Disparities and Female Labor Force Participation

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ARTICLE INFORMATION

ABSTRACT

Education as human capital will give modern thinking to rural women who consider that women are only terminated to getting married and having children. Investment on education will provide women to engage in decent work in accordance with the SDGs program. However, in Indonesia, there is a gap in facilities and infrastructure between rural and urban area. This study used binary logistic regression analysis due to the dichotomous variables, whether women have the opportunity to work in the informal or formal sector. The data source comes from IFLS-5 with total population 4,952 peoples. The results of the study showed that women from rural areas have the opportunity to work in the informal sector and women with longer education have the opportunity to work in the informal sector.

Keywords: Education, Female Labor, Rural, Sector Employment.

INTRODUCTION

The values of gender equality promoted by the Sustainable Development Goals (SDGs) program that listed on goal 5 and goal 8 indirectly encourage the female labor force to engage in decent work. Based on data from the Ministry of Women Empowerment and Child Protection from 2016 - 2020, the female labor force has always dominated informal sector jobs. Which we know that Indonesian's informal sector is far from decent work category. Meanwhile, the involvement of the female labor force in the formal sector is always lower than men.

Table 1. Percentage of The Population Works by Formal and Informal Sector in 2016 – 2020

Year	Informal		Formal	
	Woman	Man	Woman	Man
2016	61,84%	54,95%	38,16%	45,05%
2017	61,37%	54,34%	38,63%	45,66%
2018	61,80%	53,71%	38,20%	46,29%
2019	60,69%	52,61%	39,31%	47,39%
2020	65,35%	58,79%	34,65%	41,21%

Source: Ministry of Women Empowerment and Child Protection

As we know although the informal sector has a great influence on the absorption of labor (Sulistyo, 2013) but informal sector jobs are jobs with disproportionate wage, lack of social security, legal protection (Sharma, 2019), low level skill, and constraints in accessing financial facilities (Traoré & Ouedraogo, 2021) so that informal sector jobs in Indonesia are still classified as indecent jobs. The impact of the wage system contributes minimally to the welfare of the household. However, there are some conditions that ultimately make the female labor force only able to engage in informal sector work.

The female labor force from rural areas tends to live closely with cultural values (Metekohy, 2013). This makes women in rural areas tend to think that their life purpose is only up to the point of getting married and having children. In fact, the female labor force has the potential to be economically productive, therefore it will provide welfare to their children so that in the future quality of human resources will emerge. The culture of togetherness in women provides space to practice & get used to, not only in work but also innovating, creating & expressing opinions even having role as agents of change in rural residents (Imran, Mashud, & Hartini, 2022).

The participation of the female labor force from rural areas dominated by the agricultural sector finds challenges in the era of the industrial revolution 4.0 where the labor force has the potential to be replaced by machine power so that there is a threat of losing their jobs. If the labor force is not equipped with good skills and education, then the industrial revolution 4.0 will bring a disaster in employment. But ironically, the education level of the rural female labor force tends to be low compared to urban areas, which is shown in the table below:

Table 2. The Highest Percentage of Residential and Education Area Labor Force Completed in 2016-2020

Year	Gender	Highest Completed Education		
		Elementary	Junior	High School and Above
2016	**Urban**			
	Woman	31,49	16,52	52,00
	Man	28,50	18,14	53,36
	Rural			
	Woman	59,55	16,20	24,25
	Man	53,39	20,08	26,53
2017	**Urban**			
	Woman	30,74	16,54	52,72
	Man	27,99	17,39	54,62
	Rural			
	Woman	60,82	16,54	22,64
	Man	54,25	20,41	25,33
2018	**Urban**			
	Woman	29,76	16,60	53,63
	Man	26,98	17,47	55,55
	Rural			
	Woman	59,06	17,10	23,84
	Man	52,75	20,48	26,77
2019	**Urban**			
	Woman	30,62	15,96	53,43
	Man	28,10	17,57	54,33
	Rural			
	Woman	55,75	17,22	27,03
	Man	50,39	20,11	29,58
2020	**Urban**			
	Woman	30,04	16,36	53,60
	Man	27,63	17,82	54,55
	Rural			
	Woman	54,46	17,60	27,94
	Man	48,80	20,72	30,48

Source: Ministry of Women Empowerment and Child Protection

Based on the data, it can be seen that there is a 'vicious circle' where the female labor force from the rural is less motivated to take a longer education, therefore it has an impact on their involvement of being a passive and minimum contribution in economy, even though involvement in the economy is able to help the welfare of the family, especially for children in terms of nutrition and education as the forerunner of quality human capital. However, when viewed based on local government regulations, this is also triggered by inequality in rural and urban development which makes the quality of education in rural areas not as good as urban areas. It should be underlined that this study does not encourage the female labor force to engage in the formal employment sector, but to find out at how the female labor force working in the informal sector develops itself by utilizing skills supported by education to achieve prosperity with the help of governments that create decent work in informal sector employment through policy improvements.

LITERATURE REVIEW

In the economic theory of development, human capital is a form of productive investment in the population of the country. A high level of education is a form of public and private investment for the state (Schultz, 1961; Mincer, 1974; Becker, 1994). It is said to be a public investment if implied by having a higher level of education, will create welfare for the population, reduce social inequality, and increase productivity. Meanwhile, it is said that private investment if the length of education taken will reduce unemployment time, increase the income received, and better career prospects.

The economic problem in Indonesia is not only limited to the problem of poverty. The gap that occurs in Indonesia is a classic problem that has never been resolved. Economic inequality in Indonesia arises due to lack of control over economic growth that is not accompanied by balanced economic control (Ibrahim, 2017). Economic inequality creates a cycle that is difficult to stop, the implication is that investment will be carried out in potential areas, so that developed areas will be more advanced and vice versa in the underdeveloped areas will be more lagging behind (Wilonoyudho, 2009).

Various problems in the field of education cause the quality of Indonesian education to still be relatively low. One of those problem is the gap in rural and urban education facilities and infrastructure, the good quality of teaching resources is still collected in the regions urban, as well as uneven support from the government (Amin, Nuralifah, Putri, Wattimena, & Yuniasih, 2017). Education in Indonesia will not produce progress if unequal education management between regions still exists.

Based on the SISDIKNAS Law Number 20 of 2003, it states that education is a conscious and planned effort to create a learning atmosphere and learning process so that students are able to develop their potential actively in order to have self-control, intelligence, skills in society, religious spiritual power, personality and noble morals. Referring to the above exposure, residents get the same opportunities in the learning process in an effort to increase their potential, both urban and rural residents.

The sustainable development goals in Indonesia, shown in the SDGs program goal number 5, namely gender equality, show that it is necessary to create empowerment for women who do not only focus on the rights of women who accepted, but rather aspects of life such as education. In addition, goal number 8 states that it is necessary to create decent jobs and the involvement of the female labor force in decent work. The existence of this sustainable development goal indicates that women are one of the development potentials.

Based on what have been discussed above, it is known that with a higher level of education, the female labor force will have a more modern mind so that the assumption that the highest point of women is when they already have children alone can be abandoned. With women's involvement in higher education, women will have the diverse knowledge to make their children a resource quality human being. The involvement of the female labor force in the job market will make a significant contribution to the country's economic growth (Bloom, Canning, Fink, & Finlay, 2009). In addition, the female labor force with a higher level of education has the provision to get a decent job. If women with higher education remain in informal sector jobs, at least women have the resilience, the thinking to thrive, and are able to face challenges in the informal sector.

RESEARCH METHOD

This research uses quantitative methods, quantitative research is suitable to be carried out because it uses numeric and is processed mathematically (Hartas, 2010). The analytical tool carried out is binary logistic regression, because the dependent variable is a dichotomy, namely whether women have the opportunity to work in the informal or formal sector. The data used is sourced from IFLS-5 with a total population of 4,952, the population taken is the female labor force (aged 15 - 64 years) who worked according to a week ago.

The dependent variables used in this study are the informal and formal employment sectors. The informal employment sector in this variable includes self-employed, self-employed with the help of non-permanent employees, unpaid family workers, free workers on farms and non-farms. Meanwhile, formal sector work includes doing business alone with permanent employees, government employee labor, and private employee labor. The dependent variables used in this study were the length of education taken with a category variable type where 6 = Elementary School/Package A/Islamic Elementary School/Kindergarten; 9 = General Junior High School/Vocational Junior High School/Package B/Islamic Junior High School; 12 = Senior High School/Vocational High School/Package C/Islamic Senior High School; 15 = Diploma 1/2/3; 16 = bachelor degree; 18 = master degree; 22 = doctorate degree. Another dependent variable in this study is the area of residence which shows 0 = comes from urban areas and 1 = comes from rural areas. Thereby the formula can be written as follows:

$$ln\left(\frac{P(y = 1)}{1 - P(y = 1)}\right) = \alpha + \beta_1 X_1 + \beta_2 X_2$$

Where:
Y_i = 0, if women have the opportunity to work in the formal sector
Y_i = 1, if women have the opportunity to work in the informal sector
B = constant
X_1 = length of education taken
X_2 = area of residence

The hypothesis on this study are women who have shorter education tend to work in the informal sector and goes the same as women who live in rural area tend to work in the informal sector.

In the logistic regression testing stage, a model suitability test is carried out using the method from Hosmer-Leme show with the aim of testing the suitability of assessing how well & suitable the sample uses the data. The next stage of testing is carried out to determine the significant impact of the parameter estimates obtained on the model and the magnitude of the impact of each of these parameters on the model, then the parameter estimates for the predictor variables will be executed. The significance test consists of two stages, namely, joint test of the significance of the model parameters with the maximum likelihood ratio test and the partial test of the significance of the model parameters with the Wald chi-square test. Logistic regression requires the interpretation of the parameters to find the importance of their estimates on the predictor variables. Parameter interpretation can be known through the odds ratio.

RESULTS

The results of the test using binary logistic regression analysis show the results as described in the table below:

Table 3. Binary Logistic Regression Analysis

Y	Coefficient	Std. Error	Z	P>|Z|
Length of Education Taken	-0. 2544	0. 0094	-26. 82th	0. 0000
Area of Residence	0. 5663	0. 0680	8. 33th	0. 0000

Based on the results of the data process above, it can be shown that in the variable of the length of education taken shows a negative coefficient with a value of 0.000 which shows significant, so that women with higher education has the opportunity to work in the formal sector rather than in the informal sector. The results of the data processing with the variable area of residence showed a positive coefficient with a value of 0.000 which means significant, so that women with residential areas from rural areas have the opportunity to work in the informal sector compared to the formal sector.

In logistic regression, to find out the meaning of the estimated value of the parameter, it is necessary to interpret the parameter. The interpretation of parameters can be known through the odds ratio (Hosmer & Lemeshow, 2004). The results of the odds ratio of the two variables can be seen in the table below:

Table 4. The Odds Ratio's Results

Y	Odds Ratio
Length of Education Taken	0.77
Area of Residence	1.76

The results of the interpretation of the odds ratio parameter show that every increase in the length of education taken by women has a 0.77 times chance of working in the formal sector compared to the informal sector. As for the variable area of residence, it shows that women from rural areas have a 1.76 times chance of working in the informal sector compared to the formal sector.

DISCUSSION

The potential for economic development and growth can be obtained from the female labor force if women's abilities continue to be developed (Dewi, Amar, & Sofyan, 2013). The existence of a view of gender equality can at least eliminate the cultural values inherent in women to act passively in the economy (Traoré & Ouedraogo, 2021), where women do not need to take part in a productive economy. The gender-minded environment significantly reduces the chances of the female labor force to join the labor market (Molina & Usui, 2022). In fact, the influence of women's involvement in the productive economy can be felt directly, such as increasing family income that is able to prosper the family.

Based on the results of the analysis, the length of education taken by women will provide opportunities for women to work in the formal sector, so that the results of this study are in line with the results of this study in line with the results of research from (Abraham, Ohemeng, & Ohemeng, 2017). In addition, the results of this study are in accordance with the theory of human capital, where education is a form of investment where women

will feel the benefits, namely getting higher wages and widening the chances of getting a decent job, in this case formal sector jobs. When associated with the theory of human capital, women with higher education in addition to being useful for themselves, are also able to help create quality human resources through their children (Zhang, 2017), the implication is that women will find it easier to access and understand knowledge over basic education and child health. In Human Capital theory, involvement in education is a form of investment that expects a return in the future. Therefore, it can be concluded that people who take longer education are believed to have higher skill levels, are knowledgeable, and are more productive in the future (Ince, 2010). Through education, informal sector workers can change their status as formal sector workers (Satriawan, Pitoyo, & Giyarsih, 2020), considering that informal sector workers are still far from being based on social security and good health.

As known in Indonesia, informal sector work does absorb a lot of labor, but it still cannot be said to be a decent job due to the lack of social security, the level of wages that tend to be low, and laws that have not overshadowed informal sector jobs. Meanwhile, to join formal sector work, the female labor force must have competencies that are in accordance with formal sector employment standards, these competencies can be obtained through higher education. Higher education pursued by women will provide awareness to improve health through available health facilities, while residents with lower education level tends to not realize the importance of threats that will affect health (Amu Dickson, Kumi-Kyereme, & Maafo Darteh, 2018). Increased investment in the health sector will provide qualified human resources, it is implied when the labor force has a good level of health, then the labor force is able to be productive for a longer period of time, so indirectly productivity will increase and affect economic growth. In this study, it shows that a higher level of education is able to provide a multiplier effect in the form of insight and access to health.

The female labor force that are working in the informal sector, with higher education will improve their skills, thus allowing the female labor force to be more creative in his field of work so that it has an impact on increasing his income. In addition, with a higher level of education, informal sector workers can be better at analyzing the market (Liu & Chen, 2002).

Based on the results of data analysis with variables of the area of residence, it shows that the female labor force from rural areas more likely to work in the informal sector than formal. The results of this study are in line with the results of (Lukmanul, 2011), which states that most of the female labor force from rural areas tend to depend on their wages on the sector informal field of family farming. If the female labor force migrates to urban areas with the aim of obtaining higher wages, it will actually increase urban poverty (Wauran, 2012), the cause is a labor force of rural women who previously worked in agriculture did not have enough skills to join jobs in urban areas dominated by the formal sector and agricultural land in urban areas also tend to be minimal.

In addition, another point of view emerges that reveals the reason why the rural female labor force tends to work in the informal sector, namely because of the availability of formal employment in rural areas fewer than urban areas (Sharma, 2019). The lack of formal employment that develops in rural areas can be caused by poor quality human resources of rural communities (Sączewska-Piotrowska & Wąsowicz, 2017), so that entrepreneurs who prefer seeking an educated labor force will focus on urban areas that have a large educated labor force with the convenience of other public facilities in the urban area.

The results of this study showed a relationship between the variables of informal work, education level, and area of residence which were associated in one topic of discussion, namely development gaps. The development gap between rural and urban areas triggers the availability of jobs, where rural jobs are dominated by the informal sector. In addition, it also affects educational facilities, where rural education facilities are still not as good as urban areas, so in terms of human capital, the quality is also different. Urban residents tend to get a higher level of education therefore it will give a benefit to urban residents such as decent wages and jobs. The essence of development is the welfare of the people and an indicator that is relevant and able to represent the welfare of a population is the Human Development Index.

CONCLUSION

The female labor force, who are often gender discriminated, through the SDGs program, will be encouraged to participate in the work. But every woman has a different chance of getting a decent job. These opportunities are influenced by education and areas of residence, where women with higher education will have the opportunity to work in the formal sector and women who come from rural areas have the opportunity to work in the informal sector. Both of these are influenced by the development gap between rural and urban areas.

For the female labor force who only have the opportunity to work in the informal sector for several reasons that are not described in this research variable, it would be better to get trained which supports their work, so that the informal female labor force can have more creativity in developing their business, as well as in an effort to face the potential of automation due to the revolution industry 4.0. Although informal sector jobs can absorb a massive labor force, the government must improve policies on informal sector jobs, so that informal sector jobs can be referred to as decent work according to the purpose of SDGs program.

LIMITATION

Limitations in this study, include the variable area of residence is only discussed about regional origin, but the variable does not show the case of how commuter workers work between rural to urban and vice versa. There are other determinant variables that affect the employment sector opportunities of the female labor force that were not studied in this study.

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The authors declared no potential conflicts of interest.

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