Cross-National Women's Economic Equality in 1993

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Scholarly literature on international women's rights abounds with qualitative case studies and international law research but neglects quantitative supported studies for a number of reasons. First, obtaining data across a large enough section of states in order to give a substantially cross-national base is difficult. Second, data-gathering bodies often fail to collect and report specifically gender-related measures. Finally, cross-national studies are cross-cultural as well; culture is difficult to quantify, greatly impeding past research.

Although cultural difference creates a significant barrier for quantitative research, recent improvements in raw data allow us to better analyze the factors that lead to women's human rights violations. Cross-national quantitative studies have helped scholars identify and measure these factors. To further the findings of these scholars, I employ a similar model, compiling various hypotheses and testing them statistically. I use this method to explore the relationship between gender economic equality and such variables as economic development, the level of democracy, female literacy rate, women's political participation, and reproductive rights. Conventional wisdom and hints from previous studies, rather than any specific theoretical basis, lead me to assume the importance of these factors. This area of study is still in its infancy; examining the effect of many variables will provide a basis for theoretical understanding that can lead to more focused, rigorous studies.

**PREVIOUS STUDIES**

Several empirical studies, though not specifically addressing human rights issues, show which different aspects of women’s rights scholars have examined. Clark (1991), Semyonov (1980), and Semyonov and Shenhav (1988) look at labor force participation by women across countries. The United Nations (1992) has done research that deals with the proportion of women in decision-making.

Clair Apodaca (1998) focuses more on women's human rights and creates the index on women's economic and social rights (WESHR), which measures differences between male and female rights regarding work, the standard of living, health and well-being, and education. She uses this index to look at how economic development affects the realization of women's economic and social rights by region. She finds that economic development leads to greater realization of these rights and that as development increases, women's share of the prosperity also increases. S. Laurel Weldon (1999) examines cross-national government responsiveness to violence against women, concluding that strong autonomous women's movements and their links to an effective women's policy bureaucracy or other government insider most determine if and how a government deals with battered women issues.

Finally, four other studies are closely related to my research. The first is a simple analysis of some factors that hypothetically might affect human rights conditions in states, such as the type of regime, the type of colonial past, level of development, and the level of trade with capitalist states. Poe and Tate (1994) and Poe, Tate and Keith (1999) do two much more rigorous studies, building on Mitchell and McCormick, in which they examine a number of factors that they hypothesize may affect human rights dealing with violation of personal integrity: level of democracy, population size, rate of population change, economic standing, rate of economic growth, presence of a leftist government, military control, British cultural influence, international war, and civil war. The difference between their two studies is the number of years and the countries that they examine. They find that civil war is the strongest factor that contributes to violations of personal integrity. Interestingly, this change alters some of the conclusions about the causes of personal integrity abuse. Economic development, democracy, population size, economic standing, and international war were also substantially significant factors.

The study most closely related to mine is by Poe, Wendel-Blunt, and Ho (1997) in which they formulate two cross-national measures for the year 1993: one deals with women's political equality, the other with economic equality. They look at some descriptive properties of the scores by region and level of development and then correlate the scores with GNP per capita. They find it to be significant, though it is only a bivariate (two-variable) test. While they intend to look at this relationship in more detail in the future, they have made their scores publicly available. I plan to use their measure of women's economic equality as the dependent variable in my study, responding to their "hope that [their scores] will be helpful to others who wish to do research in this area."

**MODEL OF CROSS-NATIONAL WOMEN'S ECONOMIC RIGHTS**

To contribute to the continuing effort to illuminate causes of the denial of human rights to women in various countries, I build a cross-sectional multivariate linear model that regresses the level of women's economic equality in 1993 on several other variables. The model is essentially built following the process used by Poe, Tate, and Keith, which is based on Blalock's Theory Construction (1969). In this system, the research compiles various hypotheses, then inserts them into a theory-driven model that is estimated mathematically.

Various international documents define women's economic rights, the dependent variable in my study. The Universal Declaration on Human Rights is generally accepted as the ultimate human rights standard against which countries should be judged. It declares in Article 23, section 1, that "everyone has the right to work, to free choice of employment" and in section 2, that "everyone, without any discrimination, has the right to equal pay for equal work." In addition, the International Covenant on Economic, Social and Cultural Rights mandates that women's "conditions of work are not inferior to those enjoyed by men" and that women are entitled to equal pay for equal work. Using these declarations as a guide, Poe, Wendel-Blunt, and Ho code State Department reports for the year 1993 for 174 countries. The scale ranges from 1 to 4, with 1 representing the lowest level of
To summarize the criteria for coding countries, women's equality economic actual social and variables the best attitudes. Therefore, the researcher can use "facts refer to specifically score for the dependent variable, unless an ordinal discrimination. It is important to note that this is and Ho; and product study continuously in general and ment to be an important factor in human rights in particular. I hypothesize that as the level of democracy economic development contributes to recognition of human rights. This is interval-level data that runs between level and rate of development. Scholars have shown that it is the rate of growth that often leads to more oppression while a higher level of development contributes to recognition of human rights.

The second independent variable is the level of democracy. In more democratic nations (ones that give the vote to women, for example) women have more opportunity to express dissatisfaction with their economic condition and to work for change that will improve their position. The measure for democracy will be a composite of the Freedom House (Gastil) civil and political freedom scores for the year 1993–94. This composite score is following the example of Burkhart and Lewis-Beck, who use it to cover the full range of variance in democracy—both civil and political. For other usage of the Gastil measure, see Poe and Tate. I hypothesize that as the level of democracy increases, economic rights will also increase. I have not reversed the scale as Burkhart did, though, so we would expect that as the Freedom House score decreases, the Poe score will increase.

The next independent variable has to do with reproductive rights. A prevalent argument deals with the question of whether reproductive rights

<table>
<thead>
<tr>
<th>Score</th>
<th>What the Score Indicates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No laws exist that guarantee equal rights in the workplace or equal pay for equal work. Sexual economic discrimination is practiced and accepted by most of the population.</td>
</tr>
<tr>
<td>2</td>
<td>Laws apparently prohibit sexual discrimination and guarantee equal pay for equal work. Sexual discrimination is practiced by most and there are no serious governmental efforts to improve the situation.</td>
</tr>
<tr>
<td>3</td>
<td>Laws prohibit sexual discrimination and guarantee equal pay for equal work. Some sexual economic discrimination is practiced but no longer accepted by most of the population. Serious government efforts are under way to fight discrimination and ensure equal pay.</td>
</tr>
<tr>
<td>4</td>
<td>Laws prohibit sexual discrimination and guarantee equal pay for equal work. Discrimination is no longer accepted by most of the population and is therefore no longer a serious social problem.</td>
</tr>
</tbody>
</table>
**Women’s Economic Equality**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Operationalization</th>
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<tbody>
<tr>
<td>Women’s Economic Equality</td>
<td>Four-point ordinal measure of economic equality in 1993 provided by Poe, Wendel-Blunt, and Ho (1 = least economic equality; 4 = most economic equality)</td>
</tr>
<tr>
<td>Economic Development</td>
<td>GNP per capita in 1991</td>
</tr>
<tr>
<td>Level of Democracy</td>
<td>Freedom House composite democracy score in 1993 (2 = most democracy; 14 = least democracy)</td>
</tr>
<tr>
<td>Reproductive Rights</td>
<td>Percentage of married women of reproductive age who are using modern contraception in 1990</td>
</tr>
<tr>
<td>Women’s Political Participation</td>
<td>Percentage of seats held by women in parliament in 1992</td>
</tr>
<tr>
<td>Female Literacy Rate</td>
<td>Percentage of adult female literacy in 1994</td>
</tr>
</tbody>
</table>

are a necessary prerequisite to women’s economic rights.\(^{21}\) I contend that they are. As women gain substantive reproductive rights, they are then able to control how many children they have and when they have them. This allows them to attend school more readily and continuously, leading to informed attitudes about rights among women and more mobility in the domestic women’s movement. To measure this variable, I use the percentage of married women who are using modern contraception (as opposed to traditional contraceptive methods) in 1990.\(^{22}\) This is a proxy variable: higher level of use of modern contraceptives may not necessarily indicate a higher level of reproductive rights. It is therefore not an ideal measure, but scholars have used it in the past.\(^{23}\) A higher level of reproductive rights (modern contraceptive use) will lead to an increase in the economic equality scale.

Women’s political participation will also lead to increases in economic rights. As the proportion of women in government increases, the discourse about women’s rights in government will increase and voting power for women’s rights advocates in legislative bodies will increase. I measure political participation as the percentage of women in representative governmental positions in a given country in 1992.\(^{24}\) As women’s political participation increases, the women’s economic equality score will increase.

Finally, female literacy rate also plays a role in women’s economic rights. As women become more literate, they are better able to tap into resources that educate them about their rights. Education leads to activism and mass mobilization, which leads to change in economic and political rights. Where there are great amounts of literacy, women will be more informed about their options and, therefore, will act to procure them. The measure for this variable is the female adult literacy rate for each country in 1994.\(^{25}\) We expect, therefore, that as female adult literacy increases, the women’s economic equality score will also increase.

The linear multivariate model for 1993 in equation form is as follows:

Women’s Economic Equality\(_i\) = \(\beta_1 + \beta_2\) Economic Development\(_i\) + \(\beta_3\) Level of Democracy\(_i\) + \(\beta_4\) Reproductive Rights\(_i\) + \(\beta_5\) Women’s Political Participation\(_i\) + \(\beta_6\) Female Literacy Rate\(_i\) + \(\epsilon_i\)

\(\beta_1 = \) intercept  
\(\beta_2 = \) regression coefficient of variable \(n\)  
\(\beta_i = \) error term for country \(i\)

### Descriptive Analysis

Only two countries (Australia and Norway) out of the 174 achieve a women’s economic equality score of 4 (sexual economic discrimination is no longer a real problem). Not surprisingly, both countries have a high level of human development, being ranked number three and number thirteen respectively on the Human Development Index (HDI), a ranking system that considers life expectancy at birth, adult literacy rate, combined school enrollment ratio, and adjusted per capita income.\(^{26}\) Of the 174 countries, 30 received a score of 3 (indicating a serious effort by the government to undermine economic discrimination and that
most of the population is supportive of those efforts); 22 of these 30 countries have what is considered a high human development, 5 have a medium human development and 2 have a low human development (I was not able to ascertain the level of human development of one of the countries). This may indicate that it is not always necessary for a country to have a highly developed economy in order for it to have a relatively high level of economic equality for women. The overwhelming majority of states (104) have Poe scores of 2. These are states that appear to have women’s rights in their discourse (they have laws against economic discrimination on the books), but they are not yet enforcing those laws. Additionally, most of the population does not accept economic equality by gender. The mean score for economic rights overall is 1.98 with a standard deviation of 0.67. Chart 1 demonstrates the distribution of countries by score.

In performing the regression analysis, it is important to remember that this scale is very small (in terms of units) and so a small numerical change represents a large societal change.

DATA ANALYSIS

As already mentioned, the Poe score is regressed linearly on the listed independent variables. The model is linear because at this point there is no theoretical reason to suppose that the relationships are quadratic, cubic, or otherwise. In order to perform the regression with the variables that the model outlined above requires, I had to reduce the number of cases considered. One of the advantages to the Poe score is that it includes a sweeping view of cross-national women’s economic equality. Unfortunately, because of data limitations I was only able to find data on all of the variables for 100 countries. The reduction in the number of cases is disappointing, for it limits the conclusions that we can draw on a cross-national basis. Instead of drawing conclusions based on all of the countries, I will be basing mine on a smaller number.

The qualitative aspects of the countries in question, in addition to the limit in the number of cases, are also important. Fortunately the distribution of countries in different levels of development and region is similar to the full population. Basing the divisions again on the HDI, there are 35 countries that rank high, 39 countries that rank medium, and 26 countries that rank low. Regarding region, there are 17 countries from Western Europe and North America, 14 from Latin America, 30 from Africa, 20 from Asia, 10 from Eastern Europe, 4 from the Caribbean, and 5 from the Middle East (one of the hot spots when it comes to women’s rights issues) (see Table 3).

This sample includes 2 countries that score a 4; 23 countries with a score of 3; 59 countries with a score of 2; and 16 with a score of 1. The distribution of the second, reduced sample is fairly similar to that of all 174 countries. The sample mean is 2.11 and the standard deviation is 0.68. This is not the same as the full set of countries, but it is fortunately not too far off and will have to suffice. Chart 2 reflects this sample distribution.

The results of the corrected regression are presented in Table 4, after correcting for heteroscedasticity and recognizing the limitations on the data. The female literacy rate and level of women’s reproductive rights did not exert a statistically significant effect on the independent variable. Nor did they exercise a jointly significant effect, as demonstrated by an F-test. I took them out of the model, therefore, and included the

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Countries</th>
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<tbody>
<tr>
<td>Western Europe and North America</td>
<td>17</td>
</tr>
<tr>
<td>Latin America</td>
<td>14</td>
</tr>
<tr>
<td>Africa</td>
<td>30</td>
</tr>
<tr>
<td>Asia</td>
<td>20</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>10</td>
</tr>
<tr>
<td>Caribbean</td>
<td>4</td>
</tr>
<tr>
<td>Middle East</td>
<td>5</td>
</tr>
</tbody>
</table>

Chart 2. Poe Scores for 66 Countries

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Table 4. Corrected Model Results

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Beta  (S.E.)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.11 (1.17)</td>
<td>&lt;.001*</td>
</tr>
<tr>
<td>Economic Development</td>
<td>0.00021 (0.005)</td>
<td>&lt;.001*</td>
</tr>
<tr>
<td>Democracy</td>
<td>-0.082 (0.017)</td>
<td>.003*</td>
</tr>
<tr>
<td>Women's Political Participation</td>
<td>0.024 (0.006)</td>
<td>&lt;.001*</td>
</tr>
<tr>
<td>N</td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>R square</td>
<td>.59</td>
<td>-</td>
</tr>
</tbody>
</table>

results of the refitted model in Table 4. The variables that exercised a significant effect were the level of economic development, the level of democracy, and women's political participation. The R-square at the bottom of the table indicates that these three variables account for 59 percent of the variation in women's economic equality.

The results here substantiate previous studies' findings about the positive relationship between economic development and women's rights. As the GNP per capita increases by ten thousand dollars, the women's economic equality score will increase by 0.21 points. Given that the scale is only a four-point scale, a fifth of a point is quite substantial. An increase of ten thousand dollars in GNP per capita, though, is also a very substantial increase. In the sample, the country with the highest GNP per capita in 1991 is Switzerland with $33,610; the country with the lowest is Morocco with $80. It would take decades, however, for a country to increase its GNP per capita by ten thousand dollars. If we take the average GNP per capita of the countries ($4965) and assume a constant annual growth rate of 13.5 percent, the highest growth rate of any of the countries in the sample, it would take fifteen years for GNP per capita to increase by that amount. This indicates that growth is a slow process and that change in women's economic equality is relatively slow as well.

The second significant variable in the model is the level of democracy. As the Freedom House composite score increases by five points, women's economic equality goes down by 0.25 points (remember that as the Freedom House score goes up, the level of democracy in the country diminishes). This is the direction indicated by the hypothesis; as democracy increases, so does women's economic equality.

The last significant variable is women's political participation. The results confirm the prediction of the hypothesis that political participation by women increases the level of economic equality between genders. As the number of women in parliament increases by 10 percent, the economic equality score also goes up by 0.24 points.

Conclusion

This study substantiates previous studies that have concluded that the level of economic development in a country positively affects women's economic equality. In addition, I found that two new variables positively influence women's economic equality: the level of democracy and the level of women's political participation also exercise statistically significant effects on the independent variable, thus supporting my originally hypothesized relationships. This evidence is of immense importance for women's groups and policymakers at all levels because it indicates possible ways (working for economic development, promoting democracy, and putting women in government) to positively influence women's rights.

The factors that I found to be insignificant are perhaps more important in other areas of women's rights, particularly political rights. I did not examine that here because the Poe score, the most comprehensive measure, focuses on economic rights. It would be interesting to construct a new model to measure political rights.

This study represents a new step in the quantitative study of international women's rights, but it is only a beginning. Additional data must be obtained on more countries in order to make a comprehensive model of comparative women's human rights (across nations, over time, and over more variables). As governments make progress in women's human rights, they will find more variance across nations, allowing for more precise pin-pointing of what factors further those rights.

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on Latin American studies and is especially interested in human rights, development, and political theory. He wishes to thank Professors Hawkins and Goodiffe for their assistance in looking at earlier versions of this article.


Apodaca, “Measuring Women’s Economic and Social Rights Achievement,” 164.  


Poe, Wendel-Blunt, and Ho, “Global Patterns,” 829.  

Ibidem, 831.  


Poe, Wendel-Blunt, and Ho, “Global Patterns,” 818.  


Poe, Wendel-Blunt, and Ho, “Global Patterns,” 827.  


Poe, Tate, and Keith, “Repression of Human Rights.”  

Poe, Wendel-Blunt, and Ho, “Global Patterns,” 819.  


Ibidem, 78.  


