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# Economic Development and the Gender Wage Gap

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## Introduction

General wage inequality within countries is a topic that has received a great deal of attention in the economic literature. Differences in wages between men and women, particularly cross-national variation in the size of the gender gap, have not been studied as thoroughly. It was not until the later half of the 20th century that the first full study of the role of women in economic growth and the effect of development on them was completed by Ester Boserup (1970).

Income parity between genders does not exist as of yet within any country, but the size of the wage gap varies considerably. Within this study, the greatest equity is found in Switzerland, which has a male-to-female wage ratio of 1.11, meaning that men make approximately 1.11 times as much as women. The greatest inequality is seen in Egypt, with a ratio of 3.84, implying that men make almost quadruple the wages of women. The difference in income between men and women is of great importance because it affects a very large number of people. The gender wage gap is not uniform cross-nationally, and if determinants of the gap size can be found, policy could be implemented to reduce the income disparities.

Economic inequality between men and women is an important problem deserving of in-depth study because of the large number of people it affects. Not only do current gender wage gaps affect women, they also likely affect their children and future generations. A number of studies have found evidence that women tend to spend income differently then men, with greater shares being put back into the household and more equally allocated between children of both sexes (Blau, Ferber, and Winkler, 2001). This

in turn improves equality between genders if both girls and boys receive similar benefits and education.

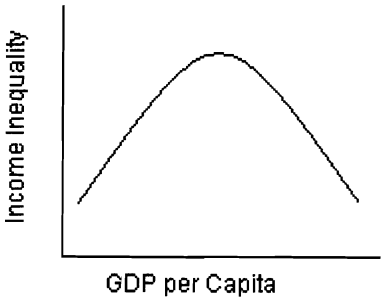
This study will examine the relationship between the gender wage gap and the degree of economic development of a country as measured by the gross domestic product per capita. A second model uses the United Nations Human Development Index as a more comprehensive measure of development. It also analyzes the relationship of educational attainment and general wage inequality to the size of the gender wage gap.

**Theory and Literature Review**

This research is based upon the basic theory of supply and demand and on human capital theory with reference to the inverted-U curve postulated by Simon Kuznets.

Kuznets' Inverted-U Hypothesis states that there is a relationship between the per capita income of a country and the amount of income inequality within it. When plotted it creates an inverted-U curve (Figure 1) such that as per capita income increases from subsistence a country will experience first increasing inequality and then decreasing inequality at later stages of development. Kuznets suggested that the pattern was the result of the inflow of people into urban areas with unequal income distributions as a country begins to develop, which would cause inequality to increase at first, but that inequality then decreases as the new members integrate into the labor force (Lantican et all, 1996).

**Figure 1: Kuznets' Inverted-U**




This study suggests that an inverted-U pattern is also to be expected when measuring income inequality between genders within countries. As a country begins to develop the growing industrial sector increases the demand for male labor, while not providing greater opportunities for female workers, resulting in a larger wage gap between men and women. Boserup (1970) concluded that women are often active participants in "home industries" which produce hand made items for sale. As these industries gradually decline in importance in an economy and lose business to large scale manufacturing – which hire a larger share of men – women's jobs are lost. In later stages of development, as the economy continues to grow and provide more service sector jobs, the labor force opportunities for women increase, thus decreasing the gender earnings gap.

Pampel and Tanaka found support for Boserup's conclusion about women's participation in the work force in their study of the effects of economic development on female labor force participation rates. Their cross-national study of 70 countries showed a curvilinear relationship, with female labor force participation rates first decreasing with regards to the measure of economic development, and increasing at greater levels of

development. This would also suggest that female earnings first decrease relative to those of men and increase at later stages of development.

Human capital theory suggests that people are compensated in the work place based on their abilities and skills (Borjas, 2000). Common measures used to get at the difficult to quantify concept of human capital include years of schooling, on-the-job training, and years in the labor force. Human capital theory would suggest that the greater the difference in educational attainment between men and women, the greater the wage difference will be.

Blau and Kahn found in their study of ten industrialized nations that the wage structure of a country is an important factor in determining the size of the gender wage gap. In the countries they examined, overall income inequality of a country accounted for a large portion of the gender wage gap. There is no reason to suppose that this factor would only be important in the industrialized countries, and so should also be included in the study.

Kidd and Shannon expanded on Blau and Kahn's work, using the same methodology to compare the gender wage gaps of Australia and Canada. They also found that wage structure was significant, and point out that this is important because it "highlights the fact that the gender wage differential may differ between countries for reasons not specifically tied to gender" (1996). Evidence of the importance of the wage structure has also been found outside of the industrialized West. Brainerd's study of seven countries of the former Soviet Union showed that the widening of the wage gap negatively affected women in all of them, although in five of the seven the losses were

"more than offset by gains in rewards to observed skills and by an apparent decline in discrimination against women" (2000).

In sum, the literature suggests that an inverted-U pattern can be expected when plotting the gender wage gap against a measure of economic development. It is also expected that differences in human capital attainment between men and women will help explain the wage gap. Recent studies also propose that greater general wage inequality within a country will be correlated with higher gender wage inequality.

**Data**

Cross-sectional data for the dependent variable, a ratio of male-to-female earnings, is available from the United Nations Human Development Report 2005: Human Development Indicators. The estimated earned income for men and women in US purchasing power parity dollars is provided for 154 of 177 countries based on the most recent year for which data are available between 1991 and 2003. While it is less than ideal to use data from different years, it is the best available, and it is also unlikely that the values for each country would have changed extremely in the time period.

GDP per capita is the variable of choice for previous literature on the Kuznets hypothesis, and the first model will use it as the measure of development. The data for this independent variable, GDP per capita, is also available in the Human Development Report 2005. The majority of the values are for the year 2003, however, for countries for which recent data were not available, the HDR calculated values based on economic regression.

It has been shown that GDP does not account for all aspects of development (Todaro and Smith, 2006). The United Nations Development Program created the Human Development Index as an alternative and more comprehensive measure of socioeconomic development. Human Development Index values are used as the measure of development in the second model and also come from HDR 2005. The HDI is calculated using a combination of longevity, knowledge, and standard of living. Longevity is measured as the average life expectancy at birth, knowledge is a combination of adult literacy and mean years of schooling data, and standard of living is measured by real per capita income adjusted for its purchasing power within the country. HDI values range on a scale of 0 to 1, with 1 representing the highest level of development.

For each model, a scatter plot of the male-to-female wage ratio against the GDP per capita or HDI will be created to look for any obvious indication of a trend across countries. The greater the wage ratio, the larger the wage gap between genders in the country. Hence, a ratio of 1 represents gender wage equality, while a ratio of 2 means that men have an estimated earned income twice as great as women of the same country. As predicted by the theory, an inverted-U relationship is expected between the two variables.

The scatter plot of the male-to-female wage ratio against GDP per capita with a best fit quadratic line is depicted in Figure 2. While it is by no means a perfect inverted-U curve, there is a noticeable cluster of countries with low GDP per capita levels and lower wage ratios followed by higher wage ratios at slightly higher GDP levels.

Countries with high incomes per capita – above approximately $25,000 – tend to have lower male-to-female wage ratios, with just a couple of high outliers.

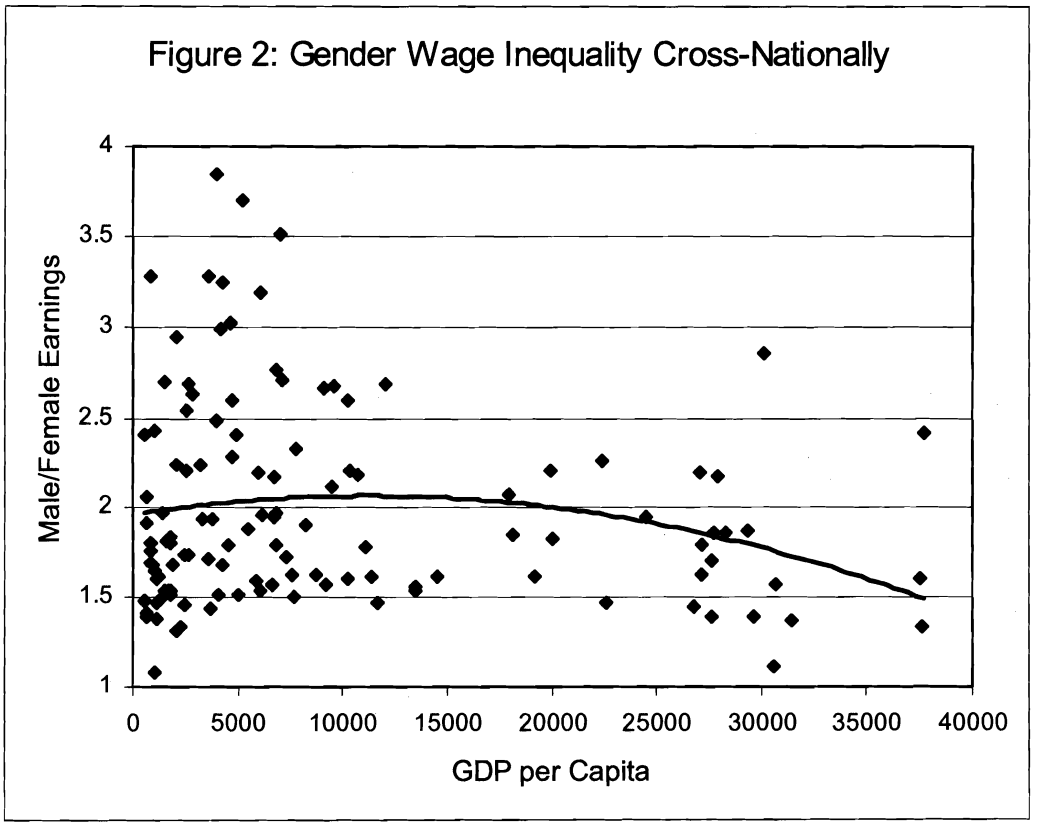
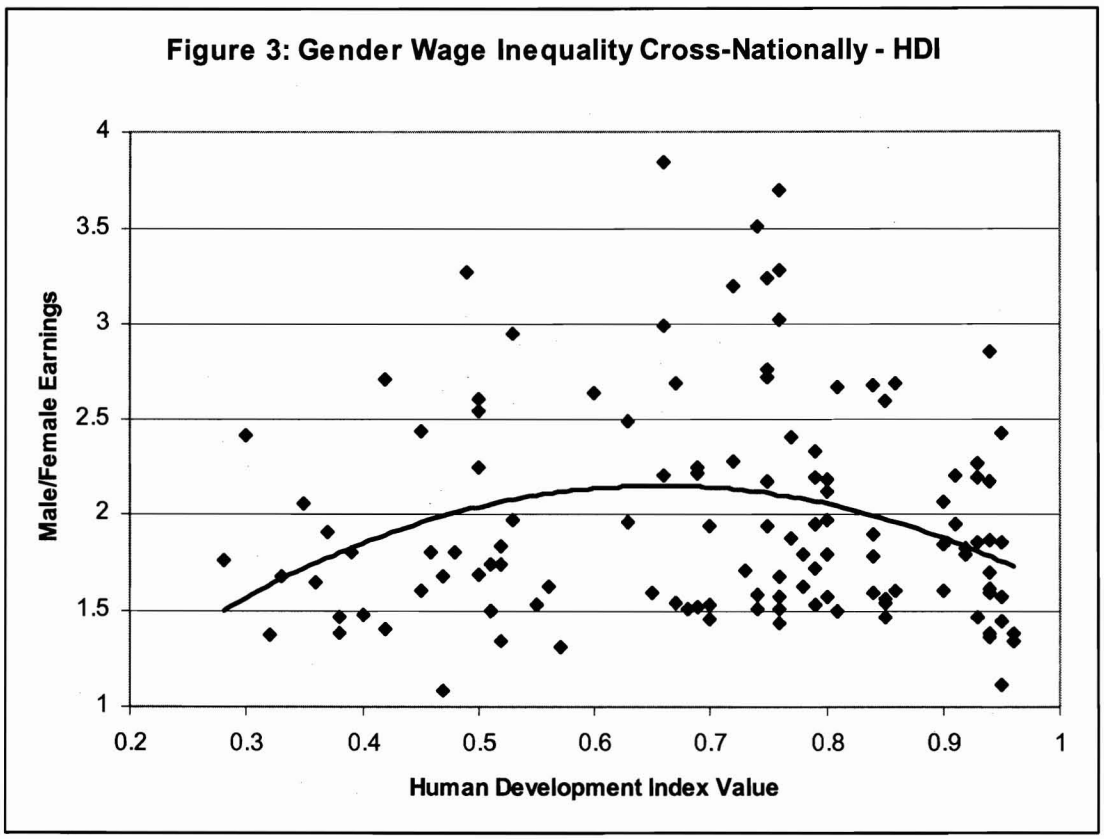



Figure 3 shows a scatter plot of Human Development Index against the Male-to-Female Earnings Ratio with a quadratic trend line. There is clearly an inverted-U pattern present in the data. As development increases (measured by HDI) inequality between male and female earnings increases. At higher levels of development, however, wage inequality begins to decrease.




The percent of women in the labor force with different levels of education would be an ideal measure for operationalizing the education variable. The World Bank's World Development Report reports this variable; however, it is missing data for a large percent of the countries under study. Adult literacy rates by gender are available from the Human Development Report and are used as an independent variable in the study as the male to female literacy ratio.

General wage inequality of a country can be measured in a number of ways. The Gini coefficient is one such measure commonly used for comparing income inequality across countries. A country's Lorenz curve measures income actually received by households as a percentage of total national income. The equality line depicts perfectly equal income distribution. For example, if ten percent of the country earned ten percent

of the income, twenty percent earned twenty percent of the income, and so on. The Gini coefficient is calculated by dividing the area between a country's Lorenz curve and the perfect equality line by the total area under the equality line. This results in a coefficient ranging from 0, representing perfect equality, to 100, which indicates perfect inequality. Gini coefficients between 20 and 35 indicate relatively equitable distributions of income, while values between 50 and 70 signify highly unequal distributions (Todaro and Smith, 2006). The Gini coefficients for a large number of the countries included in the study are available from the Human Development Report. This variable is included because previous research has found that the gender wage gap varies with general wage inequality.

Descriptive statistics of the data set are given in Table 1. After removing 33 countries from the study due to lack of data on one or more variables, a total of 121 countries are included in the data set (See Appendix for complete data set). Data are grouped according to the income categories specified by the World Bank: high income, gross national income per capita of $9,386 or more; upper middle income, $3,036-9,385; lower middle income, $766-3,035; and low income, $765 or less. One observation important to note is that the means of the dependent variable show a Kuznets-type relationship. The average value for low and high income countries is lower than that of the middle income groups.

There was large variation across countries in regard to each of the variables. The dependent variable ranged in value from near equality at 1.08 to significantly imbalanced at 3.84. The GDP per capita of the countries included in the study went from a low of $548 to a high of $37,738. The adult literacy rate ratio included a couple countries in

which women had the advantage (low of .82), but in most nations men recorded higher rates, with a ratio high at 2.44. The Gini coefficient, where 0 represents perfect equality and 100 signifies perfect inequality, ranged from low inequality at 24.7 to high inequality at 70.7.

**Table 1: Descriptive Statistics for Data by Income Group**

| Variable and Group | N | Minimum | Maximum | Mean |
|---|---|---|---|---|
| **Male to Female Earnings** | | | | |
| High Income | 26 | 1.11 | 2.85 | 1.8 |
| Upper Middle Income | 17 | 1.47 | 2.68 | 2 |
| Lower Middle Income | 38 | 1.44 | 3.84 | 2.25 |
| Low Income | 40 | 1.08 | 3.27 | 1.83 |
| **GDP per Capita** | | | | |
| High Income | 26 | $17971 | $37738 | $27192 |
| Upper Middle Income | 17 | 4919 | 14584 | 10367 |
| Lower Middle Income | 38 | 2587 | 10346 | 5548 |
| Low Income | 40 | 548 | 3262 | 1522 |
| **Gini Coefficient** | | | | |
| High Income | 26 | 24.7 | 43.4 | 32.6 |
| Upper Middle Income | 17 | 25.8 | 63 | 43 |
| Lower Middle Income | 38 | 26.2 | 70.7 | 42.3 |
| Low Income | 40 | 26.8 | 63.2 | 42.3 |
| **Male to Female Literacy** | | | | |
| High Income | 26 | 1 | 1.09 | 1.01 |
| Upper Middle Income | 17 | 0.93 | 1.08 | 1.01 |
| Lower Middle Income | 38 | 0.92 | 1.65 | 1.09 |
| Low Income | 40 | 0.82 | 2.44 | 1.46 |

**Empirical Method**

My hypotheses to be tested are as follows:

1. Gender wage inequality will follow an inverted-U pattern with respect to the level of economic development of countries.
2. The disparity in educational attainment by gender will be positively related to the size of the gender wage gap.
3. The degree of general wage inequality in a country will be positively related to the size of the gender wage gap.

Regression analysis will be used to test the importance of each independent variable on the gender wage gap. In order to test the inverted-U hypothesis, both the GDP per capita and the square of the GDP per capita will be included as independent variables. It is expected that the GDP per capita will be positively related, while the square of the variable will be negatively related to the wage ratio. Table 2 lists the variables with their descriptions and expected sign of their coefficients.

The equations to be tested are as follows:

Model 1: $\text{MEarning/FEarnings} = \alpha_1 + \alpha_2(\text{GDP per capita}) + \alpha_3(\text{GDP per capita})^2 + \alpha_4(\text{MLit/FLit}) + \alpha_5(\text{Gini}) + e$

Model 2: $\text{MEarning/FEarnings} = \alpha_1 + \alpha_2(\text{HDI}) + \alpha_3(\text{HDI})^2 + \alpha_4(\text{MLit/FLit}) + \alpha_5(\text{Gini}) + e$

Where MLit/FLit is the ratio of the male-to-female adult literacy rates, and, as a measure of educational attainment, is predicted to be positively related to the male-to-female wage ratio. Gini, as a measure of general wage inequality, is also predicted to be positively related to the dependent variable.

**Table 2: Variable Descriptions and Expected Signs**

| Variable | Description | Expected Sign |
|---|---|---|
| **Dependent** | | |
| Mearn/Fearn | Estimated yearly earnings of males divided by those of females | |
| **Independent** | | |
| GDP per capita | Gross domestic product per capita in PPP US$ for the most recent year 1991-2003 | + |
| HDI (Model 2) | Human Development Index value from the 2005 Human Development Report | + |
| $(GDP\ per\ capita)^2$ | Above variable squared | - |
| $(HDI)^2$ (Model 2) | HDI value squared | - |
| MLit/FLit | Adult male literacy rate divided by the adult female literacy rate | + |
| Gini | Gini coefficient as reported by the World Bank | + |

**Results**

Model 1:

The results of the OLS regression analysis (Table 3), while not robust, do provide tentative support for the hypotheses. All coefficients had the sign predicted by the literature. Only the Gini variable coefficient was significant at the .01 level with a value of .005. However, GDP per capita and GDP per capita squared were close to being significant at the .05 level. The ratio of male-to-female literacy rates was not significant and also had a small coefficient. Overall, the variables predict only a small amount of the variance in the dependent variable, with an R square value of .118.

**Table 3: Summary Results of OLS Regression Analysis – Model 1**

| Variable | Coefficient | Significance | t - Statistic |
|---|---|---|---|
| Constant | 0.901 | 0.015 | 2.47 |
| GDP per capita | 3.95E-05 | 0.067 | 1.852 |
| $(\text{GDP per capita})^2$ | -1.18E-09 | 0.055 | -1.938 |
| MLit/FLit | 0.281 | 0.135 | 1.505 |
| Gini | 0.015 | 0.005 | 2.894 |

R Square = 0.118
N = 121

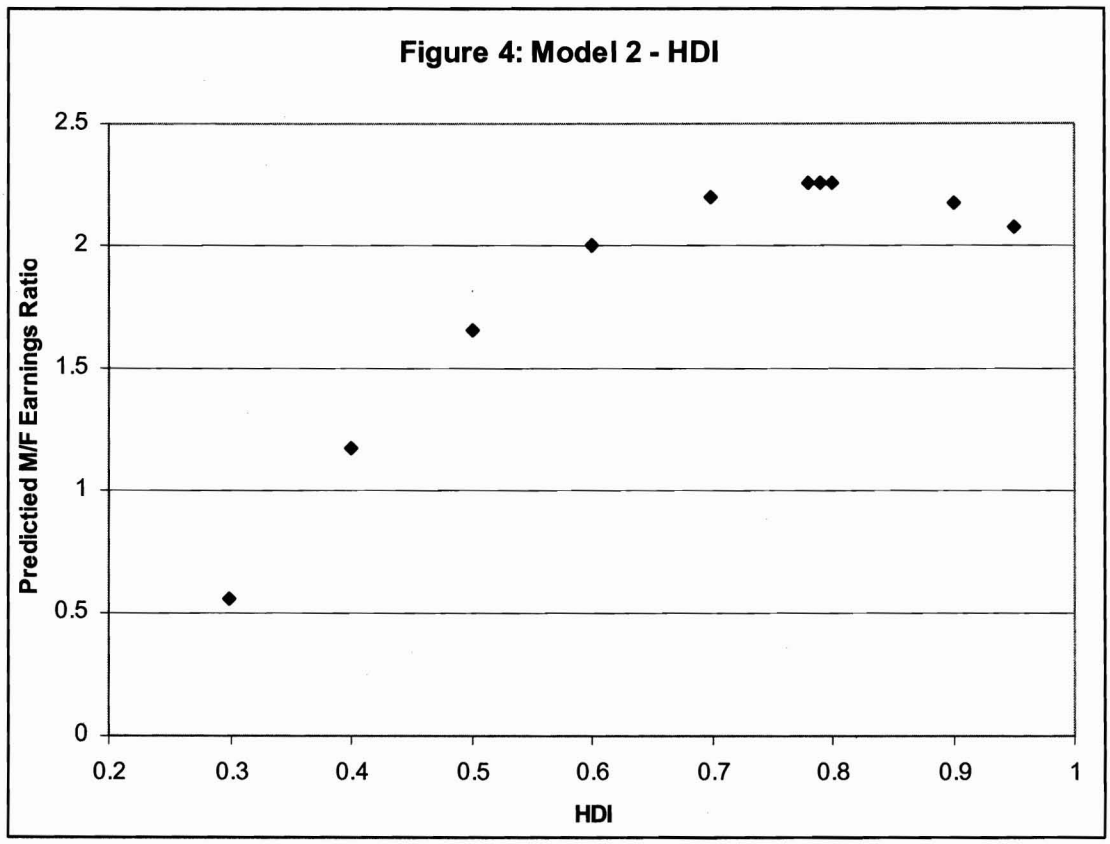
Model 2:

The results of regression analysis of Model 2 that are presented in Table 4 show that each variable is significant and has the expected sign. The R square value of .298 is over twice that of Model 1, and indicated that Model 2 explains approximately 30 percent of the variation in the dependent variable. Figure 4 plots the male-to-female earnings ratio values predicted by the regression results for Model 2. In calculating the predicted values the mean values for MLit/FLit (1.18) and Gini (40.33) were used, and HDI was allowed to vary. The simulation illustrates that the model does in fact predict an inverted U curve which peaks at an HDI value of approximately .79.

**Table 4: Summary Results of OLS Regression Analysis – Model 2**

| Variable | Coefficient | Significance | t - Statistic |
|---|---|---|---|
| Constant | -4.320 | 0.000 | -4.466 |
| HDI | 11.129 | 0.000 | 5.316 |
| $(\text{HDI})^2$ | -7.033 | 0.000 | -4.772 |
| MLit/FLit | 1.121 | 0.000 | 4.933 |
| Gini | 0.021 | 0.000 | 4.491 |

R Square = 0.298
N = 121




**Supplementary Analysis – Model 3**

Model 2 explained a significant amount of variance in the gender wage gap, and supported each of the hypotheses tested. A large amount of variance remained to be explained. Examining the countries which continued to be outliers through residual analysis suggested the possible significance of religious or cultural factors in determining the size of the wage gap. The initial models did not include any additional factors which may preclude women from fully participating in the work force and therefore result in lower earnings.

A third model was created with dummy variables added to account for the potential influence of culture on the magnitude of the gender wage ratio. Within the dataset, 34 countries were classified as predominately Roman Catholic, and 27 as predominately Muslim. Classification was based on the country having fifty percent or more of the population belonging to the religion according to the CIA World Factbook. There were no other religions for which the sample size was large enough to be included as a variable. The minimum, maximum, and mean values of the dependent variable are reported in Table 5 for the countries classified as Roman Catholic or Muslim.

**Table 5: Descriptive Statistics for Data by Religion Variable**

| Variable | N | Minimum | Maximum | Mean |
|---|---|---|---|---|
| | | **M/F Earnings Ratio** | | |
| Roman Catholic | 34 | 1.39 | 3.7 | 2.22 |
| Muslim | 27 | 1.38 | 3.84 | 2.23 |

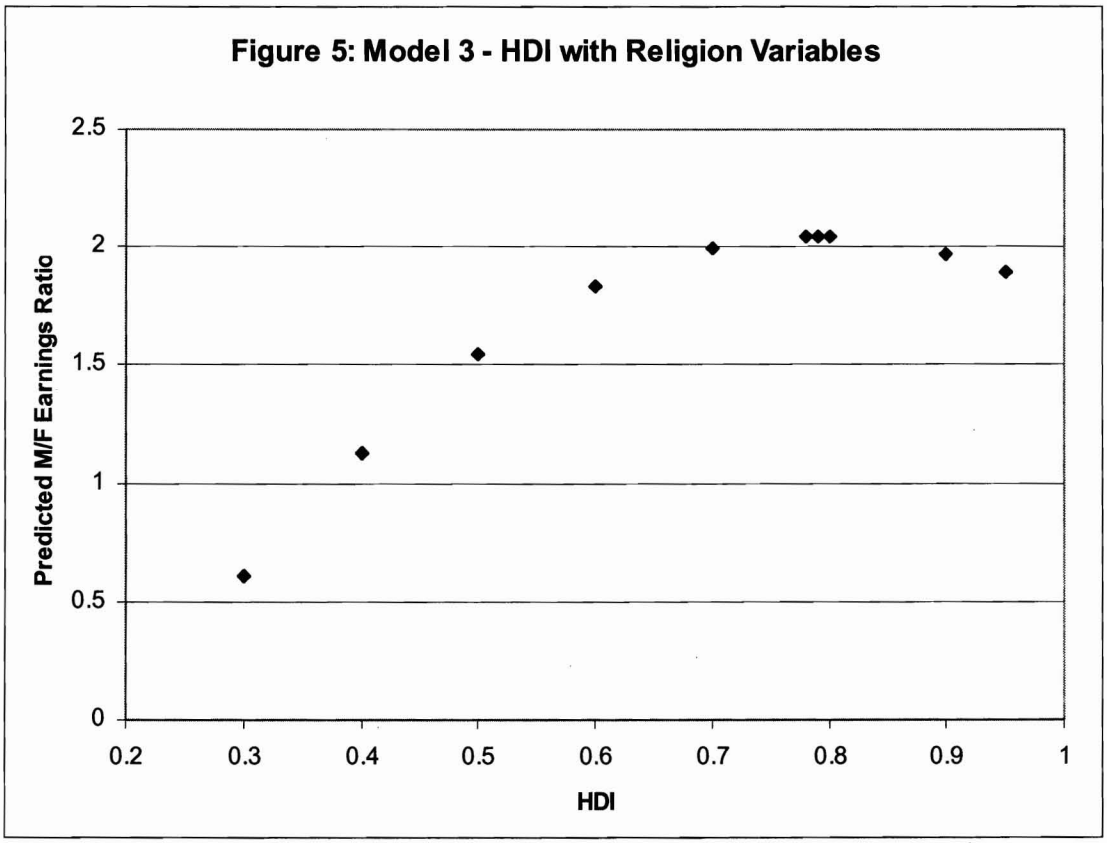
Results of the regression for Model 3 are summarized in Table 6. All original variables remained highly significant, although the coefficient values decreased somewhat for each. Model 3 explains almost 40 percent of the variance in the dependent variable, as seen by the R Square value of .396. The dummy variables for both Roman Catholic majority and Muslim majority were highly significant and positively related to the dependent variable. A country having either a Roman Catholic or Muslim majority increases the predicted size of the gender wage gap. Figure 5 plots the predicted values based on the results of Model 3 using the mean values for the MLit/FLit and Gini variables, and assuming a value of 0 for each of the dummy variables (meaning neither Roman Catholic nor Muslim).

**Table 6: Summary Results of OLS Regression Analysis – Model 3**

| Variable | Coefficient | Significance | t - Statistic |
|---|---|---|---|
| Constant | -3.537 | 0.000 | -3.809 |
| HDI | 9.44 | 0.000 | 4.661 |
| $(HDI)^2$ | -5.974 | 0.000 | -4.173 |
| MLit/FLit | 0.918 | 0.000 | 4.04 |
| Gini | 0.019 | 0.000 | 4.049 |
| Roman Catholic | 0.371 | 0.000 | 3.619 |
| Muslim | 0.353 | 0.004 | 2.979 |

R Square = 0.396
N = 121

**Figure 5: Model 3 - HDI with Religion Variables**



## Conclusion

The results of this study provide support for the presence of a Kuznets variety inverted-U curve between GDP per capita and gender wage inequality across nations. GDP per capita was positively related to the size of the gender wage gap while the square of it was negatively related. This shows that the relationship holds at least somewhat that as economic development increases the size of the gender wage gap increases, but at high levels of per capita income the difference in pay decreases.

The results of Model 2 using Human Development Index values as the measure of development are more robust that those using the traditional Kuznets variable, GDP per capita. All four variables are significant at the highest level, and the R square value is over double that of the first model. Model 3 explains an additional ten percent of the variance in the dependent through the addition of dummy variables for the Roman Catholic and Muslim religions. Plots of the values predicted by Models 2 and 3 both have a clear curve which peak at an HDI value of approximately .79. The results suggest that the decrease in gender wage inequality is not expected to be seen until countries reach development levels close to .80 on the Human Development Index.

The role of human capital in determining the gender wage gaps as measured by the ratio of literacy rates did not prove significant in Model 1, but was significant in Models 2 and 3. The gap between men and women in adult literacy was positively related to the size of the gender wage gap. While differences in literacy rates may serve as a reasonable proxy for human capital differences in some countries, it is possible that in a large number of countries literacy is so high for both genders that it does not show

much of the difference. Research using a different measure of human capital differences which allows for more of the actual human capital difference to be observed may prove to have even more significance on the gender wage gap.

The importance of overall wage inequality (as measured by the Gini coefficient) on gender wage inequality was seen to be significant in this study. One policy implication that can be seen stems from the significance of the Gini coefficient variable in the analysis. As suggested by Blau and Kahn (1996) and supported by Kidd and Shannon (1996) as well as Brainerd (2000), general wage inequality within a country is positively related to gender wage inequality. One way in which a government could take action to reduce the disparity in incomes between genders would be to work to lower the overall income gap, or at a minimum keep it from growing.

The results of Model 3 suggest an avenue for further research. Dummy variables for both Roman Catholic and Muslim (defined as fifty percent or greater of the population) were statistically significant and positively correlated with the size of the gender wage gap. Model 3 was run only as a preliminary look at the relevance of religion on the gender wage gap, and significant further research could be done on the subject.

# Appendix

## Table A 1: Dataset in Descending Order by GDP per Capita

| | Male to Female Earnings | GDP per Capita (PPP US$) | HDI | Gini Coefficient | Male to Female Literacy | Roman Catholic | Muslim |
|---|---|---|---|---|---|---|---|
| **High Income** | | | | | | | |
| Ireland | 2.42 | 37738 | 0.95 | 35.9 | 1 | 1 | 0 |
| Norway | 1.34 | 37670 | 0.96 | 25.8 | 1 | 0 | 0 |
| United States | 1.6 | 37562 | 0.94 | 40.8 | 1 | 0 | 0 |
| Denmark | 1.37 | 31465 | 0.94 | 24.7 | 1 | 0 | 0 |
| Canada | 1.57 | 30677 | 0.95 | 33.1 | 1 | 0 | 0 |
| Switzerland | 1.11 | 30552 | 0.95 | 33.1 | 1 | 0 | 0 |
| Austria | 2.85 | 30094 | 0.94 | 30 | 1 | 1 | 0 |
| Australia | 1.39 | 29632 | 0.96 | 35.2 | 1 | 0 | 0 |
| Netherlands | 1.87 | 29371 | 0.94 | 30.9 | 1 | 0 | 0 |
| Belgium | 1.86 | 28335 | 0.95 | 25 | 1 | 1 | 0 |
| Japan | 2.17 | 27967 | 0.94 | 24.9 | 1 | 0 | 0 |
| Germany | 1.86 | 27756 | 0.93 | 28.3 | 1 | 0 | 0 |
| France | 1.7 | 27677 | 0.94 | 32.7 | 1 | 1 | 0 |
| Finland | 1.39 | 27619 | 0.94 | 26.9 | 1 | 0 | 0 |
| Hong Kong, China (SAR) | 1.79 | 27179 | 0.92 | 43.4 | 1.08 | 0 | 0 |
| United Kingdom | 1.62 | 27147 | 0.94 | 36 | 1 | 0 | 0 |
| Italy | 2.19 | 27119 | 0.93 | 36 | 1 | 1 | 0 |
| Sweden | 1.45 | 26750 | 0.95 | 25 | 1 | 0 | 0 |
| Singapore | 1.95 | 24481 | 0.91 | 42.5 | 1.09 | 0 | 0 |
| New Zealand | 1.47 | 22582 | 0.93 | 36.2 | 1 | 0 | 0 |
| Spain | 2.26 | 22391 | 0.93 | 32.5 | 1 | 1 | 0 |
| Israel | 1.83 | 20033 | 0.92 | 35.5 | 1.03 | 0 | 0 |
| Greece | 2.2 | 19954 | 0.91 | 35.4 | 1.06 | 0 | 0 |
| Slovenia | 1.61 | 19150 | 0.9 | 28.4 | 1 | 1 | 0 |
| Portugal | 1.85 | 18126 | 0.9 | 38.5 | 1 | 1 | 0 |
| Korea, Rep. of | 2.07 | 17971 | 0.9 | 31.6 | 1 | 0 | 0 |
| **Upper Middle Income** | | | | | | | |
| Hungary | 1.61 | 14584 | 0.86 | 26.9 | 1 | 1 | 0 |
| Estonia | 1.56 | 13539 | 0.85 | 37.2 | 1 | 0 | 0 |
| Slovakia | 1.54 | 13494 | 0.85 | 25.8 | 1 | 1 | 0 |
| Argentina | 2.68 | 12106 | 0.86 | 52.2 | 1 | 1 | 0 |
| Lithuania | 1.47 | 11702 | 0.85 | 31.9 | 1 | 1 | 0 |
| Poland | 1.61 | 11379 | 0.86 | 34.1 | 1 | 1 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Croatia | 1.78 | 11080 | 0.84 | 29 | 1.02 | 1 | 0 |
| Trinidad and Tobago | 2.18 | 10766 | 0.8 | 40.3 | 1.01 | 0 | 0 |
| South Africa | 2.2 | 10346 | 0.66 | 57.8 | 1.04 | 0 | 0 |
| Chile | 2.59 | 10274 | 0.85 | 57.1 | 1 | 1 | 0 |
| Latvia | 1.6 | 10270 | 0.84 | 33.6 | 1 | 0 | 0 |
| Costa Rica | 2.67 | 9606 | 0.84 | 46.5 | 1 | 1 | 0 |
| Malaysia | 2.12 | 9512 | 0.8 | 49.2 | 1.08 | 0 | 1 |
| Russian Federation | 1.57 | 9230 | 0.8 | 31 | 1.01 | 0 | 0 |
| Mexico | 2.66 | 9168 | 0.81 | 54.6 | 1.04 | 1 | 0 |
| Botswana | 1.63 | 8714 | 0.56 | 63 | 0.93 | 0 | 0 |
| Uruguay | 1.9 | 8280 | 0.84 | 44.6 | 0.99 | 1 | 0 |
| **Lower Middle Income** | | | | | | | |
| Brazil | 2.33 | 7790 | 0.79 | 59.3 | 1 | 1 | 0 |
| Bulgaria | 1.5 | 7731 | 0.81 | 31.9 | 1.01 | 0 | 0 |
| Thailand | 1.63 | 7595 | 0.78 | 43.2 | 1.05 | 0 | 0 |
| Romania | 1.72 | 7277 | 0.79 | 30.3 | 1.02 | 0 | 0 |
| Tunisia | 2.71 | 7161 | 0.75 | 39.8 | 1.28 | 0 | 1 |
| Iran, Islamic Rep. of | 3.51 | 6995 | 0.74 | 43 | 1.19 | 0 | 1 |
| Panama | 1.97 | 6854 | 0.8 | 56.4 | 1.01 | 1 | 0 |
| Dominican Republic | 2.76 | 6823 | 0.75 | 47.4 | 1.01 | 1 | 0 |
| Macedonia, TFYR | 1.79 | 6794 | 0.8 | 28.2 | 1.04 | 0 | 0 |
| Turkey | 2.17 | 6772 | 0.75 | 40 | 1.18 | 0 | 1 |
| Colombia | 1.95 | 6702 | 0.79 | 57.6 | 0.99 | 1 | 0 |
| Kazakhstan | 1.57 | 6671 | 0.76 | 32.3 | 1.01 | 0 | 0 |
| Namibia | 1.96 | 6180 | 0.63 | 70.7 | 1.04 | 0 | 0 |
| Algeria | 3.19 | 6107 | 0.72 | 35.3 | 1.32 | 0 | 1 |
| Belarus | 1.53 | 6052 | 0.79 | 30.4 | 1 | 0 | 0 |
| Bosnia and Herzegovina | 2.19 | 5967 | 0.79 | 26.2 | 1.08 | 0 | 0 |
| Turkmenistan | 1.59 | 5938 | 0.74 | 40.8 | 1.01 | 0 | 1 |
| Ukraine | 1.88 | 5491 | 0.77 | 29 | 1.01 | 0 | 0 |
| Peru | 3.7 | 5260 | 0.76 | 49.8 | 1.14 | 1 | 0 |
| China | 1.51 | 5003 | 0.76 | 44.7 | 1.1 | 0 | 0 |
| Venezuela | 2.4 | 4919 | 0.77 | 49.1 | 1.01 | 1 | 0 |
| El Salvador | 2.28 | 4781 | 0.72 | 53.2 | 1.07 | 1 | 0 |
| Swaziland | 2.6 | 4726 | 0.5 | 60.9 | 1.03 | 0 | 0 |
| Paraguay | 3.02 | 4684 | 0.76 | 57.8 | 1.03 | 1 | 0 |
| Albania | 1.79 | 4584 | 0.78 | 28.2 | 1.01 | 0 | 1 |
| Philippines | 1.68 | 4321 | 0.76 | 46.1 | 1 | 1 | 0 |
| Jordan | 3.24 | 4320 | 0.75 | 36.4 | 1.12 | 0 | 1 |
| Guatemala | 2.99 | 4148 | 0.66 | 59.9 | 1.19 | 1 | 0 |
| Jamaica | 1.51 | 4104 | 0.74 | 37.9 | 0.92 | 0 | 0 |
| Morocco | 2.48 | 4004 | 0.63 | 39.5 | 1.65 | 0 | 1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Egypt | 3.84 | 3950 | 0.66 | 34.4 | 1.54 | 0 | 1 |
| Sri Lanka | 1.94 | 3778 | 0.75 | 33.2 | 1.04 | 0 | 0 |
| Armenia | 1.44 | 3671 | 0.76 | 37.9 | 1.01 | 0 | 0 |
| Ecuador | 3.28 | 3641 | 0.76 | 43.7 | 1.03 | 1 | 0 |
| Azerbaijan | 1.71 | 3617 | 0.73 | 36.5 | 1.01 | 0 | 1 |
| Indonesia | 1.94 | 3361 | 0.7 | 34.3 | 1.11 | 0 | 1 |
| Nicaragua | 2.24 | 3262 | 0.69 | 43.1 | 1 | 1 | 0 |
| India | 2.63 | 2892 | 0.6 | 32.5 | 1.54 | 0 | 0 |
| **Low Income** | | | | | | | |
| Honduras | 2.68 | 2665 | 0.67 | 55 | 1 | 1 | 0 |
| Papua New Guinea | 1.74 | 2619 | 0.52 | 50.9 | 1.25 | 0 | 0 |
| Bolivia | 2.21 | 2587 | 0.69 | 44.7 | 1.16 | 1 | 0 |
| Lesotho | 2.54 | 2561 | 0.5 | 63.2 | 0.82 | 0 | 0 |
| Viet Nam | 1.46 | 2490 | 0.7 | 37 | 1.08 | 0 | 0 |
| Zimbabwe | 1.74 | 2443 | 0.51 | 56.8 | 1.09 | 0 | 0 |
| Ghana | 1.34 | 2238 | 0.52 | 40.8 | 1.38 | 0 | 0 |
| Cameroon | 2.24 | 2118 | 0.5 | 44.6 | 1.29 | 0 | 0 |
| Pakistan | 2.94 | 2097 | 0.53 | 33 | 1.75 | 0 | 1 |
| Cambodia | 1.31 | 2078 | 0.57 | 40.4 | 1.32 | 0 | 0 |
| Gambia | 1.68 | 1859 | 0.47 | 47.5 | 1.46 | 0 | 1 |
| Mongolia | 1.51 | 1850 | 0.68 | 30.3 | 1.01 | 0 | 0 |
| Bangladesh | 1.84 | 1770 | 0.52 | 31.8 | 1.6 | 0 | 1 |
| Mauritania | 1.8 | 1766 | 0.48 | 39 | 1.37 | 0 | 1 |
| Lao People's Dem. Rep. | 1.53 | 1759 | 0.55 | 37 | 1.26 | 0 | 0 |
| Kyrgyzstan | 1.53 | 1751 | 0.7 | 34.8 | 1.01 | 0 | 1 |
| Uzbekistan | 1.52 | 1744 | 0.69 | 26.8 | 1.01 | 0 | 1 |
| Senegal | 1.81 | 1648 | 0.46 | 41.3 | 1.75 | 0 | 1 |
| Moldova, Rep. of | 1.54 | 1510 | 0.67 | 36.9 | 1.03 | 0 | 0 |
| Côte d'Ivoire | 2.7 | 1476 | 0.42 | 44.6 | 1.57 | 0 | 0 |
| Uganda | 1.5 | 1457 | 0.51 | 43 | 1.33 | 0 | 0 |
| Nepal | 1.97 | 1420 | 0.53 | 36.7 | 1.8 | 0 | 0 |
| Rwanda | 1.61 | 1268 | 0.45 | 28.9 | 1.2 | 1 | 0 |
| Burkina Faso | 1.38 | 1174 | 0.32 | 48.2 | 2.28 | 0 | 1 |
| Mozambique | 1.47 | 1117 | 0.38 | 39.6 | 1.98 | 0 | 0 |
| Tajikistan | 1.6 | 1106 | 0.65 | 32.6 | 1 | 0 | 1 |
| Central African Republic | 1.65 | 1089 | 0.36 | 61.3 | 1.93 | 0 | 0 |
| Nigeria | 2.43 | 1050 | 0.45 | 50.6 | 1.25 | 0 | 1 |
| Kenya | 1.08 | 1037 | 0.47 | 42.5 | 1.11 | 0 | 0 |
| Mali | 1.68 | 994 | 0.33 | 50.5 | 2.24 | 0 | 1 |
| Yemen | 3.27 | 889 | 0.49 | 33.4 | 2.44 | 0 | 1 |
| Zambia | 1.8 | 877 | 0.39 | 52.6 | 1.27 | 0 | 0 |
| Niger | 1.76 | 835 | 0.28 | 50.5 | 2.09 | 0 | 1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Madagascar | 1.69 | 809 | 0.5 | 47.5 | 1.17 | 0 | 0 |
| Ethiopia | 1.91 | 711 | 0.37 | 30 | 1.46 | 0 | 1 |
| Guinea-Bissau | 2.06 | 711 | 0.35 | 47 | 2.23 | 0 | 0 |
| Burundi | 1.39 | 648 | 0.38 | 33.3 | 1.29 | 1 | 0 |
| Tanzania, U. Rep. of | 1.41 | 621 | 0.42 | 38.2 | 1.25 | 0 | 0 |
| Malawi | 1.48 | 605 | 0.4 | 50.3 | 1.39 | 0 | 0 |
| Sierra Leone | 2.41 | 548 | 0.3 | 62.9 | 1.94 | 0 | 1 |

Notes: Data are grouped according to the income categories specified by the World Bank: high income, gross national income per capita of $9,386 or more; upper middle income, $3,036-9,385; lower middle income, $766-3,035; and low income, $765 or less.

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