18	0.15	-0.04	-0.16	-0.16
SEL	0.57	0.38	0.35	0.15	0.03	0.03
TEL	1.33	1.14	1.11	0.86	0.74	0.74
TRA	0.60	0.41	0.39	0.13	0.01	0.01
AGE	0.27	0.08	0.05	-0.10	-0.22	-0.21

Notes: POV1 = low poverty rate, POV2 = medium poverty rate, POV3 = high poverty rate
Source: Authors' computation

For male, the positive effect of the primary education level on the decent standard of living is the smallest at 0.37 compared to the effect of the level of secondary and tertiary education. The effect becomes smaller as they live in regions with higher poverty rates. For male individuals living in low poverty rates regions, the effect of secondary education attainment on the ratio of decent standard of living is positive and higher at 0.57 than for those with primary education attainment. It is also higher for males living in higher poverty rates regions. The highest predicted value of the ratio of the decent standard of living is contributed by the tertiary education level at 1.33. This is true for men living in regions regardless of poverty rates.

We find a somewhat similar pattern for women in terms of the effect of education on the ratio of decent standard of living that can be achieved. The higher the level of education the higher the standard of living of women. However, the positive predicted value of the ratio of decent living standards explained by tertiary (0.86) and secondary (0.15) education level for women is lower than that for men, while for primary education it is even negative (-0.04). The regional condition as reflected by regional poverty rates negatively affects the benefits of educational attainment. The regional condition - reflected by provincial poverty rates - where women live negatively affects the benefits of women's educational attainment. Primary educated women living in the regions with medium and high poverty rates have more than three times larger negative effects on their decent standard of living. Meanwhile, women with tertiary education that live in regions with medium and high poverty rates have a 14% smaller positive effect.

The above-mentioned findings emphasize the importance of education for any effort to achieve a decent standard of living, both for men and women. Participation in trainings has a significant positive effect on efforts to achieve a decent standard of living with men (0.60) getting a greater positive effect than women (0.13). However, the effect of acquired trainings decreases with increasing poverty rates of regions where they live. Furthermore, the positive effect of experience is found to be the smallest compared to other predictors of decent standard of living

for men, and even negative for women. The effect of experience becomes very small for those who live in regions with medium and high poverty rates. This finding implies that experience does not provide a meaningful influence on decent standard of living if they do not invest in education and training.
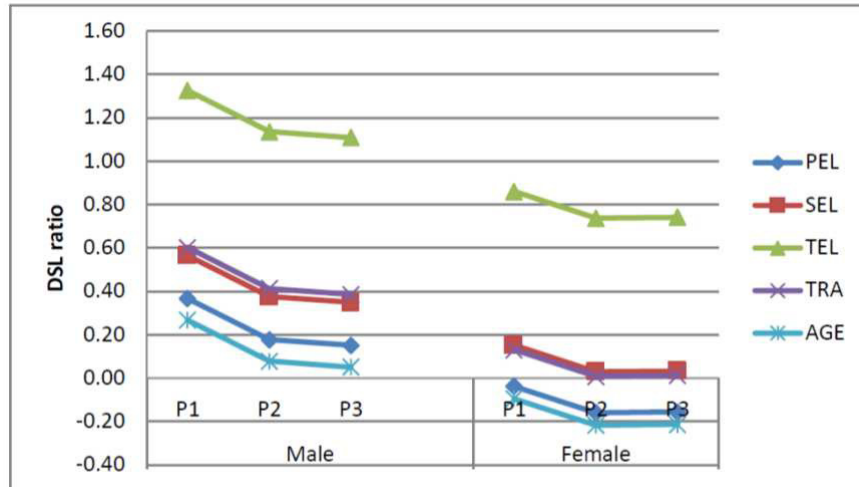

Figure 2. Variation in the predicted value of the ratio of a decent standard of living for men and women for each determinant by regional poverty rates

6. Conclusions

There are quite clear differences in patterns of the main determinants of labor participation between men and women in various age cohorts. Marital status is the main determinant that positively explains men's work participation, whereas for women, work participation is mainly explained by the educational attainment. Greater magnitudes of the effects for men than for women of all determinants of labor force participation suggest the strong influence of a patriarchal culture in Indonesia that leads to men being the primary breadwinners for families.

When individuals age cohorts are taken into account, we observed the existence of an inverted U shape in the pattern of effects of various determinants of labor force participation of men and women, with the peak of influence being in the age range of 25-54 years for men, and the age range of 35-64 years for women. We can then say that women play an important role in continuing the baton of men in securing family livelihoods. Educational attainment, especially at tertiary and secondary levels, as well as training are the main determinants of an individual's opportunity to achieve a decent standard of living, although the positive effects decreases with regional poverty rates. This implies that educational attainment and training have smaller effects, both for men and women, in poorer regions. As far as work experience is concerned, it does not matter much because it does not provide significant benefits for individuals unless they have adequate education and training.

The policy implication of the results is that there should be more incentives for individuals with high academic potentials to continue their studies to tertiary education through, for example, government-funded scholarships as well as provision of trainings relevant to workers. Providing certain incentives for employed workers so that they constantly improve their work

skills should also be encouraged. Such policies would enable greater opportunities for society at large to achieve a higher decent standard of living.

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