

Beliefs in Equality for Women and Men as Related to Economic Factors in Central and Eastern Europe and the United States

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Abstract Do economic indicators predict the general level of support for gender equality? This question was investi-

gated in a sample of countries in Central and Eastern Europe, a region that has been undergoing rapid economic

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changes since the early 1990s. In this overall sample of male and female college students from ten countries, including the United States as a comparison, the predicted association between stronger beliefs in gender role egalitarianism and positive economic factors was generally supported. Also, consistent with other research, women were more in support of gender equality than men were. There was no support for a predicted trend in less support for gender equality over the time period of the present study.

Keywords Gender attitudes · Central and eastern Europe · Economics

Gender role attitudes are people's beliefs about the appropriate roles and obligations of women and men. Such beliefs have been of great interest in the North America over the last 30 years, during a time when attitudes toward gender roles, and the actual roles of women and men, have been changing (Russo, 1997). Studies have shown that North American women have more egalitarian beliefs than North American men do (see McHugh & Frieze, 1997, for a review of this research). There has been a trend over these years for both women and men to become more egalitarian in their views (Loo & Thorpe, 1998; Spence & Hahn, 1997), but changes appear to have leveled off since the 1990s (Bryant, 2003).

Although there has been a great deal of research since the early 1970s on changes in the gender role attitudes of young adults in the United States and Canada (e.g., Loo & Thorpe, 1998; McHugh & Frieze, 1997; Spence & Hahn, 1997), there has been little research on the impact of macroeconomic conditions on gender role attitudes. This may be in part because the economic changes in these two countries have not been large enough for researchers to measure their statistical impact on gender role attitudes.

Central and Eastern Europe is an area of the world where there have been dramatic economic changes. In many ways events in CEE provide a natural experiment to see how economic and political changes relate to the gender role attitudes of the people who live in those countries. In our research we asked this question: As economic conditions change, do we see associated changes in the ways in which young university-educated adults view the appropriate roles for women and men? Answers to this question may help researchers and policy makers to understand how gender role attitudes change and to make better predictions about the views of future professionals. These answers also provide important theoretical information about the determinants of gender role attitudes.

In order to answer our question, we drew upon samples of university students from a variety of disciplines in nine countries in Central and Eastern Europe, with a comparison

sample of university students from one institution in the United States. Data were collected over the period from 1991 through 2004. These were years of transition in CEE, as these countries moved away from state-controlled socialist economies and developed market economies. A diverse sample within the CEE region enabled us to assess the relationship of gender role attitudes to economic factors, and allows us to generalize beyond one particular country. Our decision to use students from many different fields was made to add to the generalizability of the data.

Economic Changes in Central and Eastern Europe

Countries in Central and Eastern Europe have undergone rapid social and economic change since the late 1980s as they attempted to transform from "command economies" (i.e., centrally-planned economies) to market economies. Economic changes included liberalization of prices and other market activities, privatization of production, restructuring of inefficient factories, and reform of the banking and the legal systems. Some countries made reforms quickly, whereas others moved slowly (Svejnar, 2002).

In evaluating the overall performance of economies, economists often look at macroeconomic variables such as real Gross Domestic Product (GDP) per capita, growth in real GDP per capita, the unemployment rate, and the inflation rate. Real GDP per capita is a measure of a country's total economic output divided by its population size after adjusting for price changes; it is considered a rough proxy for a country's overall standard of living or material wealth (Kemmelmeier, Krol, & Kim, 2002). To compare countries, their real GDPs must be converted to a common currency, often the U.S. dollar. Economists generally recommend converting at a Purchasing Power Parity (PPP) exchange rate rather than the actual market exchange rate. The Purchasing Power Parity exchange rate is one that equalizes the costs of buying a set of goods and services in the two countries. This rate is preferred because actual exchange rates fluctuate substantially from year to year and because the outputs of low income countries tend to be understated when converted at the actual exchange rates (Samuelson & Nordhaus, 2005).

Given a country's current real GDP per capita, the growth rate determines how rapidly a country's material wealth is increasing (Kemmelmeier et al., 2002). A high growth rate means rapid improvement, whereas a slow growth rate means slow improvement. A negative growth rate means a declining standard of living (Samuelson & Nordhaus, 2005). The unemployment rate measures the percentage of the labor force without jobs. The higher the unemployment rate, the more difficult it is for people to find jobs. Studies have shown that when the unemployment

rate is high, crimes, family violence, mental illness, and suicides also increase (Gordon, 2006; Leana & Feldman, 1992). High unemployment is often negatively correlated with the GDP per capita growth rate because low growth may indicate an inability to absorb new workers; however, this may not be the case in transition economies where restructuring may simultaneously increase growth and unemployment (Chadha, Coricelli, & Krajnyak, 1993).

Inflation is the fourth variable commonly used as a measure of performance. Inflation measures the percentage change in the general level of prices over a given time period. Inflation has mixed effects on an economy. An unexpected increase in prices can be beneficial to debtors as they can pay back their loans in a discounted currency. Lenders and those on fixed incomes generally lose from unexpected inflation as they are paid with money that buys less than expected. In general, though, a high rate of inflation has an overall negative impact on an economy because it creates greater uncertainty and makes rational decision-making more difficult (Gordon, 2006). Ideally a country would want a high GDP per capita, a high growth rate, a low unemployment rate, and a low inflation rate.

Based on these measures, one can see that the economic performance of former command economies has varied considerably over the last 15 years. All of them initially suffered drops in output and increased unemployment during their transition. Many also initially experienced rapid inflation and a worsening distribution of income (Samuelson & Nordhaus, 2005; Vecernik, 2003). However, progress since then has varied. Some countries, such as the Czech Republic, Hungary, Slovakia, and Slovenia, have relatively high GDPs per capita and have become members of the European Union. Others, such as Albania, Croatia, and Russia, are still struggling to raise income and to become successful market economies.

These economic changes have had both positive and negative effects on the lives of the people in these countries. Increased opportunities in the private sector have meant higher salaries and greater possibilities for job advancement. But, these same forces have also resulted in the closing of factories and the downsizing of many organizations, which has resulted in high levels of unemployment. Inflation eroded the values of people's incomes, especially those on fixed incomes (Svejnar, 2002).

In the present study we investigated how young adults (university students) have responded to these economic changes in terms of their views of the roles of women and men in their societies. The gender role attitudes of students from Albania, Croatia, the Czech Republic, Hungary, Lithuania, Poland, Russia, Slovakia, and Slovenia were examined. We also compared their attitudes to the gender role attitudes of students from a wealthy, long-standing market economy, the United States. We examined whether

the macroeconomic performance of a country relates to ideas about gender, and if so, which performance variable has had the most impact.

Gender role attitudes and state support for equality of the sexes Under the former socialist governments of Central and Eastern Europe, in accord with the values of Communism, it was assumed that men and women were equal under the law. Consistent with this belief was the fact that both sexes worked outside the home (e.g., Gal & Kligman, 2000).

With the movement away from socialism, some see the "official" view of gender equality as part of the old Communist belief system. In Russia, as in other formerly state socialist countries, the movement away from Marxist ideology has been accompanied by a belief among some that a movement toward traditional (non-egalitarian) gender roles are both inevitable and desirable (Deacon, 1992; Goodwin & Emelyanova, 1995; Henderson-King & Zhermer, 2003; Malinowska, 1995; Stulhofer & Sandfort, 2005). Many have questioned the previous policy under socialism for women to be employed full time and have argued that it would be better for the society if women did not have full-time jobs outside the home. For example, such ideas could be seen in the Czech Republic, where in the early Nineties more women sought to leave full-time employment and to be full-time wives and mothers (Shebloski & Gibbons, 1998); however, after the initial drop the percentage of women in the Czech labor force has remained at about 44–45% (World Bank, 2006). In a previous analysis of data from Slovenia, we found that men, in particular, were less supportive of gender equality in the later years of the study, but economic factors were not controlled in that study (Frieze et al., 2003).

Opposing arguments can also be made. Like other (formerly) socialist countries (Funk & Mueller, 1993), many of the countries of Central and Eastern Europe have incorporated the ideal of gender equality into their new constitutions and now have full legal equality for men and women (e.g., Commission for Women's Politics, Republic of Slovenia, 1992). Evidence suggests that there tends to be more equality for the sexes in countries around the world when the laws support equality (Epstein, 1988). Henderson-King and Zhermer (2003) reported a large growth of women's groups in Russia in the 1990s. These groups were concerned with a variety of issues including women's economic situation in the face of the transition, professional women's issues, and the campaign for a return to traditional gender roles. And, although the percentage of women in the Czech labor force dropped in the early Nineties, in most of the other CEE countries, the percentage has increased (World Bank, 2006).

Gender role equality and economic conditions As will be discussed, a variety of theories suggest that better economic conditions lead to more egalitarian beliefs about women, but at least one theory makes the contrary argument. One theory arguing a positive relationship between economic indicators and support for gender equality is based on the idea that it is more difficult for women to have equality in the workplace when economic conditions are difficult. This situation can be seen in several of the countries in our study. Less successful CEE countries are still attempting to deal with a variety of economic problems as well as political and social problems related to higher rates of unemployment and poverty for many, which has resulted in greater social inequality than had ever been the case under the formerly socialist governments. Health care and other social services have declined as well. These changes especially affected women, whose unemployment generally was higher than that of men, and who have, in some countries, lost the resources provided by state-run child care centers and paid maternal work leaves (Stulhofer & Sandfort, 2005). These types of changes might lead to less egalitarian views of gender roles. For example, Malinowska (1995) argued that, in times of economic prosperity in socialist Poland, women were encouraged to enter many high level jobs, but with economic downturn, women's roles as mothers were emphasized, and women's labor force participation (and equality with men) was discouraged.

A similar conclusion of a positive relationship comes from a different type of argument. It is often argued that power in a society is related to control of money. As women earn more income, they attain more power in the society (Blumberg, 1984). In times of economic growth, more jobs are created, and the labor of women is needed to fill these jobs. As women enter the labor force in greater numbers, they acquire many freedoms. As both sexes see women and men doing the same types of work, it is harder to argue that basic differences between the sexes are responsible for gender inequality (Epstein, 1988), and thus one would expect that economic growth would be positively related to egalitarian views of gender roles. These ideas have generally been tested through reference to pre-industrial societies, but have not been empirically tested in the modern world. Our data allow us to test this prediction that positive economic conditions are related to egalitarian gender role attitudes.

Also in support of the relationship between economic indicators and gender equality are empirical data that show that positive economic changes are often associated with more egalitarian beliefs, especially for women. Studies of young women since the collapse of the socialist states in Central Europe have suggested that many women have greater desires for self-realization and personal career

success (Adler, 2002; Frieze et al., 2003; Miluska & Bogacka, 1987; Severova, 1989).

A contrasting argument about economic improvements can be seen in the more economically successful countries of Slovenia, Poland, and Hungary, beginning in the late 1990s. It has been proposed that men responded to these economic changes by taking on what they saw as a new Western professional image that involved materialism and cynicism (Stulhofer & Sandfort, 2005). Such values might translate to an increased interest in male dominance and patriarchy, and thus into less egalitarian gender attitudes. This idea was tested by looking at trends in support for gender egalitarianism over time.

Other research also supports the idea that as countries move away from socialism, there would be less support for gender equality. Johnson (1997) argued that patriarchy becomes stronger when men believe that they are being controlled by others. One of the factors that he suggested leads to this feeling of lack of control is when some people begin to acquire more resources than others have. Such an argument might lead to a conclusion that patriarchy would be greater in wealthier societies with more unequal income distributions, although Johnson did not draw this conclusion himself. He did explicitly suggest that patriarchy is closely tied to capitalism and that there is more egalitarianism under socialism. Although we did predict that positive economic indicators would be related to egalitarian attitudes, our data allowed us to determine whether this alternative model would be a better fit to our findings.

Views of gender equality in the United States

To provide a basis for comparison, data from Central and East European students were compared to data from students in the United States. Cross-cultural comparisons of attitudes toward women's roles have shown significant differences among cultures (e.g., Gibbons, Hamby, & Dennis, 1997; Khalid & Frieze, 2004; Wall et al., 1999). Glick et al. (2000) also found significant cross-cultural differences in the Glick and Fiske (1996) Ambivalent Sexism Inventory, a measure that has been shown to be correlated with the Attitude Toward Women scale. In comparison to many other countries, there is relatively strong support for gender equality in the United States. Although some nonscientific writers have suggested that people in the United States are developing more conservative attitudes toward gender roles (e.g., Santorum, 2005), we did not anticipate that this change would be visible over the time period of our research.

Data collected over the last 30 years in the United States indicate a trend toward more egalitarian attitudes in both men and women (Frieze et al., 2003; Rice & Coates, 1995).

But, an often reported difference in gender role attitudes is that men, relative to women, appear to be more resistant to gender equality in the family and the workplace (e.g., Twenge, 1997). Resistance in men may be greater in some domains than others. For example, American men may support gender equality in the workplace because they rely on the earnings of their wives, but they still see housework as women's work (Henry, 1994). Overall, though, women are more egalitarian about gender role attitudes than men in the United States (e.g., Bolzendahl & Meyers, 2004; Frieze et al., 2003; L. King & D. W. King, 1990), as is the case in other countries as well (e.g., Gibbons et al., 1997; Wall et al., 1999). On the basis of such data, we predicted that women, more than men in all the countries, would have more egalitarian or less sexist beliefs about appropriate gender roles.

Summary of predictions

1. Positive economic indicators, such as a high GDP per capita, a high growth rate of GDP per capita, a low unemployment rate, and low inflation, would be associated with higher levels of support for gender egalitarianism; whereas negative economic data would be associated with less support for gender equality.
2. Consistent with U.S. and Canadian data (McHugh & Frieze, 1997) and some evidence from Slovenia, there would be more support for egalitarianism in women than men (Frieze et al., 2003) across all countries in the study.
3. To explore whether there was more or less support for egalitarian gender roles as countries moved away from state socialism, we included a time trend variable in our analysis. A positive correlation of attitudes with time trend would indicate that university students became more egalitarian over time. A negative correlation would indicate that they became less egalitarian.

Method

Participants

Within each country group, the proportion of students within age groups was compared by year. There were only minor variations across years for average ages: the modal age for all groups was 18–20 years. Samples in Albania, the Czech Republic, Hungary, Lithuania, Poland, and Slovakia were somewhat older than those in other countries. The large majority of the students had never married. The lowest percentages of never-married students

were 71% in the 2000 Russian sample and 86% in Lithuania. Most students were in their first year of university, although those countries with somewhat older students were also less likely to have included first-year students. Detailed sample information can be found in Table 1.

Measures

In the United States, the Attitudes Toward Women Scale (Spence & Helmreich, 1972) has been the most widely used measure of gender role attitudes (Beere, 1990; McHugh & Frieze, 1997). We selected a subset of items that we thought would be relevant in a cross-cultural context. This version of the ATW has been used in other cross-cultural studies (e.g., Frieze et al., 2003). There are 22 items in our gender equity scale, a subset of the ATW. All items were rated on a 1 to 5 scale from strongly disagree to strongly agree. Items were scored so that a higher score was more egalitarian or less traditional. Sample items included: Vocational and professional schools should admit the best qualified students, independent of sex; Husbands and wives should be equal partners in planning the family budget; and A woman should be as free as a man to propose marriage. Scores were the mean item response across all items answered. Alpha coefficients were computed for each country, with values ranging from .786 for Lithuania to .861 for Slovakia. For purposes of analyses, means were computed separately for women and men for each country for each year and sample group.

The economic data are GDP per capita in 2000 prices (converted to dollars using the 2000 purchasing power parity exchange rate), percentage growth in real GDP per capita, the overall unemployment rate, and the inflation rate for consumer prices. These data came from the World Bank's *World Development Indicators online* (2005 and 2006) and in one case from the International Monetary Fund's *International Financial Statistics*, April 2006.

Trend over time is a dummy variable measured such that 1991=0, 1992=1, up to 2004=13.

Procedure

Data were collected from 1991 through 2004, but not in every year for every country. In most cases, data were collected in university classrooms by the instructors of the class. In the United States, data came from introductory psychology students who received credit for study participation, a requirement for their course. Surveys for each country varied slightly, but most included 22 items from the Attitude Toward Women Scale. For all the CEE countries, items were translated by the researchers involved in this

Table 1 Data sets used in analysis.

Country	Year	Men		Women	
		Number	Mean gender role equity score	Number	Mean gender role equity score
Albania	1996	52	3.32	77	3.64
	1998	39	3.08	62	3.70
Croatia	1995	59	3.61	89	4.07
	1997	99	3.45	182	4.07
	1997	63	3.58	70	4.02
	1998	78	3.60	122	4.19
	1999	80	3.50	136	4.10
	2000	143	3.61	156	4.09
	1994	64	3.40	68	3.74
Czech Republic	1998	67	3.64	85	4.00
	2004	50	3.82	105	4.10
	1999	245	3.58	298	3.94
Hungary	2003	223	3.79	259	4.10
	1996	26	3.21	102	3.66
Lithuania	1996	130	3.65	129	3.95
Poland	1996	34	3.59	53	3.54
	1998	31	3.53	89	4.19
Russia	1996	2	*	87	3.75
	1997	74	3.23	80	3.80
	1998	54	3.17	20	3.92
	1998	50	3.21	79	3.81
	1999	91	3.15	150	3.66
	2000	81	3.73	86	3.55
	2001	103	3.71	195	3.92
	2004	41	3.92	78	4.16
Slovakia	1993	96	3.91	118	4.30
Slovenia	1994	42	3.90	112	4.36
	1996	173	3.67	216	4.19
	1997	119	3.76	268	4.22
	1997	168	3.64	181	4.07
	1999	66	3.98	188	4.30
	2002	108	4.00	220	4.35
	2002	88	3.74	147	4.28
	1991	47	3.94	108	4.27
	1993	81	3.76	119	4.36
	1994	87	3.93	209	4.31
United States	1996	119	3.85	194	4.38
	1997	102	3.79	250	4.31
	1999	78	3.90	150	4.32
	2001	129	3.83	289	4.28
	2003	66	3.92	133	4.27
	2004	131	3.83	233	4.31

* Sample was too small to use.

Note: Some countries have multiple datasets in a single year.

research, who were native speakers in the respective countries from English into the language of the country. A second faculty colleague translated the surveys back to English to check the translations. Disagreements were discussed, and in some cases, were resolved by consulting a third person with knowledge of both languages. All surveys were administered anonymously.

Results

Economic data

Table 2 shows the macroeconomic variables for each country by year of a survey. As can be seen, the United States has a superior performance except for its relatively low growth

Table 2 Economic performance measures for countries and survey years.

Country	Year	Real GDP per capita (PPP 2000)	% Change in Real GDP per capita	Unemployment rate	Inflation in consumer prices
Albania	1996	\$3,068	10.13	12.4	12.73
	1998	\$3,126	13.18	17.8	20.64
Croatia	1995	\$7,420	6.38	14.5	4.04
	1997	\$8,572	4.93	9.9	4.13
	1998	\$8,984	4.12	11.0	6.43
	1999	\$8,906	-1.95	13.5	3.70
	2000	\$9,545	6.85	16.1	5.42
Czech Republic	1994	\$13,096	2.17	4.3	9.96
	1998	\$14,492	-1.06	6.5	10.63
	2004	\$17,837	4.30	8.3	2.83
Hungary	1999	\$12,487	4.63	7.0	10.00
	2003	\$14,575	3.69	5.9	4.64
Lithuania	1996	\$7,215	5.46	16.4	24.62
Poland	1994	\$7,726	4.97	14.4	33.25
	1996	\$8,578	5.92	12.4	19.82
	1998	\$9,589	4.76	10.7	11.73
Russia	1996	\$6,176	-3.34	9.7	47.74
	1997	\$6,329	1.70	11.8	14.77
	1998	\$6,149	-5.04	13.3	27.67
	1999	\$6,541	6.83	13.4	85.74
	2000	\$7,096	10.00	9.8	20.78
	2001	\$7,383	5.35	8.9	21.46
Slovakia	2004	\$13,439	5.45	18.1	7.55
Slovenia	1993	\$12,745	4.40	8.7	32.86
	1994	\$13,066	4.16	8.2	20.99
	1996	\$14,080	3.59	7.2	9.79
	1997	\$14,843	5.03	7.2	8.38
	1999	\$16,243	5.40	7.4	6.11
	2002	\$17,993	3.22	5.9	7.48
United States	1991	\$27,991	-1.52	6.8	4.23
	1993	\$29,180	1.35	6.9	2.95
	1994	\$30,004	2.79	6.1	2.61
	1996	\$30,891	2.55	5.4	2.93
	1997	\$31,814	3.30	4.9	2.34
	1999	\$33,446	3.30	4.2	2.19
	2001	\$33,983	-0.33	4.7	2.83
	2003	\$35,373	2.19	6.0	2.27
	2004	\$36,465	3.19	5.5	2.68

Source: Data were taken from World Bank (2005, 2006) and International Monetary Fund (2006).

rate. (An average growth rate of 2–3% is typical of advanced industrial countries; Weil, 2005.) Slovakia, Slovenia, the Czech Republic and Hungary have high per capita GDPs for Central and Eastern European countries, but they are still less than one half of those of the United States. Albania has the lowest GDP per capita but also the highest growth in GDP per capita (13% in 1998). In general growth rates varied considerably from year to year among the CEE countries. Unemployment rates ranged from 4.3% for the Czech Republic in 1994 to over 18% for Slovakia in 2004. Inflation rates also varied from less than 5% in Croatia (in most years) to over 85% in Russia in 1999.

Attitudes toward gender role equity

Means for the gender role equity measure are shown in Table 3 by country for men and women. Analysis of variance was used to test for significant differences between genders and between the U.S. and the overall CEE means. The results shown in Table 3 indicate that university students in the United States have significantly more egalitarian attitudes toward women than do university students in Central and Eastern Europe, $F(1, 82)=24.01$, $p<.001$. Women also have more egalitarian attitudes toward women than men do, $F(1,82)=51.75$, $p<.001$, thus supporting our

Table 3 Mean gender role equity scores.

	Men	Women
United States	3.86 (9)	4.13* (9)
Central & Eastern Europe	3.59 (33)	4.00* (34)
Albania	3.20 (2)	3.67 (2)
Croatia	3.56 (6)	4.09 (6)
Czech Republic	3.62 (3)	3.95 (3)
Hungary	3.69 (2)	4.02 (2)
Lithuania	3.21 (1)	3.66 (1)
Poland	3.59 (3)	3.89 (3)
Russia	3.37 (6)	3.77 (7)
Slovakia	3.92 (1)	4.16 (1)
Slovenia	3.84 (9)	4.25 (9)

Note: A higher score indicates a more egalitarian attitude. Scores ranged from 1 = Strongly disagree to 5 = Strongly agree.

*Gender differences and differences between U.S. and CEE are statistically significant at the .001 level.

second hypothesis that women across all countries would have more egalitarian attitudes toward women than would men. The analysis of variance did not indicate a significant interaction effect between countries and gender; therefore, the significant gender difference was consistent across countries.

Table 4 shows the simple correlation matrix for the mean gender role equity score and the explanatory variables; the latter include gender, trend, and the four macroeconomic variables. Correlation coefficients above the diagonal include the data from the United States; correlations

coefficients below the diagonal exclude the U.S. data. These correlations coefficients support two of our hypotheses.

There is general support for the first hypothesis, that positive economic indicators would be associated with higher levels of support for gender egalitarianism, and vice versa. Egalitarian gender attitudes are positively and significantly correlated with GDP per capita as expected. They are also negatively and significantly correlated with the unemployment rate and the inflation rate as predicted. However, the correlation with growth of GDP per capita is negative, but not statistically significant. According to our first hypothesis, the correlation would be positive and statistically significant. With and without U.S. data, the correlation between attitudes toward women and gender is and statistically significant, $r=.64$, $p<.01$, again supporting our second hypothesis.

Our third hypothesis explores the possibility that egalitarian attitudes toward women changed over time. The correlation coefficient between time trend and the mean gender role equity score is positive, suggesting that CEE countries are trending toward becoming more egalitarian. However, the correlation is not statistically significant.

In order to test the overall impact of the various explanatory variables on gender attitudes, regressions were conducted and the results are shown in Table 5. Regressions were conducted both with and without the U.S. data. Because of the relatively large and significant correlation coefficients between GDP per capita and unemployment ($r=-.69$ for CEE countries; $r=-.71$ with the U.S. included), multicollinearity between these two variables was expected (and found) to be a problem. Therefore, two sets of regressions were conducted: one set excluded unemployment, and the other set excluded GDP per capita.

The first prediction, that positive economic indicators would be associated with higher levels of support for gender egalitarianism, is again partially supported by the regression results. In Eqs. 1 and 2 (shown in Table 5), the betas for the three macroeconomic variables have the predicted signs.

Table 4 Correlations of mean gender role equity scores and explanatory variables.

	Mean Gender Role Equity Score	Gender	Trend	GDP per capita	Unemployment Rate	Inflation Rate	Growth
Mean Gender Role Equity Score		.641**	.082	.525**	-.439**	-.384**	-.134
Gender (Male=1 and Female=2)	.643**		-.007	-.011	.001	.028	-.024
Trend in Years	.168	-.011		.127	-.027	-.144	.078
GDP per capita	.553**	-.016	.358**		-.709**	-.481**	-.284**
Unemployment Rate	-.331**	-.003	-.039	-.685**		.398**	.287**
Inflation Rate	-.308*	.031	-.222	-.413**	.262*		.081
Growth in GDP per capita	-.043	-.031	.012	-.146	.197	-.015	

The number of observations is 83 with the U.S. and 65 without the U.S.

*Correlation is significant at the .05 level (2-tailed); **Correlation is significant at the .01 level (2-tailed).

Correlations above the Diagonal Include the U.S.; Correlations below the Diagonal Exclude the U.S.

However, for CEE data alone, only the beta for GDP per capita is statistically significant. When U.S. data are included in Eq. 2, the beta for inflation is also statistically significant. The betas for growth of GDP per capita are not statistically significant, and, in fact, they are close to zero.

When GDP per capita was dropped and the unemployment rate was added in Eqs. 3 and 4, both unemployment and inflation had the expected negative signs and are statistically significant. The betas for growth are again not significant, and they also are close to zero. The results suggest that GDP per capita, the unemployment rate and the inflation rate, but not the growth rate, have the predicted effect on the mean gender role equity scores. Thus, better economic conditions generally lead to more egalitarian attitudes toward women.

The second prediction, that there would be more support for egalitarianism in women than in men, is again supported by the regression results. The beta values for gender in all four regressions are large, positive, and statistically significant. Women in the CEE countries have more egalitarian attitudes toward women than do men. The gender coefficient was almost identical when data from the U.S. were added. This suggests that gender has a similar impact on attitudes toward women across all countries when other explanatory variables are controlled.

The third prediction, that there may be either a negative or positive linear change over time in egalitarian attitudes is again not supported. When controlling for economic factors and gender of the participants, the betas for trend are not statistically significant and are close to zero in all four regression equations.

Discussion

Our results support the prediction that positive economic conditions are related to more egalitarian gender role attitudes. Countries with higher real GDP per capita, higher

growth, lower inflation, and lower unemployment had more egalitarian attitudes toward women. The relationship was strongest with real GDP per capita and weakest with growth in GDP per capita. We suspect that gender attitudes respond gradually to economic change, and thus are not highly correlated with the more volatile economic variables such as growth rates and inflation (see Table 2). These findings suggest that, as economic conditions continue to improve in Central and Eastern Europe, there will be increased support for gender equality.

Our results show that American university students had more egalitarian gender attitudes than CEE students did (see Table 3), but the similarity of regression equations with and without U.S. data (see Table 5) suggest that this gap may reflect economic differences. As economic conditions in CEE countries begin to approach those of the United States, the gap might disappear. However, subtle differences in how the scales were translated could also account for differences in attitude scores across countries. Views of the meaning of gender equality can also differ across countries (Raabe, 1998). In the Czech Republic, there has traditionally been a very high rate of women's labor force participation, and women contribute substantially to family income. Women see themselves as equal to men in the home. At the same time, it has been assumed that men and women should have different types of work and gender inequality in the workplace has been acknowledged and accepted. However, our Czech authors see signs that this may be changing and that inequality in the labor force is not as widely accepted as it used to be. Other researchers, such as Shebloski and Gibbons (1998), have also reported the items found in the standard Attitude Toward Women Scale may not be an appropriate measure of gender role beliefs in the Czech Republic. This does suggest that any country differences must be treated cautiously.

It is interesting to note that the more egalitarian attitudes in the U.S. exist in comparison to all of the countries in CEE, with the exception of the very early years in Slovenia.

Table 5 Regression results on mean gender role equity scores with and without U.S. data.

Equation number	Including GDP per capita		Including unemployment rate	
	(1) CEE	(2) +US	(3) CEE	(4) +US
Gender (male=1 and female=2)	.66**	.65**	.65**	.65**
Trend	-.04	.00	.11	.04
GDP per capita	.54**	.45**	–	–
Unemployment Rate	–	–	-.27**	-.33**
Inflation rate	-.11	-.19**	-.23*	-.26**
Growth in GDP per capita	.06	.02	.03	-.01
Number of observations	65	83	65	83
Adjusted R ²	.73**	.70**	.56**	.65**

*Significant at the .05 level (2 tailed); **Significant at the .01 level (2-tailed).

This was a period of relative economic stability and prosperity for Slovenia, at least relative to other parts of the former Yugoslavia. Future researchers might examine perceptions of the economic situation as well as actual economic data in predicting gender role attitudes and other types of attitudes that have been found to be related to economic factors (e.g., Olson et al., 2006).

Future researchers might also use more refined measures of economic conditions. For example, unemployment rates for men and women or unemployment rates for university graduates might differentially affect the gender attitudes of university students. These variables were not examined in the present study because these data were not available for all countries for the relevant years.

Our research indicates that *differences* in gender role attitudes between women and men are very similar in the CEE countries and the United States. Women have more egalitarian gender role attitudes than men do in both parts of the world. This is somewhat surprising given the different traditions in these regions. In the 1990s, some of the American authors of this study were often confronted informally with the argument that American feminists' views were not particularly relevant to the women of former state socialist countries who had no choice on the issue of whether or not to work outside the home. Contrary to this argument, our data indicate that as these countries move toward market economies and have more choice about employment, there may be more similarity with the U.S. in terms of views of gender equality among women and men. However, other measures of gender attitudes may show different effects. For example, Glick et al. (2000) measured gender differences across 19 countries in their hostile and benevolent components of the Glick and Fiske (1996) Ambivalent Sexism Inventory. In all countries men scored significantly higher than women on the hostile scale, but the differences were less on the benevolent scale; in Cuba and three African countries women actually scored significantly higher than men. Yakushko (2005) also found that Ukrainian women (another country in the CEE region that was not included in our database) were significantly less egalitarian than men on measures of benevolent sexism. Glick et al. suggested that women were likely to score higher than men on the measure of benevolent sexism in countries that were objectively the most sexist.

Our exploratory prediction that attitudes towards women in CEE countries might become more or less egalitarian as the countries moved away from state socialism was not supported. Correlation coefficients and regressions coefficients for trend were not statistically significant and signs were sometimes positive and sometimes negative. The variable of "trend" did not add to the explanatory power of the regression equations after controlling for gender and economic factors.

As in other socialist countries, equal rights for women were guaranteed by the constitution in Poland in the period before our study began. Although the society was never truly equal, there was an illusion of egalitarianism (Gal & Kligman, 2000; Malinowska, 1995). Although the socialist rhetoric supported equality of the sexes, there might never have been true equality and people's personal views might not have supported the ideology (Funk & Mueller, 1993; Renner & Ule, 1998). Many have noted that women were never truly equal in the labor force or in other ways in the socialist countries of Central and Eastern Europe (e.g., Leven, 1994; Malinowska, 1995; Massey, Hahn, & Sekulic, 1995; McMahon, 1994). Many of the laws that supported gender equality were not well followed in the Soviet Union, or in other state socialist countries (Epstein, 1988; Shebloski & Gibbons, 1998). Evidence for incomplete acceptance of socialist ideals of gender equality can be seen in the lower incomes of women as well as in the types of jobs that women held. Women were and are still employed mostly in low-paying, labor-intensive industries, such as textiles, footwear, and tobacco processing, and in the service professions. Few women hold high status positions, even in these female-dominated areas (e.g., Massey et al., 1995).

Despite their full-time jobs, women did much of the work within the household (Ferligoj, Ule, & Renner, 1991; Massey et al., 1995; Renner & Ule, 1998). This "double burden" resulted in many women feeling overworked and withdrawing from the political arena (Ferligoj et al., 1991). There is some evidence that people continue to see women as primarily responsible for housework in CEE and in the U.S. For example, support for women's employment, although women are still seen as responsible for housework, can also be seen in men from the formerly socialist East Germany (Rudd, 2000). Data from Poland suggest that people believe that unemployed women would spend their time taking care of the household and children, but men, even unemployed men, are not expected to do this work (Reszke, 1995).

Although data from the present study suggest that economic factors do predict gender role attitudes in Central and Eastern Europe, there may be other causal factors that help to explain this relationship. For example, Miluska (1998) argued that, in more countries where a high percentage of GDP comes from industry (manufacturing, mining, construction and utilities), there is more emphasis on masculine values and on differences between the sexes. Such beliefs lead to the acceptance of sex discrimination. As countries become more service-oriented, there would be a greater emphasis on feminine values, which may be associated with greater gender equality. All the countries in this study increased the share of GDP devoted to services over the 1991 to 2004 period, but the increases varied from

relatively small for Croatia (9%) to very large for Lithuania (89%), Slovakia (95%), and Albania (207%) (World Bank, 2006).

Economic factors may also correlate with other variables that affect gender attitudes, and thus pick up their effect in our results. For example, six of the countries in this study joined the European Union in 2004 and Croatia is in accession talks. In order to join the EU, these countries were required to adopt many of the policies of the EU including egalitarian treatment of women. The two poorest countries in this study, Albania and Russia, are not in accession talks with the EU.

Religion may also influence attitudes toward women. Preliminary analysis of our data did not find religiosity to be a significant factor in determining attitudes, but we did not have sufficient data to compare traditionally Christian student groups with traditionally Muslim students. One of the countries in our data, Albania, is a Muslim country, but all the others are predominantly Christian.

Finally, it should be noted that we did survey university students. In general, younger people tend to have more egalitarian attitudes toward gender roles than older people do. For example, there is evidence of increased egalitarianism in young Czechs relative to their parents (Shebloski & Gibbons, 1998). A large survey of men and women in Yugoslavia in 1989 to 1990 showed that younger women and men were more in favor of gender equality than were older adults (Massey et al., 1995). The overall levels of support reported here across countries is highly egalitarian, and many of the country means were greater than over 4 on the 1 to 5 scale. We cannot assume that this level of egalitarianism would be found in older or less educated samples.

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