

# Effect of Economic Growth to Gender Wage GAP

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## Abstract

Gender gap persists in all aspects of life in the world. United Nations Development Programme Human Development Report states that it is important in human development is equitable economic growth between generations, gender and region. One form of gender inequality is the wage gap. Wage gap of men and women draw a lot of attention in the economic literature as related to economic growth. The aim of this study examine factors Gross Domestic Product (GDP) to the level of gender wage gap the ASIA countries. The data used are secondary data and the GDP per capita index ratio of estimated female to male earned income from 32 countries in Asia in 2005-2007 in the report of the United Nations Human Development Report. Based on linear regression and hypothesis testing concluded GDP per capita is negative and significant effect on the level of gender wage gap. This indicates that the more advanced a country the lower the level of the wage gap.

Keywords :GDP, Gender Wage Gap.

## 1 Introduction

Gender gap persists in all aspects of life in this world. Nature and extent of the gap varies in different countries or regions. Most of the countries in the world, women are experiencing gaps in legal rights, social and economic. United Nations Development Programme (UNDP) stated in Human Development Report (HDR) that one of the important things in human development is equitable economic growth between generations, between ethnicities, between sexes, and between regions. Where one dimension is emphasized by the UNDP gender equality.

Gender equality is a key issue of development. Gender equality will strengthen the ability of countries to grow, reduce poverty and to govern effectively. One form of gender inequality is the wage gap. The wage gap between men and women today have become a hot issue in the world and attracted a lot of attention in the economic literature as related to economic growth.

Previous research by Martin and Garvi 2009 suggests that growth Gross Domestic Product (GDP) stimulates an increase in the value of Gender Development Index (GDI) and Human Development Index (HDI) and reduce the gap between the two indices. In another study, [5] calculate

the quantitative consequences to be borne by a country when there is gender inequality in education and employment in his country differences in economic growth rates that ranged from 0.9 to 1.7% in the Middle East and North Africa and 0.1 to 1.6% in South Asia when compared with countries in East Asia and the Pacific. In Indonesia the linkages between gender equality showed statistically significant and negative effect on poverty and positive impact on economic growth [10]. [4] mentions that negatively affects GDP gender wage gap.

Based on the background and some previous studies above, as for the purpose of this study is to GDP factor test for levels of gender wage gap. Effect of GDP measured using GDP index and the gender wage gap is measured using index ratio of estimated female to male earned income the Asia countries.

The hypothesis of this study are:

- $H_0$  : Gross Domestic Product (GDP) does not affect the Gender Wage Gap  
 $H_a$  : Gross Domestic Product (GDP) affect the Gender Wage Gap

## 2 Methodology

In this study the type of data used are secondary data, namely data collection techniques based on the data available on the internet. Data were collected in the form GDP per capita and Index ratio of estimated female to male earned income from 32 countries in Asia in the years 2005-2007 are available in the report United Nations Human Development Report. Independent variables used in this study is the value GDP per capita each country while Index Ratio of estimated female to male earned income as the dependent variable. Analysis using simple linear regression using Statistical Package for Social Science (SPSS) version 15.0.

The steps are performed in the linear analysis is the first must fulfill Classical Assumption Test. It is used to avoid biased estimates, given that not all data can be applied to regress. Classical Test assumptions in this study consisted of Normality Test, Test and Test heterocedasticity autocorrelation. Normality test aims to test whether the regression model, the variable or residual pengganggu have a normal distribution. Autocorrelation test aims to test whether the linear regression model is no correlation between the error in period  $t$  with disturbing disturbing error in period  $t-1$  (previous). Heterokedastisitas test aims to test whether the regression model of the residual variance inequality occurs one other observation to observation.

After the Classical Assumption Test, then tested the research model in the form of Test coefficient of determination ( $R^2$ ) and Test T. Test coefficient of determination ( $R^2$ ) is used to determine the contribution of the independent variables in explaining the dependent variable. The greater the value of the coefficient of determination, it shows the greater the effect of independent variables on the dependent variable. T test aims to demonstrate how far the influence of the independent variables in explaining the variation individually dependent variable. Tests carried out using  $\alpha = 5\%$ .

## 3 Result

### 3.1 Classical Test Assumptions

#### Normality test

Normality test is used to determine whether the data used has a normal distribution

Based on Table 1 shows that the residual normality test results showed a significantly greater level of  $\alpha (\alpha = 0.05)$  is 0.645 to 0.072 for the variable gender and the GDP variable. Thus it can be stated both normally distributed variables sehinggal unfut for regression analysis.

Table 1: One-Sample Kolmogorov-Smirnov Test

		GDP	Gender
N		32	32
Normal Parameters (a, b)	Mean	35.3571	1.3997
	Std. Deviation	32.04776	, 52032
	Absolute	, 228	, 131
Most Extreme Differences	Positive	, 228	, 078
	Negative	-, 161	-, 131
	Kolmogorov-Smirnov Z	1.290	, 739
Asymp. Sig. (2-tailed)		, 072	, 645

a Test distribution is Normal

b Calculated from data.

#### Autocorrelation Test

In this study, durbin-watson test values ( $dw$ ) is 2.415 which is in the interval 1, 502 (value  $du$ ) - 2, 498 (value  $4-du$ ). This shows that the regression model there is no autocorrelation.

#### Test Heterocedasticity

Figure 1: Scatterplot

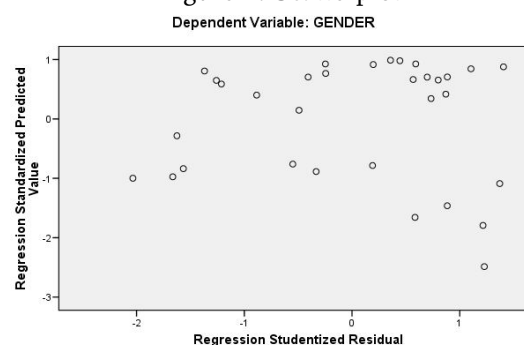


Figure 1 shows that the distribution of the data points are not patterned, the data points spread above and below or around the number 0 and not accumulate just above or below it. It can be concluded that the linear regression model is free from assumptions heterocedasticity classic.

### 3.2 Testing The Research Model

#### Test Koefisien Determination ( $R^2$ )

The test results of Table 2 shows the value of Adjusted R Square of 0.108. This means that 10.8% level of the wage gap is affected by the independent variable is GDP per capita. While 89.2% is influenced by other variables not examined in this study as the level of education, welfare and job availability.

Table 2: Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.370 <sup>a</sup>	.137	.108	.49136	.137	4.782	1	30	.037	

a Predictors: (Constant), GDP

b Dependent Variable: GENDER

Sources: Secondary data were processed with SPSS.

### Hypothesis testing (t test)

Table 3:

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,612	,130		12,356	,000
	GDP	-,006	,003	-,370	-2,182	,037

a Dependent Variable: GENDER

Sources: Secondary data were processed with SPSS.

Hypothesis testing is done by comparing the value of t and t table. Hypothesis is accepted if  $t > t$  table and  $sig < 0.05$ . In this study the value  $t_{table} = 0.05$  and  $df = 30$  is 1,697 and t values for the variables GDP by -2182 and  $sig. = 0.05$  is 0.037. Thus it can be said that  $t > t$  table is  $2.182 > 1.697$  and significance value  $0.037 < 0.05$ . Thus  $H_0$  is accepted. Judging from the beta of -0.006, it shows that GDP has a negative and significant effect on the level of gender wage gap.

## 4 Discussion

Based on the results of statistical analysis known that  $H_0$  is accepted and can be proved that the GDP per capita is negative and significant effect on the level of the wage gap between the genders. This indicates that the more developed a country, the level of the wage gap, the lower or the higher the value of a country's GDP per capita index the gender wage gap is getting smaller. Discrimination also play a role in gender wage gap, it is also expressed by International Labor Organization Report in 2012 that the overall gender wage gap associated with gender discrimination. These results are related to the results of research conducted by [1] shows that the gender gap is negative and significantly affect economic growth.

In general, inter-gender wage gap is affected by a country's progress. Developed countries will always be concerned about the welfare of each of its citizens, one of them in the form of wage equality. For most countries, the wage gap is still happening, it is caused by the culture of several countries who think that women tend to have less work experience than men and women would rather spend their time on homework mengakibatkan can not control their working hours and reduced productivity at work.

Women always have discrimination in terms of gender equality. In fact the relationship between gender equality with economic development have a reciprocal relationship, growth in advanced economies will mengurangi level gender inequality and the higher levels of gender equality in a country will improve the state's ability to grow and reduce poverty. Economic development has provided a way to increase the level of gender equality in the long run. The increase in revenue and a decrease in the poverty rate tends to reduce gender inequalities in education, health and nutrition.

Power increased productivity and new jobs often reduce gender inequality in employment and investment in infrastructure can also help reduce gender ketidaketaraan. Compiled from reports development and gender perspective[8] mentioned that it takes institutions provide equal rights and opportunities for women and men, and also takes policy measures to address the gender gap is still a problem in a country.

## 5 Conclusions and Recommendation

Based on the above discussion, it is known that  $H_0$  is accepted and concluded that GDP per capita is negative and significant effect on the level of the wage gap between the genders. 10.8% gender wage gap is affected by the value of economic growth. This indicates that the more developed a country, the level of the wage gap, the lower or the higher the value of a country's GDP per capita index the gender wage gap is getting smaller.

For further research are expected to use the sample countries with wider coverage and add some other factors not tested in this research.

## References

- [1] Erma Aktaria. Gender inequality in economic growth. *Journal of Development Economics*, 13:194–206, 2012.
- [2] Francine D. Blau and Lawrence M. Khan. Gender differences in pay. *National Bureau Of Economic Research*. <<http://www.nber.org/papers/w7732>>, 2000.
- [3] Imam Ghozali. *Multivariate Analysis with Applications SPSS Program, Third Edition*. Agency Publisher Diponegoro University (BPUD), 2006.
- [4] Sherri Haas. *Economic Development and Gender Wage Gap*. 2008.

- [5] S. Klasen and F. Lamanna. The impact of gender inequality in education and employment on economic growth: New evidence for a panel of countries. *Feminist Economist*, 15.3:91–132.
- [6] Tren Labour and Social 2012. Efforts to create a just and sustainable economy. *International Labour Organization ILO Office for Indonesia*, 2013.
- [7] R.D. Martin and M.G. Garvi. Gender inequality and economic growth in Spain: An exploratory analysis. *The Review of Regional Studies*, 39. 1:23–48.
- [8] Summary of Gender and Development. <http://siteresources.worldbank.org/INTGENDER/Resources/indonesiansumm.pdf>. 2000.
- [9] United Nations Development Programme. *Human Development Report*. <http://hdr.undp.org/reports/global/2005/>, 2005.
- [10] O.B. Samosir and R. Toersilaningsih. Relationships gender equality, poverty and economic growth: Data analysis susenas 2000 and 2002. *News Demographics Year 34*, 4:6–21, 2004.