

Conference Paper

Gender Equality and Economic Development

Hardius Usman and Fitri Catur Lestari

Institute of Statistic Jakarta – Indonesia

Abstract

The purpose of this research was to study the effect of gender equality, both in education and work, on the economic development of Indonesia, directly and indirectly. The impact of gender equality in education will be studied by education level. Analysis of the comparison among the level of education is aimed to find out level of adequate education for woman so as to encourage the economic development. Sources of data in this study is a publication issued by BPS, namely Indikator Kesejahteraan Rakyat, Statistik Ketenagakerjaan, Statistik Indonesia, and National Economic and Social Survey of 2012. This study applies multiple regression models to test hypotheses and data analysis.

Ratio NER of girls to boys in junior high school has a negative effect on the per capita income, mean year school of population and urbanization. Meanwhile, Ratio NER in senior high school has a positive relationship even though no significant on per capita income, mean year school of population and urbanization. This research concluded that Indonesia don't ever dreamed could be a developed country if it is not able to provide greater opportunities for girls to attend school at least until the senior high school level. The success of the Program WAJAR 12 Tahun is one of the keys for the purpose.

Keywords: Gender Equality, Ratio NER, Per Capita Income, Education, Work

1. Introduction

Gender equality has an important role in the economic development of a country. The World Bank (2003) stated there has been an agreement among the community, that the policies, and the implementation of development, which fail to take into account and address the gender gap, has limited effectiveness and serious cost implications. The statement is in line with the finding of several scholars who generally suggests that gender inequalities in work and education have a negative effect on economic development [16]. In his study, based on historical data, Chen (2004) also reveals that there is a positive correlation statistically significant between gender equality in education and economic development. These results support a wide range of previous

Received: 19 March 2018

Accepted: 27 July 2018

Published: 29 August 2018

Publishing services provided by
Knowledge E

© Hardius Usman and Fitri Catur Lestari. This article is distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the ICSPI 2016 Conference Committee.

 **OPEN ACCESS**

studies, such as: Hill and King (1993, 1995); Galor and Weil (1996); Thomas (1997); Klasen (1999); Dollar and Gatti (1999); World Bank (2001a); Abu-Ghaida and Klasen (2002); United Nations (2002); Nils-Petter (2003); WBDG (2003); Cavalcanti and Tavares (2007); and King, Klasen, and Porter (2008).

While the OECD (2008) revealed that sustainable economic growth at the national and global levels depends on the involvement of women as workers and the full use of their skills and qualifications. Various previous studies [15–18, 24, 33, 36, 37, 52, 53, 55–58] has also revealed that there is a negative impact of gender inequality in work on economic development.

The impact of women working is not just limited to economic growth, but has a broader impact on sustainable development. OECD (2008), and Galor and Weil (1996) stated that women who work helps to reduce the negative effects of decreased fertility and aging populations in many developed countries. Meanwhile, Cavalcanti and Tavares (2007) suggests that gender inequality in work have relationship with higher fertility rates, which in turn reduces economic growth. Therefore, the education of girls actually has a higher marginal return. The return can be higher if the impact of women's education on fertility and education of the next generation are taken into account [28, 29, 54].

Indonesia is one country that still facing the problem of gender inequality. World Economic Forum (2014) based on Gender Gap Index, puts Indonesia at 97th place among 142 countries in the world. This shows that gender inequality in Indonesia is relatively still high. When viewed progress from year to year, based on data from the World Economic Forum can be stated that the development of gender equality in Indonesia has a slower progress than several countries in 2014, due to Indonesia in the previous year was ranked 90 in 2011, and 92 in 2008.

From the perspective of the importance of gender equality for economic development, on the one hand the conditions in Indonesia can be seen as a disadvantage that could disturb the progress of development, but on the other hand, this condition can be viewed as a potential resource that has not been used in order to accelerate economic development. Therefore, Indonesia still has homework to enhance the role of women in development, so that the potential of women resources could be utilized as much as possible in development.

Palaz (2005) reveals that there are two main causes that lead to women having a low role in the economic development and the low participation of women in economic life that is the difference in human capital, such as education and work experience. Thus it can be stated that if there is no improvement on the gender gap in education,

the participation of women in economic development will always be limited. In other words, the gender gap in education would reduce the benefit of women for the society [24, 29, 36, 54]. Similar statement was expressed by the OECD (2003) that the gender gap is actually a condition in which a woman as one of the important resources are not used, and Chen (2004) stated that women who did not fully participate in development can be termed as a 'waste of human resources'.

Indonesia has made various efforts to improve public education. Wajib Belajar (WAJAR) 6 Tahun (This program requires that Indonesian children can attend school up to primary school) and 9 Tahun (This program requires that Indonesian children can attend school up to junior high school), exemption of school fees or Kartu Pintar are some examples of government programs that provides ease of school for children. Although the program is not intended specifically for girls, but these programs have led girls have a greater opportunity to attend school. One statistic that can indicate the condition of the participation of children in school is Net Enrollment Rate (NER). Based on data from Badan Pusat Statistik (BPS), NER at the primary school level is 96.00 for boys and 96.42 for girls; NER at the junior school level is 75.81 for boys and 79.16 for girls; and NER at the high school level of 58.45 for boys and 60.55 for girls. Data NER above reflects that the public awareness to educate their daughters have been relatively high. Even so, the value of NER on secondary education was still low. This indicates that besides the public awareness, there are various factors that inhibit girls to attend school.

This research attempts to study the impact of gender equality in education and work on economic development in Indonesia, either directly or indirectly. The impact of girls' participation in school will be studied by education level. Analysis of the comparison among the level of education is aimed to find out level of adequate education for woman so as to encourage the economic development. Furthermore, the study will also examine the relationship of gender equality in schooling and gender equality in the work. In this section, gender equality in education will also be divided by level of education.

1.1. Literature Review

The role and status of women has been ignored in a very long period of time in development. Therefore, there are continuous efforts to empower women so that gender equality can be realized. The feminist economics reveals that the conceptual underpinnings of economic knowledge is produced and reproduced by gender bias,

since women have a position 'under' men due to the patriarchal system (Eroglu and Isler 2006).

Culture is also stipulating that the care of children and household management is the responsibility of women, so that women are more burdened to find a job close to home and family. This condition causes the 'life work' of women limited by time and mobility [37]. The gender gap can also be seen from wage discrimination. One of the causes of wage discrimination is the view that men should support the family, while women only support itself [23], in addition to the view that women are weaker and more imperfect than men [39].

Boserup (1970) was the first to show that economic growth, particularly the system of capitalism in developing countries, do not always provide equitable benefit to women. Empirical studies in Africa, Asia and Latin America shows that the working conditions of women still lag behind men. Women are only as producers who use the 'primitive technique' in the agricultural sector, low-paid workers in the non-agricultural sector and unpaid workers in rural areas, and will contribute to agricultural productivity after the men perform the migration.

Two key elements that cause a woman decides to work is: **First**, the opportunity cost of their time, which in a competitive labor market, time equivalent to the prevailing wage, according to the level of education, experience, and skill level. Based on the Labor Supply Theory, higher wages have a substitution effect, which led to longer working hours, because the work becomes more attractive. But higher wages also have the income effect that will reduce working hours, because they feel the income has given satisfaction [12]. **Second**, non-labor income earned by women, such as: income derived from her husband for a woman who has been married, and the profits or income provided by his family. The increase in non-labor income will have an impact on labor supply, by reducing work hours or leave the labor force ([12], Mammen and Paxson, 2000).

The participation of women in economic activities has been a long debate. Those who do not support the increased participation of women in all fields of economic and political activity, have the opinion that sex (biological state) is the cause of the woman's role is limited to the home and children, and should have a small role in economic and politics activity. Conversely, those who support the role of women stated that sex (biological circumstances) are consistently unable to be used as explanatory changes in society, so it cannot be used to explain the status of women in society [18].

However, theoretically and empirically, researchers tend to be more supportive of women to participate in economic activities. The World Bank (2003) stated there has

been an agreement among the community, that the policies, and the implementation of development, which fail to take into account and address the gender gap, has limited effectiveness and serious cost implications. Historical data shows that there is a positive correlation statistically significant between gender equality in education and economic development [16]. This condition is indicated by the ratio literacy rate of female-male that tends to be positively correlated with the level of GDP per capita, and the ratio of girls to boys who attend primary and secondary school, that also tend to have a positive relationship statistically significant with development economy. Therefore, Chen (2004) concluded that there was a statistically significant correlation between gender inequality in education with the level of economic growth, and gender inequality tend to have a negative effect on economic development. The conclusions support the findings Mammen and Paxson (2000) which states that there is a positive relationship between GDP per capita and the education of women.

1.2. Hypothesis

Various previous studies [1, 15, 16, 19, 24, 27-30, 36, 46, 50, 52, 54] reveals that there is a statistically significant positive correlation between gender equality in education and economic development.

Chen (2004) states that the ratio literacy rate of female-male that tends to be positively correlated with the level of GDP per capita. This statement is supported by Mammen and Paxson (2000) which states that there is a positive relationship between GDP per capita and the education of women. Abu-Ghaida and Klasen (2002) provides empirical evidence that countries that fail to reduce the gender gap in education, may experience a decrease in per capita income by 0.1 to 0.3 percentage points. Arab Human Development Report 2002 concluded that the low female empowerment is one of the serious factors that hinder human development in the region over the last three decades [50]. Klasen (1999) stated supposed that the countries in South Asia, Sub-Saharan Africa, the Middle East and North Africa has achieved gender equality in education during 1960 to 1992, like the countries in the East Asia, the per capita income of those countries can grow with the addition of from 0.5 to 0.9 percentage points per year.

Based on the literature, research hypothesis that is proposed on the present study is:

H1: Gender equality in education has a positive impact on economic development

Meanwhile, some previous studies [15–18, 24, 33, 36, 37, 52, 53, 55–58] reveals that there is a negative impact of gender inequality in work on economic development, and Klasen (1999) states gender equality in education has an effect on gender equality in employment, which in turn had an impact on economic development. Based on the literature, it can be stated that gender equality in education has a direct and indirect impact on the economic development. Therefore, the hypotheses are:

H2: Gender equality in work has a positive impact on economic development

H3: Gender equality in education has a positive impact on gender equality in work

The growth literature suggests that education has a positive and significant impact on the growth rate of per capita income [25]. This is due to education, even at the primary level able to increase the productivity of the labor force through improved literacy, numeracy and health status (World Bank, 1990, 1995, 1999). Fleischer (2002) who did research on China reports evidence of a significant positive relationship between higher levels of education and GDP. Meanwhile, Chen and Fang (2000) shows the higher educated population has a positive and statistically significant relationship to economic growth across the provinces of China in the 1980s and 1990s. Based on the literature, the study proposed hypothesis:

H4: The education of the population has a positive impact on economic development

The basic cause of gender inequality is gender bias [39, 40], due to the patriarchal system (Eroglu and Isler 2006). Cultural factors have restricted women's rights and participation in the workplace, because she has the task as a housekeeper, childbirth and child rearing [13, 18, 37]. As a result, families are often unwilling to invest in girls' education [48].

Based on the literature, it can be stated that the participation rate of girls in school is determined by the willingness of the people to send their daughters to school.

Chen (2004) states that education tends to broaden one's outlook, and reduced ethnocentrism, which can increase one's flexibility in accepting the new view and norms. Therefore, the education of the population will affect their views on gender equality. However, because of the woman is a part of the population, the level of female education will determine the level of education of population. In other words, the level of education of the population is also determined by the number of girls enrolled in school. Thus, gender equality that is open up opportunities for the children to school will lead to increased levels of population education, which in turn will push economic growth. Therefore, this study proposed a hypothesis:

H5: Gender equality in education has a positive impact on the education of the population

Cities offer better employment, education, health care, and culture; and they disproportionately contribute to national economies, which are identified by industrialization as the basic driver behind movement [3]. Urbanization is the beginning of modernization and technology has a very big role (Peng, Chen and Cheng, 2015). Meanwhile, Lai and Zheng (2005) stated that the transformation of urban-rural population and constant improvement of human capitals have boosted the city's formation and development.

Based on the literature, the research hypothesis is:

H6: Urbanization has a positive impact on economic development

People who live in rural areas are a traditional society, which is generally more conservative and rigid in viewing gender roles, and the way of think is determined by local traditions and norms [16]. On the other hand, gender bias [39, 40], the patriarchal system (Eroglu and Isler, 2006), cultural factors [13, 18, 37], is a cause of inequality gender. Thus it can be stated that the gender gap is more likely to occur in rural areas. In other words, the level of urbanization is the driver of gender equality.

Furthermore, Lai and Zheng (2005) revealed that the urbanization has boosted the development of education scale, and the urbanization process is a process of population transfer and enhancement of human capitals. Bertinelli and Black (2004) stated that with average educated period as measurement standards for human capitals, found that the urbanization ratio rises by 1%, the average educated period will be

increased by 0.72 years. Thus it can be stated that urbanization can boost education, including girls' education.

Nevertheless, the education of the population including girls' education can also encourage urbanization. As stated by Akpan (2006) that urbanization Identical with industrialization, modernization and technology, so it takes an educated human resources in the process. In other words, educated population could determine the rate of urbanization. Therefore, the hypothesis is proposed in this study is:

H7: Gender equality in education has a positive impact on urbanization

The overall research hypothesis can be illustrated in the following conceptual framework:

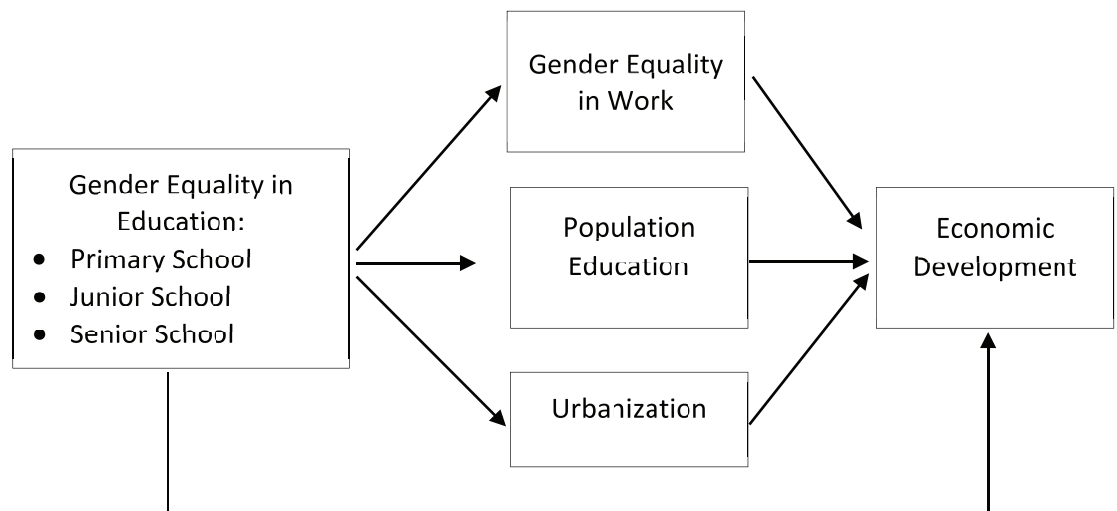


Chart 1: Conceptual framework and Hypothesis.

2. Research Method

Sources of data in this study is a publication issued by BPS, namely Indikator Kesejahteraan Rakyat, Statistik Ketenagakerjaan, Statistik Indonesia, and National Economic and Social Survey of 2012. The reason for using the data in 2012 is data has been available for all variables. Meanwhile after the year 2012, the data has not been available for several variables. The unit of analysis in this study is all provinces in Indonesia, which totaled 33 provinces.

Gender equality in education is a condition where girls and boys have the same opportunities to participate in education. The ratio of the percentage of enrolment of

girls to boys at every level of education can be used as a measure of gender equality in education. If the ratio is close to 1 or 100%, it can be stated that girls and boys have equal opportunities in education. In various previous studies, especially in developing countries, the measurement of gender equality in education is not done at every level of education, but only at the level of primary and secondary education [16]. Refer to the Chen (2004), in this study; gender equality in education will be measured using the Net Enrollment Ratio (NER) of girls and boys in primary and secondary education level (primary school, and junior and senior high school).

As gender equality in education, gender equality at work is a condition in which women and men have the same opportunities to get a job. In measuring gender equality at work, Chen (1994) using the ratio of crude labor force activity rates, that is expressed as ratio of the labor force between women and men. Thus, indicator of gender equality in the work in this study is the ratio of the labor force.

Meanwhile, the level of education of the population should be reflected by the average length of schooling of the population aged 15 years and above. Urbanization is measured by the percentage of the population living in urban areas (%). Economic development indicators commonly used is economic growth or per capita income. In this study will be used per capita income variable, because the study only reflects conditions in a given year.

Operational definitions of variables that are used in this study are:

1. Income per capita: Gross Domestic Product (GDP) per capita at current prices (000 Rupiah)
2. RAPMSD: Ratio Net Enrollment Rate of girls to boys in primary education level.
3. RAPMSMP: Ratio Net Enrollment Rate of girls to boys in junior high school education.
4. RAPMSMA: Ratio Net Enrollment Rate of girls to boys in high school education.
5. RAK: Ratio of the percentage of female to male in the labor force.
6. MYS: The average length of schooling of the population aged 15 years and over (Year).
7. Urbanization: The percentage of the population living in urban areas (%).

This study applies multiple regression models to test hypotheses and data analysis. Based on the conceptual framework and the proposed hypotheses, the models in this study are:

$$\text{Income per Capita} = \beta_{10} + \beta_{11} \text{RAPMSD} + \beta_{12} \text{RAPMSMP} + \beta_{13} \text{RAPMSMA} + e_{1i} \quad (1)$$

$$\text{RAK} = \beta_{20} + \beta_{21} \text{RAPMSD} + \beta_{22} \text{RAPMSMP} + \beta_{23} \text{RAPMSMA} + e_{2i} \quad (2)$$

$$\text{MYS} = \beta_{30} + \beta_{31} \text{RAPMSD} + \beta_{32} \text{RAPMSMP} + \beta_{33} \text{RAPMSMA} + e_{3i} \quad (3)$$

$$\text{Urbanization} = \beta_{40} + \beta_{41} \text{RAPMSD} + \beta_{42} \text{RAPMSMP} + \beta_{43} \text{RAPMSMA} + e_{4i} \quad (4)$$

$$\text{Income per Capita} = \beta_{50} + \beta_{51} \text{RAK} + \beta_{52} \text{MYS} + \beta_{53} \text{Urbanization} + e_{5i} \quad (5)$$

3. Result

The average of Ratio NER in primary education in 2012 based on the ratio of NER across the provinces in Indonesia was 99.84. The figure shows that the school participation of boys at primary level is higher than girls. Even so, the average NER at the junior and senior high school level, higher than 100. This condition indicates that the participation of girls attending school in junior and senior high school levels higher than boys. Based on these data it can be stated that the awareness of people to provide education for girls has been relatively good.

TABLE 1: Descriptive Statistics.

	N	Minimum	Maximum	Mean	Std. Deviation
RAPMSD	33	94.73	104.15	99.84	1.69
RAPMSMP	33	89.65	113.54	104.30	5.62
RAPMSMA	33	84.62	139.52	103.74	11.72
RAK	33	47.55	83.14	61.16	8.90
MYS	33	6.87	10.98	8.29	0.87
Urbanisasi	33	20.22	100.00	43.60	18.45
PDB Per Kapita	33	2976.62	47774.70	9572.44	8291.43
Valid N (listwise)	33				

Nevertheless, NER at the junior and senior high school education level is still relatively low, both for girls and boys (the average NER junior high school for boys =

66.48 and girls = 69.17, and the average NER senior high school for boys = 49.78 and girls = 51.30). These conditions indicate the people of Indonesia still have internal and external constraints to educate their children.

Table 1 also shows the value of the standard deviation, which is relatively large at Ratio NER for senior high school level. This condition indicates that net enrollment ratio between the provinces in Indonesia have considerable variations. Thus, although the average of Ratio NER at the high school level is higher than 100, but not all provinces in Indonesia have a school enrollment rate at the high school level of girls is higher than boys. This is also supported by the minimum value of Ratio NER of both juniors and senior high school is lower than 100.

Even though from a gender perspective, educational conditions of girls' relative have improved, but in terms of participation in the labor force, the condition is still not encouraging. Table 1 shows that none of the provinces in Indonesia which has a Ratio Participation of labor force rate (RAK) is higher than 100. This shows that in all the provinces of Indonesia women's participation in work is still relatively underdeveloped compared to men, with an average of RAK = 61.16.

Mean years of school population of Indonesia was still equivalent to grade 2 junior high school, even some provinces still equivalent to primary school. This condition is caused there are group of elderly people who had an education is still relatively low. Meanwhile, urbanization variation appears to be relatively high, because there is province in Indonesia which 100% are urban areas, but some are only 20.22%. It shows there is still quite a gap in the industrialization and modernization in Indonesia.

A variation of income per capita in Indonesia is also still relatively high. Several provinces have the GDP per capita is relatively low, while some provinces have GDP is relatively very high. For example, DKI Jakarta has the GDP per capita around 16 times the province of East Nusa Tenggara. This variation is of course dependent on many factors, such as natural resources, technology, capital, infrastructure, and human resources, including the role of women in development.

To examine how the impact Ratio NER in primary, junior and senior high school to per capita income, the regression model is used, which is based on the results of data processing provides the following equation:

$$\text{Income per Capita} = 197944,500 - 1216,802 \text{ RAPMSD} - 751,940 \text{ RAPMSMP}^{*}) + 111,248 \text{ RAPMSMA}$$

Note: *) significant at $\alpha = 5\%$

Ratio NER of girls to boys in junior high school has a significant effect on the per capita income at a significance level of 5%. Meanwhile, Ratio NER of girls to boys in primary education level has not significantly effect on the per capita income at a significance level of 5%. Regression coefficients of both variables are negative. It means, Ratio NER for primary and junior high schools have an inverse relationship with income per capita. These results differ from Ratio NER for senior high school which has a positive relationship even though no significant on per capita income.

The statistical test results support the findings Gyimah-Brempong, et al, (2006), that although general, research shows that education has a positive impact on income per capita, but when divided by level of education, the relationship is not clear yet. Several studies (Hall and Jones, 1999; Romer, 1990; Nelson and Phelps, 1996) suggested that higher education is a source of growth. Meanwhile, Petrakis and Stamakis, 2002; McMahan, 2002 revealed that primary education is the major source of economic growth, at least in Less Developed Countries (LDCs).

Furthermore, the impact of Ratio NER at primary, junior and senior high school on the Ratio participation in labor force (RAK) is described in the following regression equation:

$$RAK = 105,266 - 0,059 \text{ RAPMSD} + 0,044 \text{ RAPMSMP} - 0,413 \text{ RAPMSMA}^{*})$$

Note: *) significant at $\alpha = 5\%$

Results of testing the hypothesis using a regression model showed that the number of girls at the senior high school level has a significant influence on children's participation in the labor force at a significance level of 5%. However, the regression coefficient for the variable is negative, indicating that the higher the participation of girls at the senior high school level led to the lower female participation in the labor force. The results of statistical tests in this study differs from Klasen (1999), which reveals the influence of gender equality in education on gender equality in work, which in turn had an impact on economic development.

Meanwhile, the impact of Ratio NER at primary, junior and senior high school on the mean years' school (MYS) of population is represented by the following regression equation:

$$MYS = 28,419 - 0,142 \text{ RAPMSD} - 0,077 \text{ RAPMSMP}^{*}) + 0,020 \text{ RAPMSMA}$$

Note: *) significant at $\alpha = 5\%$

Based on the regression model, hypothesis testing provides results that participation of girls at senior high school did not significantly effect on the mean years' school of

population at a significance level of 5%. Nevertheless, the regression coefficients of these variable is positive, which means that the higher the participation of girls at the senior high school led to increase the mean years' school of population.

The participation of girls in junior high school had a significant influence on the mean years of schooling of population at a significance level of 5%. Regression coefficient of the variable has a negative sign, so that it can be interpreted that the higher participation of girls in junior high school, causing the lower the mean years' school of the population. However, by referring to the data about mean years of schooling in Indonesia, which is relatively high enough, i.e. 8.3 years, then this condition can be stated that the awareness of the public to allow his daughter in junior high school is not enough anymore to increase the mean years of schooling of population. Or in other words, the mean years of school of population in Indonesia will increase if people have awareness to send their daughters at least at senior high school level.

Regression models showing the impact of Ratio primary, junior and senior high school on the percentage of urban areas (urbanization) is written as follows:

$$\text{Urbanization} = 602,519 - 4,340 \text{ RAPMSD}^*) - 1,335 \text{ RAPMSMP}^*) + 0,132 \text{ RAPMSMA}$$

*Note: *) significant at $\alpha = 5\%$*

The hypothesis testing of regression model showed that the participation of girls going to school in senior high school had no significant effect on the percentage of urban population at a significance level of 5%. If the urban population can be an indicator of modernization, the positive regression coefficient indicates that the higher participation of girls going to school at the senior high school level, then a more modern that area. Thus, it can be stated that the awareness of the people to send their daughters to senior high school can bring a modernization, although its influence is not significant in this study.

Urbanization characterized by industrialization as the basic driver behind movement [3], early modernization and technology has a very big role (Peng, Chen and Cheng, 2015). Means the transformation of rural areas into urban areas, which is characterized by industrialization and modernization, requires a better-educated population. In this study, the change from rural to urban areas need women who are at least senior high school graduates.

Based on the same regression model, it was shown that the participation of girls at primary and junior high school have a significant effect on the urbanization at a significance level of 5%. Nevertheless, sign of regression coefficients on these twos variables are negative. These results can be stated that to bring modernization in

Indonesia, not enough to just give an opportunity to the girls get education up to the level of primary or junior high school, but at least the girl should be sent to senior high school level.

Having to test hypotheses and analyze the direct impact Ratio NER on the GDP per capita, Ratio Labor Force (RAK), Mean Year School (MYS) and Urbanization, will now be tested the effect of RAK, MYS and Urbanization on the income per capita to study the indirect impact of ratio NER on per capita income, which is described in the following regression equation:

$$\text{PDRB per Capita} = - 30942, 544 + 44,346 \text{ RAK} + 3300,389 \text{ MYS}^{*}) + 239,503 \text{ Urbanization}^{*})$$

*Note: *) significant at $\alpha = 5\%$*

Test the hypothesis based on the above equation reveals that the ratio of the labor force does not significantly influence on the per capita income at a significance level of 5%. Even so, RAK variable coefficient is positive, so it can be stated that the higher the RAK, the higher the GDP per capita. Thus, the achievement of gender equality in the workforce can bring prosperity. Although in this study the influence of gender equality in the work does not have a significant effect on the income per capita, but the regression coefficient, which is positive supports previous studies [15–18, 24, 33, 36, 37, 52, 53, 55–58].

Meanwhile, Variable MYS and Urbanization have a significant effect on per capita income at a significance level of 5%, and the both variables have a positive regression coefficient. These results can be interpreted that the higher education and more modern society (indicated by urbanization) will bring prosperity in Indonesia. These conditions support the growth literature that suggests that education has a positive effect and significant impact on the growth rate of per capita income (Gyimah-Brempong, et al, 2006), and the statement Desheng and Qinhuo (2005) which states that the Urban- transformation of rural population and constant improvement of human capital have boosted the city's formation and development, and they disproportionately contribute to national economies [3].

Ratio NER primary school has an indirect effect on income per capita after first affecting Urbanization. While Ratio NER junior high school has indirect influence on income per capita after first affecting the MYS and Urbanization. However, Ratio primary and junior high school showed negative effect on per capita income. This is different from Ratio NER senior high school net enrollment ratio, even though not significant, have an indirect positive effect on per capita income, after first affecting

both MYS and Urbanization. These results reveal again that it takes more women are minimal graduated from senior high school to encourage increased income per capita in each province in Indonesia.

4. Discussion and Conclusion

The negative effects of Ratio NER at primary and junior high school on per capita income shows that the high participation in primary and secondary education is not enough for women to play a role in increasing per capita income, and tend to reduce the per capita income. Schultz (1988) revealed that until women have access to adequate education and skills to find suitable employment in enterprises in the modern sector, the opportunity value of female's time relative to male will decrease. It means that gender equality in the work cannot be achieved until women get adequate education. Without a significant role in economic activities, the role of women in enhance economic development has also become limited. This study found that primary and secondary education has not been adequate to enable women to play a significant role in economic development. Adequate education for women for this purpose at least at the senior high school level. Thus, to improve the welfare of the people in the provinces in Indonesia, it required women who had an education at least at the senior high school level.

The study also found that participation of girls in senior high school have a negative influence on participation of girls in work. These results seemed to indicate that high public awareness to send their daughters in senior high school, impacting prevent women to actively participate in productive economic activities. Even so, by looking at the fact that many girls in Indonesia who has worked in the school age, then the information can be interpreted that the increasing public awareness to send their daughters in senior high school led to prevented girls to quickly entering the workforce. This condition implies avoid girls work in bad or worst sectors, receive low wages, or work that led to the children got ill treatment, including: slavery or sexual harassment and abuse. The increasing level of education of girls, leading to increased quality of the girls, so the girls are better prepared to enter the workforce and understand the world of work itself. In turn is expected girls would get a good and dignity job.

Indonesia is still in a phase of the process towards gender equality. When the various efforts made have a positive trend, it can be expected that someday, public awareness to educate their daughters in senior high school or higher have a positive impact on women's participation in the labor force, as has been shown by the developed

countries. At that time, of course women enter the workforce with a high bargaining power, so that women can choose the work, in accordance with her wishes. Women will no longer accept an unwilling job with forced due to low quality of self, as it is still prevalent in Indonesia at this time.

The participation of girls in junior high school had a significant negative effect on the mean year school and urbanization. It shows the participation of girls to attend school up to junior level is no longer sufficient to increase the mean year school and encourage urbanization. Conversely, the participation of girls in senior high school have a positive impact, although not significantly, on mean year school and urbanization. This indicates that the increase in the average length of the school is determined on the participation of girls in school at least at the high school level. Meanwhile, urbanization, which identical with technology-based industrialization and modernization, would require skilled human resources. The results showed that in order to encourage urbanization, we need women who have education at least a senior high school level.

Based on the above analysis, it can be concluded that in order to improve the welfare of the population, Indonesia require the participation of women in productive economic activities, higher education of the population, and encourage industrialization and modernization, that based on the technology. This condition must be supported by women with an adequate education that is at least senior high school level. Thus it can be stated, Indonesia don't ever dream could be a developed country if it is not able to provide greater opportunities for girls to attend school at least until the senior high school level. The success of the Program WAJAR 12 Tahun is one of the keys for the purpose.

References

- [1] Abu-Ghaida, D. and Klasen, S. (2002). *The Costs of Missing the Millennium Development Goal on Gender Equity*. The World Bank, Washington D.C.
- [2] Abu-Ghaida, D., and Klasen, S. (2004). The Costs of Missing the Millennium Development Goal on Gender Equity. *World Development* 32(7): 1075-107.
- [3] Akpan, I. A. (2006). The impact of urbanization and institutions of higher education on Houston Texas' Third Ward Community. *Journal Appl. Sci. Environ. Mgt.* June, 2006. Vol. 10 (2) 29 - 36
- [4] Amu, N. J. (2005). *The Role of Women in Ghana's Economy*. Friedrich Ebert Stiftung. Ghana.

- [5] Barro, R., and Jong-Wha, L. (1994). Sources of Economic Growth. Carnegie-Rochester Conference Series on Public Policy 40: 1-46.
- [6] Beneria, L. and Sen, G. (1981). Accumulation, Reproduction, and Women's Role in Economic Development: Boserup Revisited. *Journal of Women in Culture and Society* 1981, 7 (2), 279-298.
- [7] Blecker, R. and Seguino, S. (2002). Macroeconomic Effects of Reducing Gender Wage Inequality in an Export-Oriented, Semi-Industrialized Economy. *Review of Development Economics* 6(1): 103-19.
- [8] Barro, R. and Sala-i, X. M. (1995). Economic Growth. New York: McGraw-Hill.
- [9] Bloom, D. and Williamson, J. (1997). Demographic Transition and Economic Miracles in Emerging Asia. NBER Working Paper 6268.
- [10] Bloom, D. E., and Williamson, J. G. (1998). Demographic Transition and Economic Miracles in Emerging Asia. *World Bank Economic Review* 12(3): 419-55.
- [11] Bodkin, R.G. (1999). Women's Agency in Classical Economic Thought: Adam Smith, Harriet Taylor Mill, and J. S. Mill. *Feminist Economics*, 5(1), 45-60.
- [12] Borjas, G. J. (2010). Labor Economics, Fifth Edition. Singapore: McGraw-Hill International Edition.
- [13] Bradshaw, S., Castellino, J. and Diop, B. (2013). Women's role in economic development: Overcoming the constraints. Background paper for the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda. Sustainable Development Solution Network.
- [14] Busse, M. and Spielmann, C. (2006). Gender Inequality and Trade. *Review of International Economics* 14(3): 362-79.
- [15] Cavalcanti, T. V. and Tavares, J. (2007). The Output Costs of Gender Discrimination: A Model-Based Macroeconomic Estimate. Mimeograph, University of Lisbon.
- [16] Chen, D. H. C. (2004). Gender Equality and Economic Development: The Role of Information Communication Technologies. World Bank Policy Research Working Paper 3285.
- [17] Credit Suisse Research (CSR) (2007), Economics: More Women, More Growth.
- [18] Deckard, B. S. (1983). The Women's Movement: Political, Socio-economic and Psychological Issues. Harper & Row Publishers, NY.
- [19] Dollar, D and Gatti, R. (1999). Gender Inequality, income, and Growth: Are Good Times Good for Women? Policy Research Report on Gender and Development, Working Paper Series, No. 1, The World Bank, May.

- [20] Durán, A. L. Keynote speech at High-Level Roundtable “The implementation of the Beijing Declaration and Platform for Action, the outcomes of the 23rd special session of the General Assembly and its contribution to shaping a gender perspective towards the full realization of the MDGs”. 54th session of the UN Commission on the Status of Women, United Nations Headquarters NY, March 2010.
- [21] Easterly, W. (1999). Life During Growth. *Journal of Economic Growth*. Vol. 4, No. 3 (September), 239-76.
- [22] Forbes, K. (2000). A Reassessment of the Relationship between Inequality and Growth. *American Economic Review* 90(4): 869-87.
- [23] Forget, E.L. (1997). The Market For Virtue: Jean- Baptiste Say On Women in The Economy and Society, *Feminist Economics*, 3(1), 95-111.
- [24] Galor, O., and Weil, D. N. (1996). The Gender Gap, Fertility, and Growth. *American Economic Review* 86(3), 374-87.
- [25] Gyimah-Brempong, K., Paddison, O., and Mitiku, W. (2005). Higher Education and Economic Growth in Africa. *Journal of Development Studies*, Vol. 42, No. 3, 509-529, April 2006.
- [26] Haddad, L. J., Hoddinott, J., and Alderman, H. (1997). Intra household Resource Allocation in Developing Countries. Baltimore: Johns Hopkins University Press.
- [27] Hill, M. A. and King, E. M. (1993). Women’s Education in Developing Countries: An Overview. In Elizabeth M. King and M. Anne Hill (eds.) *Women’s Education in Developing Countries: Barriers, Benefits and Policies*. The World Bank, John Hopkins University Press.
- [28] Hill, M. A. and King, E. M. (1995). Women’s Education and Economic Well-Being. *Feminist Economics* 1(2): 1-26.
- [29] King, E. M., Klasen, S., and Porter, M. (2008). Gender and Development Challenge. Paper prepared for 2008 round of Copenhagen Consensus Project. Mimeographed, Copenhagen Consensus Center.
- [30] Klasen, S. (1999). Does Gender Inequality Reduce Growth and Development? Evidence from Cross-Country Regressions. Policy Research Report on Gender and Development Working Paper Series, No.7, the World Bank, November.
- [31] Klasen, S. (2002). Low Schooling for Girls, Slower Growth for All? Cross-Country Evidence on the Effect of Gender Inequality in Education on Economic Development. *World Bank Economic Review* 16(3): 345-73.
- [32] Klasen, S. and Wink, C. (2003). Missing Women: Revisiting the Debate. *Feminist Economics* 9(2/3): 263-99.

- [33] Klasen, S., and Lamanna, F. (2009). The Impact of Gender Inequality in Education and Employment on Economic Growth: New Evidence for a Panel of Countries. *Feminist Economics* 15(3), 91–132.
- [34] Knowles, S., Lorgelly, P., and Owen, D. (2002). Are Educational Gender Gaps a Brake on Economic Development? Some Cross-Country Empirical Evidence. *Oxford Economic Papers* 54(1): 118–49.
- [35] Lansky, K. (2000). Gender, Women and All the Rest. *International Labour Review*, 139 (4), 481-505.
- [36] Nils-Petter, L. (2003). Gender Equality and Long-Run Growth. *Journal of Economic Growth* 8(4), 403–26.
- [37] Organisation for Economic Cooperation and Development (OECD) (2008). Gender and Sustainable Development. Maximising The Economic Social and Environmental Role Of Woman.
- [38] Palaz, S. (2005). Toplumsal Cinsiyet ve Kalkınma: Kalkınmada Kadının Yeri” in M. Kar and S. Taban (eds.) iktisadi Kalkınmada Sosyal, Kültürel ve Siyasal Faktörlerin Rolü, Ekin Kitabevi, Bursa.
- [39] Pujol, M.A. (1992). Feminism and Anti-feminism in Early Economic Thought, Aldershot, U.K. Elgar.
- [40] Pujol, M.A. (1995). Into the Margin. In E. Kuiper ve J. Sap (eds.), Out of the Margin: Feminist Perspectives on Economic Theory, Routledge, New York.
- [41] Seguino, S. (2000a). Accounting for Gender in Asian Economic Growth. *Feminist Economics* 6(3): 27–58.
- [42] Seguino, S. (2000b). Gender Inequality and Economic Growth: A Cross-Country Analysis. *World Development* 28(7): 1211–30.
- [43] Seguino, S. and Floro, M. S. (2003). Does Gender Have Any Effect on Aggregate Saving? *International Review of Applied Economics* 17(2): 147–66.
- [44] Sen, A. (1990). Gender and Cooperative Conflicts. In Irene Tinker, ed. Persistent Inequalities: Women and World Development, pp. 123–49. Oxford: Oxford University Press
- [45] Stotsky, J. (2006). Gender and its Relevance to Macroeconomic Policy: A Survey. Working Paper WP/06/233, International Monetary Fund.
- [46] Thomas, D. (1997). Incomes, Expenditures and Health Outcomes: Evidence on Intra household Resource Allocation. In Lawrence James Haddad, John Hoddinott, and Harold Alderman, eds. Intra household Resource Allocation in Developing Countries, pp. 142–64. Baltimore: Johns Hopkins University Press.

- [47] Tinker, I. (1997). *The Making of a Field: Advocates, Practitioners and Scholars*. In N. Visvanathan, L. Duggan, L. Nison'off, N. Wiegiersma (eds.) *The Women, Gender and Development Reader*, Zed Books Ltd., London.
- [48] UNFPA (2012). *From Childhood to Womanhood: Meeting the Sexual and Reproductive Health Needs of Adolescent Girls*. Fact Sheet: Adolescent Girls' Sexual and Reproductive Health Needs.
- [49] UNPFII (2013). *Study on the extent of violence against women and girls in terms of article 22(2) of the United Nations Declaration on the Rights of Indigenous Issues (E/C.19/2013/9)*.
- [50] United Nations (2002). *Arab Human Development Report 2002: Creating Opportunities for Future Generations*. United Nations Development Programme, Arab Fund for Economic and Social Development.
- [51] Vendrik, M. and Cörvers, F. (2009). *Male and Female Labour Force Participation: The Role of Dynamic Adjustments to Changes in Labour Demand, Government Policies and Autonomous Trends*. IZA Discussion Paper Series DP No. 4397.
- [52] WBGDG (2003). *Gender Equality and the Millennium Development Goals*, World Bank Gender and Development Group.
- [53] Women and Work Commission (WWC) (2006), *Shaping a Fairer Future*, United Kingdom.
- [54] World Bank (2001a). *Engendering Development*. Washington, D.C.
- [55] World Bank. (2001b). *Social Protection Strategy: From Safety Net to Springboard*, Washington DC: World Bank.
- [56] World Bank (2001c). *Engendering Development Through Gender Equality in Rights, Resources, and Voice*, New York: Oxford University Press.
- [57] World Bank (2002). *Integrating Gender into the World Bank's Work: A Strategy for Action*. Washington DC: World Bank.
- [58] World Bank (2003). *Gender Equality and the Millennium Development Goals*. Washington, D.C., April.
- [59] World Economic Forum (2014). *The Global Gender Gap Report 2014*. World Economic Forum
- [60] Yamarik, S., and Ghosh, S. (2003). *Is Female Education Productive? A Reassessment*. Mimeograph, Tufts University, Medford, MA.