Gender Inequality in East and West: Attitudes to Women's Participation in the Labour Market

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Abstract

The analysis of economic factors usually applied for examining gender inequality in the labour market suggests that former post communist countries have reached similarly high standards of gender equality compared to Western European countries. This paper aims at comparing attitudes to women's work between transition and OECD countries highlighting the explanatory power of societal norms. The analysis of attitudes, their determinants and their change in regions and countries is based on micro-data of the International Social Survey Program (ISSP) from 1994 and 1998 waves. These data reveal that a strikingly higher share of people in the East than in the West agrees with traditional values on women's work. The large homogeneity in patriarchal values of Eastern European people with differing socio-economic background explains these regional differences. The East-West gap in traditional value orientations is likely to widen given that liberal values spread faster in OECD countries than in transition countries.

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1 Introduction

The transition process from centrally planned to market economies in Central and Eastern Europe (CEE) confronted the population of post-communist countries with a change of mandatory employment to 'efficiency' employment. Women's chances to integrate successfully in these new work relations are very much dependent on the prevalence of gender equality in CEE labour markets.

Gender equality in the labour market is often measured by comparing women's and men's economic characteristics, like gender-specific human capital, labour force participation rates and the gender pay gap. If we apply these measures in order to compare gender equality in the labour market in Eastern and Western European countries we find generally that Eastern European countries keep up perfectly well with their Western neighbours.

However, pure economic factors might not catch the "whole truth" of gender equality, especially when picturing transition countries where the full employment policy in the past and poverty and necessity of two earner income also today might shape results of economic gender equality measures. In addition, attitudes to women's work in the society might impact decisively on women's equal opportunities in newly emerged labour market structures.

As a supplement to research examining economic indicators of women's position in the labour market, this paper aims at analysing and comparing patriarchal attitudes to women's work between transition and OECD countries. We are interested in what people from different societies actually think about a gender equal division of work in the household and economic sphere. This different measure of gender disparities offers new perspectives for explaining gender inequality by highlighting the explanatory power of societal norms and value systems in different countries and regions that cannot easily be caught by pure economic factors. It is assumed that patriarchal attitudes shape genders' opportunities in the labour market and can serve as a proxy for measuring gender inequality in the society. We measure traditional values on women's work with people's agreement with the following statement: "It is a husband's job to earn money and a wife's job to look after the home and family." Micro-data derive from mainly two rounds[1] of the International Social Survey Program (ISSP). The 1994 round includes seven CEECs and 14 Western

industrialised countries and the 1998 round provides data on nine CEECs and 18 OECD countries.

Few studies[2] have taken advantage of a truly comparative framework to investigate gender-role attitudes in transition countries. This paper adds new research results comparing differences in gender-role attitudes between the East and the West. Additionally, the application of statistical techniques can show the different impact of population characteristics on gender attitudes in both regions and sheds light on future patterns of social change of gender-role attitudes to women's work.

The remainder will be structured as follows. Section 2 compares gender equality between East and West by investigating regional differences in economic indicators. In addition, it describes different political and societal trajectories related to women's role in the labour market. There are some arguments derived from the communist past indicating that societal attitudes to women's work are much more traditional than the economic measures imply. This is of a great concern since profound societal preferences for gender inequality are very likely to impact upon women's role in societies and could therefore lead to increasing gender gaps in the transitional labour market.

Section 3 describes the ISSP micro data that we use for examining those preferences for gender inequality.

Section 4 examines differences in gender norms between East and West and compares women's with men's attitudes. We summarise agreement with the patriarchal statement and use ordered logit regressions for measuring the 'pure' differences between transition and other OECD countries.

Where do the regional differences derive from? Section 5 compares the impact of individual background characteristics between regions and gender. Results of the Oaxaca decomposition show how important these differences in the impact of individual background are compared to divergent regional population characteristics for determining the probability of agreement with the traditional statement on women's work.

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[1] The coverage of transition countries is very small for the 1988 and 1991 rounds, so that we show only some results for these years.

[2] Inglehart & Norris (2003) compare Eastern and Western European countries based on data of the World Value Survey. The same data are used by Panayotova & Brayfield (1997) comparing gender-attitudes in the USA and Hungary.

Section 6 sheds light on regional patterns of social change of gender attitudes. We estimate change over time first by variation in agreement between age cohorts and second by comparing cross-sectional data collected in the two ISSP waves for the rather short time period from 1994 to 1998.

Section 7 concludes.

2 Economic indictors on gender equality and different trajectories in the increase of women's participation in the labour market in East and West

Are women in a greater disadvantage than men in the labour market in CEECs today? In this section we first use some economic indictors for comparing gender equality in the labour market between East and West. In a second step, different trajectories in the development of women's participation in the labour market for East and West are described.

2.1 Similarities between East and West regarding economic indicators on gender equality in the labour market

Table 1 presents three economic indicators of gender equality in the labour market: gender equality in human capital measured by female and male gross enrolment ratios in tertiary education, gender employment/population ratio and the gender pay ratio. The selection of transition countries is driven by data availability. We compare these countries with five OECD countries: We chose the Scandinavian country Sweden due to its high regulation on gender equality and a Mediterranean country Italy with traditionally less emphasis on gender equality. In addition we focus on Germany (West-Germany later on proves to have pronounced patriarchal gender values compared to other OECD countries), the USA and the UK.

Column 1 of Table 1 shows the female/male gross enrolment ratio (GER) in tertiary education. The GER is the number of students enrolled in tertiary education, regardless of age, expressed as a percentage of the population in the theoretical age group for the same level of education. In all countries women are in an advantageous position. In Albania and Latvia 60 percent more women than men are enrolled in tertiary education; women's advantage is lowest in the Czech Republic and Slovenia with an about 10 percent higher share in tertiary education. However, we find a similar trend of the 'feminisation of tertiary education' in OECD countries.

Table 1: Economic indicators on gender equality in the labour market

	Gross enrolment ratio[3] in tertiary Education ISCED 5 and 6, 2000/2001 in percent			Employment/ population ratio[4] 2001 in percent			Gender pay ratio[5] different sources		
	Male	Female	**Ratio female male**	Male	Female	**Ratio female male**	**a** 1996, 1997, 1998	**b** 1998	**C** 1998
Albania	11	19	**1.73**						
Bulgaria	35	47	**1.34**	54	48	**0.89**	69		
Czech	29	31	**1.07**	73	57	**0.78**	81		
Estonia	45	70	**1.56**	66	57	**0.87**	73		
Hungary	35	45	**1.29**	63	50	**0.78**	78		
Latvia	48	79	**1.65**	62	56	**0.91**	80		
Lithuania	42	63	**1.50**	60	57	**0.96**	71		
Macedonia	21	28	**1.33**						
Moldova	24	31	**1.29**						
Poland	46	66	**1.43**	59	48	**0.82**	79		
Romania	25	30	**1.20**	69	58	**0.85**	76		
Russia	56	72	**1.29**				70		
Slovakia	29	32	**1.10**	62	52	**0.84**	78		
Slovenia	52	70	**1.35**	69	59	**0.86**	85		
Italy	*43*	*57*	**1.33**	*69*	*41*	**0.60**		*91*	*93*
Germany				*73*	*59*	**0.80**		81	83
Sweden	*56*	*85*	**1.52**	*77*	*73*	**0.95**		82	88
UK	*53*	*67*	**1.26**	*78*	*65*	**0.83**		76	79
USA	*63*	*83*	**1.32**	*79*	*67*	**0.85**			76

Source: UNESCO 2003 for gross enrolment ratio, OECD 2002 and EUROSTAT 2003 for data on employment rates. Gender pay gap data are not directly comparable. The sources and measures are as follows: a) UNICEF 1999; monthly gender pay ratios (*not adjusted for hours worked*). In general data refer to 1996 data, but for Hungary, Bulgaria, Romania, Lithuania to 1997 and for Latvia to 1998. b) Eurostat, ECHP, wave 5 1998: Ratio of women's average gross hourly earnings with respect to men's average gross hourly earnings based on earnings data for all individuals employed 15 hours or more at the time of the survey in 1998 (*adjusted for hours worked*). c) OECD 2002: gender pay gap by median of wage structure, hourly earnings 1998 *(adjusted for hours worked*).

The Scandinavian countries Sweden and Norway show the highest advantage in OECD countries for women in access to tertiary education (about 50 percent more women than men); on the other hand, a higher share of men than women attend universities in Switzerland and Japan. However, Italy, the UK and the US reflect the OECD average: in Western industrialised countries about 30 percent more women

[3] The gross enrolment ratio is the number of pupils enrolled in a given level of education, regardless of age, expressed as a percentage of the population in the theoretical age group for the same level of education. This contrasts to the net enrolment ratio, that is the number of pupils in the theoretical age group for a given grade/level of education enrolled in that level expressed as percentage of the total population in that age group.

[4] The employment ratio expresses the number of employed people between 15 and 64 years olds as a share of the working-age population in the same age group here for women and men separately. Data refer to 2001 for all countries. Even though sources for the four OECD and the transition countries are different, sources are comparable: for the four countries given in both sources the Slovak and Czech Republic show exactly the same female employment ratio, and for both sources Hungary and Poland respectively have very similar values with a smaller ratio of 0.2 for the first and a higher ratio of 0.6 for the second in the given EUROSTAT source.

[5] The gender pay ratio gives the fraction of the average male pay earned by women.

than men are enrolled in tertiary education. The average gender enrolment ratio for transition countries is 1.36 showing a slightly higher educational advantage of women in post-communist compared to OECD countries.

Column 2 displays a measure of women's economic independence by presenting the employment/population ratio of people in the working age (15 to 64 year olds) by gender and again the female/male ratio. We find now a reverse picture to education, showing that women's higher human capital is not efficiently used in the labour market since women make up a smaller share of the employed than men. In transition countries female employment is relatively high. There is practically no difference between the share of women and men in the labour market in Lithuania. Only in the Czech Republic and Hungary a considerably higher share of women (about 22 percent) than men is not employed. Variation is greater in OECD countries. In Italy the Mediterranean country with lowest female labour force participation 40 percent more working age men than women are employed. Only the OECD countries Turkey and Mexico show considerable lower female participation rates with 63 percent more men employed in the first and 53 percent in the last. On the other end, Scandinavian countries are characterised by only marginal differences in men's and women's working age employment status. Gender equality here is similar to that in Lithuania and higher than in many other transition countries. However, the general picture reveals that due to the high variability in OECD countries gender equality in employment is higher in post-communist than in Western industrialised countries today.

The gender pay ratio, the fraction of the average male pay earned by women, is given in column 3. Differences in pay between women and men is of great importance as it has a direct effect on the level of pensions, unemployment benefits and other benefits paid to employees. Unfortunately, there is no one satisfactory source for measuring the gender pay ratio in a harmonised way across Europe so that figures are not directly comparable between regions. Source a (UNICEF 1999) refers to monthly gender pay ratios and is available only for transition countries covering the years 1996 to 1998. Sources b (Eurostat 1998) and c (OECD 2002) refer to gender wage ratios calculated on the basis of hourly earnings and refer to the year 1998. The monthly ratios (source a) given for transition countries tend to show higher gender inequality than ratios based on an hourly measure (b and c) as men, on average, work longer hours than women.

Based on the monthly ratio women in transition countries earn about 20 to 30 percent less than their male counterparts with the exception of Slovenia, where the gender ratio is about 85 percent high. Surprisingly, gender pay ratios seem to reveal a quite low gender inequality for OECD countries with the exception of the UK. This stands in contrast to other data that suggest higher gender pay inequality in some Western industrialised countries compared to the East (Blau and Kahn 2001). However, taking into account that the monthly pay calculation for transition countries overestimates gender inequality data do not show that women in transition fare necessarily worse than women in Germany or Sweden. Even by applying the hourly wage calculation, gender equality in the UK is not higher compared to that in many transition countries, where differences in working hours between men and women are not taken into account for the gender gap calculation.[6]

Even though there is a high variation in economic indices on gender equality in the labour market across countries, the general picture shows that transition countries are not more or less gender equal than OECD countries. While women's advantage in access to tertiary education and work seems to be slightly greater in post-communist countries, the gender pay gap does not necessarily suggest higher gender equality in the West. Hence, given these economic indicators there is no greater concern regarding gender equality in transitional than in OECD labour markets.

However, can economic factors indeed show the 'whole' picture of gender equal work division? Regional differences in developments of gender equality show another perspective of women's integration into work.

2.2 Dissimilarities in developments of women's work in East and West

In Western industrialized countries the increased labour market participation of women was a gradual process stimulated by economic factors but also by societal contest. New opportunities for women to earn money outside the home opened during the last decades initially driven by an increasing service sector. The availability of part-time employment facilitated women's ability to work. At the same time, the amount of time necessary for household activities diminished, since consumption of household appliances increased and the appearance of inexpensive substitutes for services traditionally provided by women augmented. This increased the costs of

[6] In contrast to the hypothesis of women's higher vulnerability during the transition process, literature suggests, that the gender pay gap diminished in transition countries (Newell and Reilly 2000, Brainerd 1997) which might be

conformity to the traditional division of labour between male breadwinner and female homemaker in the West.[7]

Closely related to the economic stimulation of women's work in the labour market was the social contest on gender norms. Starting in the 70s women participating in women's organisation fought for women's rights, created an agenda where women's issues were discussed and counter fought resulting in reinforced equal opportunities for women in all spheres of life in the eighties and nineties. The increasing female labour force participation was therefore paired with a discussion on gender equality regarding responsibilities in the household.

Hence, both, economic factors and societal contest led to erosion in traditional gender roles specifying husbands as breadwinners and wives as homemakers in Western industrialised countries. (Blossfeld & Drobnic, 2001; Badgett et al., 2000; Frankel, 1997)

In contrast to Western industrialised countries, communist countries used direct state intervention for the implementation of a socialist form of gender equality. This normative imposition of gender ideology impeded the development of a pluralistic and free debate of gender issues that shaped gender norms in the West.

The communist ideology of gender equality did not by far reach the ambitious aim of gender equality in all spheres of life demanded by Western women's organisations. The socialistic term of equality for women was mainly identified with women being wage earners but did not question women's primary responsibilities for childcare and household task. (Dijkstra 1997) While in the West feminism restructured value orientations with e.g. one effect of a voluntarily and gradually increase of women's entry into the labour force, women in the East were often constrained to work full-time due to two reasons. First, women's participation in the labour market was meant to maximise the use of all available productive resources to sustain economic growth by 'extensive' means. Second, women had to participate in the labour market as a means of economic survival and not self-realisation.

2.3 Greater adherence to traditional attitudes to women's work in the East?

Since the communist gender ideology focused only on access to paid work but not on the division of caring and household tasks women's full-time employment led

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also related to an increase in return to women's education (Munich et al 1999).

[7] Indeed, over the last decades breadwinner-husband marriages in which the wife did not work outside home slide into an increasing economic disadvantage relative to other marital arrangements where both contribute to the family income. (Dechter, 1994)

to an overburdening of women as workers and mothers. This so-called ‘double burden’ (UNICEF 1999) might have promoted the acceptance of traditional orientations towards Eastern European women’s work and family responsibilities (Lobodzinska, 1995) in transition countries today. In addition, differential pattern of women’s employment might matter: women in transition countries are generally full-time workers, while Western women have a wider opportunity of part-time work given financial situations and labour market structure. Also women’s lack of choice in ex-communist countries might have restrained public support for women’s employment. (Panayotova & Brayfield, 1997)

Additionally, once boundaries lifted in the aftermath of communism, it makes a difference whether gender equality is a fundamental part of a society and defined broadly as characteristic for the West or whether gender equality was dictated and only used for meeting the needs of the communist system. Due to the imposition of gender equality in the work sphere people in the East experienced a discrepancy between their traditionally moulded expectations of women’s role as housewives and the necessity of women’s fulltime work in the society. The loss of a communist, societal grip caused a revitalisation of traditional values that were concealed during communism.

Such a revival of traditional values was also due to the re-emergence of other powers within the post-communist societies like the revival of religious community life that was in favour of traditional believes on family life. In contrast, values in Western European Countries are moulded by increasing shares of populations not associated with any religion at all (Crouch, 1999) whereby also a relatively high share of Protestantism might be related to more relaxed attitudes to gender roles.

Hence, while in the West women’s participation in the economy, women’s high access to tertiary education and decreasing gender gaps are argued to be most important for explaining the degree of liberal gender values today it must be doubted whether this can be applied also to post-communist countries. Eastern women’s high labour force participation and access to tertiary education might still more reflect inheritance of the communist system than that it is build on a profound societal agreement on women’s societal roles. Hence, for the East women’s much longer and profounder tradition of women’s labour force participation compared to the West

might not be the reason for a greater acceptance of dual earner households, in the contrary it might have lead to a backlash nourishing traditional gender values.[8]

These societal norms on gender equality in the labour force are of a high importance. First, attitudes are likely to impact upon labour market policies and peoples (e.g. employers') behaviour. Therefore, they can shape women's equal opportunities in the labour market. Second, the relative high gender equality in the labour market visible through economic indicators today might still be inherited from the communist grip. Profound societal preferences for gender inequality are very likely to impact upon women's role in societies and could therefore lead to increasing gender gaps in the CEE labour market.

After the introduction in the data used in Section 3 the following sections aim at answering three main questions:

a) *Are there differences in preferences to gender inequality between East and West?* In Section 4 we compare regional and gender differences in attitudes. The results show large regional discrepancy in patriarchal values even if controlled for population characteristics.

b) *Where do these regional differences derive from?* In Section 5 we compare different impacts of population characteristics between genders and regions. Since there is a considerable regional difference in the explanatory power of individuals' background we estimate the share of differences in agreement with the traditional gender stereotypes that derives from i) regionally different impacts of individuals' background and ii) varying regional population characteristics.

c) Given that there is a great gap between OECD and transition countries in patriarchal attitudes it is interesting to know *how attitudes to gender inequality will change over time in both regions*. Section 6 examines age cohort effects and compares agreement with the gender stereotype between 1994 and 1998.

[8] A comparison of China and Taiwan regarding traditional values of women and men for the male-breadwinner-model showed similarly, that people in China think much more that women should be the homemaker even though women's labour participation in China has a much more profound and longer tradition in China than in Taiwan. (Tu & Chang 2000)

3 Data

The data used to measure attitudes to gender inequality are taken from four waves of the International Social Survey Program (ISSP)[9]. The 1988 and 1991 ISSP rounds cover only one and four transition countries respectively, so that we concentrate predominantly on the 1994 and 1998 round. The 1994 round of the ISSP includes seven transition (Eastern Germany, Hungary, Czech Republic, Slovenia, Poland, Bulgaria and Russia) and 14 OECD countries. The 1998 data comprise additionally two further Eastern European countries (Latvia and Slovakia) and a total of 18 Western industrialised countries. Even though the sample of transition countries is quite heterogeneous, data on Central Asia and the Caucasus are missing. Both regions differ in cultural, economic and geographical terms from the countries covered by ISSP. Hence, the results cannot be generalised for these regions that are very likely to show a higher degree of patriarchal attitudes to women's work.

In each country a representative sample of approximately 1000 respondents were asked questions related to preferences about gender roles. Table A1 shows the sample size, response rate, fieldwork method and sample type for each country. In all transition and half of other OECD countries data were obtain by face-to-face interviews. Response rates are over 80 percent in Latvia and Bulgaria, slightly above 50 percent for Russia and Hungary and small for Slovenia (35 percent) and Czech Republic (40 percent). Results on the last two countries need to be interpreted with caution. Also some OECD countries show very low response rates, especially France with only 10 and Canada with 30 percent of response. We exclude both countries from the analysis since results are very likely to be biased. In general, the weighted data of the other countries approximate[10] population characteristics of the countries.

The focus of our analysis is on one ISSP question that is given in the form of a statement which respondents are asked to register their attitude to on a scale of 1 to 5.

[9] Information on ISSP data can be found under http://www.issp.org/

[10] For some countries there is a slight bias in response. Women, people not in the labour force, youngest and oldest age cohorts and better educated people seem to be more likely to respond in general. However, differences between country's census and ISSP data remains generally below 5 percent of the respective group.

Table 1: Question on attitudes to women's work

Statement asked of respondents	Response categories
Do you agree or disagree… "A husband's job is to earn money; a wife's job is to look after the home and family"?	1. Strongly agree 2. Agree 3. Neither agree nor disagree 4. Disagree 5. Strongly disagree

This measure for attitudes to gender inequality limits our focus on gender stereotypes concerning labour division within the family and leaves open gender-specific attitudes regarding politics, the workforce and education. Additionally, the question is formulated quite neutrally in the sense that it is not directly related to distributional conflicts between women and men. Men are more likely to accept an increased pooled household income than equality in the division of common domestic chores like routine house-care or care of children. Also women gain from becoming breadwinners given the distribution of homework is solved. Hence, we assume that there is a relative low interference of very own distributional interests impacting upon respondents' answers.[11]

It is important to note that respondents being asked about their ideas of women's work are likely to associate predominantly female full-time occupation in the East where part-time work is still very rare. In contrast Western respondents might think of 'some form of' female occupation give the high variability of part-time work.

4 Are there differences in preferences to gender inequality between East and West?

This section provides a first glance at cross-country differences in preferences for gender inequality by looking at the distribution of answers to the question listed in Table 1 and by examining gender differences in attitudes (Sub-section 4.1). In a second step we measure 'pure' regional and country differences in gender attitudes controlling for individuals' characteristics in Sub-section 4.2.

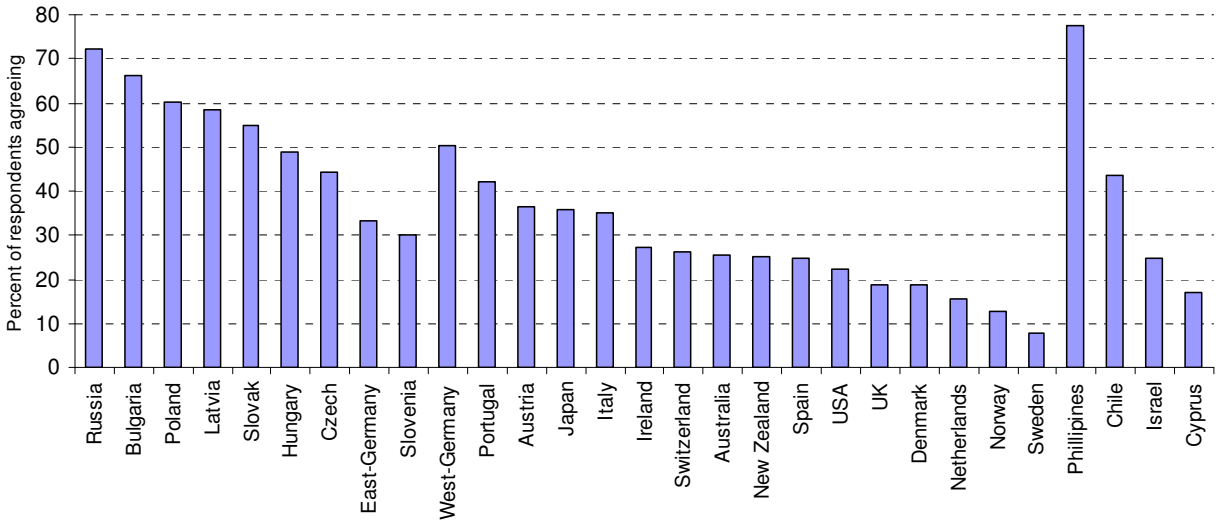
4.1 General preferences for gender inequality

Figure 1 displays the share of respondents in each country who agree and strongly agree with the statement that it is a husband's job to earn money and a wife's job to look after the home and family. The countries are ordered first by regional

[11] This is to compare with questions like "Women and men should share homework equally" that given the direct link to gender-specific interests and is likely to be much more contested between both genders. (Inglehart & Norris 2003)

groups (CEEC, other OECD, other countries (incl. developing countries)) and second by the share of agreement.

Figure 1: It is a husband's job to earn money and a wife's job to look after the home and family; percentage of people who agree or strongly agree by country



Source: ISSP 1998, author's calculations

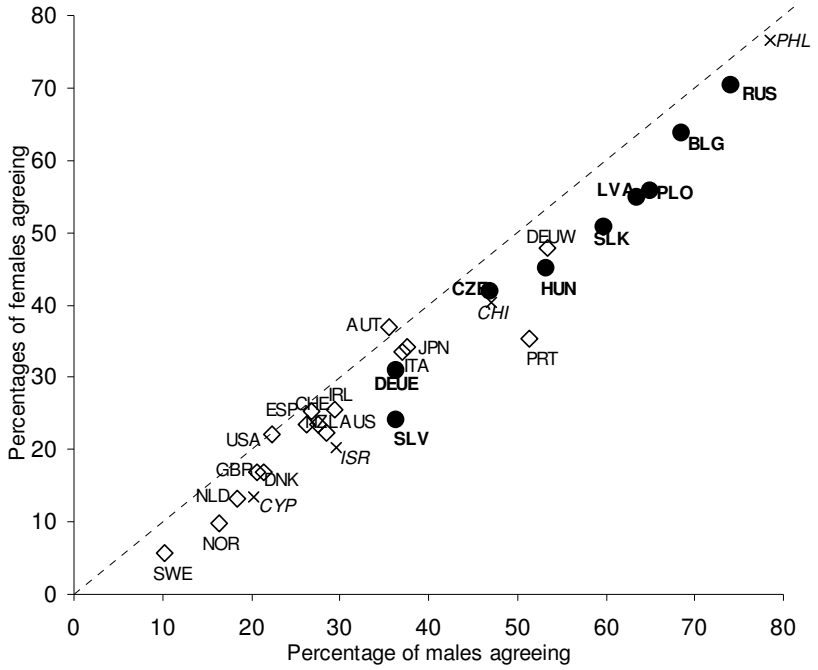
As the figure reveals there is substantial variation across the entire set of countries. People in the Philippines assume the top rank with almost 80 per cent agreeing with their traditional roles, closely followed by Russia, where still a massive 70 per cent do agree. On the other hand, only 8 percent of respondents in Sweden think that the statement is right. This share of agreement is also significantly lower (1 percent level) than in any other OECD and transition country as multiple comparison of agreement between countries reveals (Table A2 in Appendix).

Within each group variation in agreement is also considerable. The share of respondents in West-Germany adherent to traditional gender stereotypes is about 6 times higher than in Sweden.

However, comparing country groups reveals that transition countries display on average more traditional views than the OECD countries. More than half of the population in Russia, Bulgaria, Poland, Latvia and Slovakia believe in the traditional division of work between genders. Traditional values in Russia are significantly more pronounced than in any other transition or OECD country. This is also true for Bulgaria once Russia is not taken into account. (see Table A2 in the Appendix)

One might think that the views on this issue differ greatly between men and women, for instance because the current construction of society is one that has very much been dominated by men thereby leaving women in the economically less advantageous positions. Quite surprisingly, the empirical evidence contained in the answers to the above question firmly rejects the hypothesis of substantial male-female differences in gender-related world-views. To illustrate this finding, Figure 2 shows a scatter plot containing the national shares of "agree" and "strongly agree" for woman (on the vertical axis) and for men (on the horizontal axis).

Figure 2: Do women and men think differently about gender roles?



Source: ISSP 1998, author's calculations.

As the figure indicates, the gender-specific answers appear to lie on a straight line parallel to the 45° line. Running a simple linear regression through the data-points gives the following numerical relationship between female and male answers (standard errors in parentheses):

Agree female= -4.11 (-1.59) + 0.96 (0.04)*Agree male $(R^2 = 0.96)$

The intercept of – 4.11 captures the average differences in the percentage point of agreement between women and men: surprisingly, within the sample of countries analysed women agree (and strongly agree) by a mere four percentage points less than men with the above statement. Although the difference is significant at the 1 per cent

level, it is indeed anything but 'substantial'. One might also have suspected that the degree of disagreement between men and women differs systematically across countries, for instance in the sense that in countries where male 'patriarchal attitudes' are particularly pronounced, women are much less in favour of the traditional roles they 'are bound to' assume. However, as the slope of 0.96 - which is not significantly different from 1 (p=0.32) – indicates, gender differences in agreement do not vary between countries with more and less traditional societal values on women's work.

4.2 Regional differences in attitudes controlled for individuals' characteristics

The practice to measure traditional values by summarising people attributing themselves to gender stereotypes cannot take into account 'pure' (or 'conditional') effects that demographic variables have on individual's agreement with traditional gender roles. In this section we estimate differences in gender attitudes between regions and countries controlling for varying individuals' characteristics.

4.2.1 Research design

We need to apply ordered logit (or probit) models[12] for measuring the pure size effect of attitudes to gender inequality in regions and countries. The ordered logit models described in the following will also be applied similarily in Sections 5 (comparing the impact of socio-economic background between genders and regions) and Section 6 (estimating changes in attitudes to gender inequality).

Model

We assume that the attitudes to family roles of individual i can be characterised by a latent variable A_i^* ranging from - ∞ to ∞: Our structural model is:

$$(1)\quad A_i^* = \beta x_i + \varepsilon_i ,$$

whereby A* is the dependent variable indicating the degree of patriarchal gender values, β is the vector of unknown coefficients, x the vector of explanatory variables and ε the random term in the equation.

The variable A_i^* is not directly observed, but a variable A_i taking values from 1 to 5 decreasing in individual endorsement of traditional family roles.

[12] For the examination of factors determining attitudes to gender inequality we prefer logistic regressions instead of probit regression models. Since the agreement to gender stereotypes is a qualitative variable a logistic regression seems more suitable. Additionally, coefficients of logistic regressions are easier to interpret. However, since the predicted probabilities of logit and probit regressions are normally identically, probit regressions could be used alternatively.

In particular, we measure the model

(2)

$$A_i = 1 \text{ if } A_i^* \leq \mu_1$$

$$A_i = 2 \text{ if } \mu_1 < A_i^* \leq \mu_2$$

$$\ldots$$

$$A_i = 5 \text{ if } \mu_4 < A_i^*$$

where $\mu_1,\ldots,\mu_4$ are unknown threshold parameters to be estimated with the β-coefficients. Assuming that the distribution of the error term is logistic, we estimate an ordered logit model**.**

Independent variables

Region and countries: We assume that all transition countries can be treated as a fairly homogeneous group. This may be justified to the extent that all share the common experience of socialism.

On the other hand, however, it might be reasonable to distinguish between Russia and the other Eastern European countries, all of which have strongly committed themselves to the Western market model by becoming official candidates for accession to the European Union. Russia differs also insofar as it has by far the longest history of communism, being the only country under communist rule before the world wars. To capture this we separate the CEEC dummy into one for the Russia and one for the remaining eight transition countries ("CEE8").

Besides regional dummy variables, countries' adherence to patriarchal values can be estimated by single country dummies, even though the size and significance of which would certainly be influenced by international differences in the exact interpretation of the question, given the languages differences.

Gender: Women are less likely to agree with patriarchal values as shown before.

Age, education, cohabitation, single parenthood, household income, social class and religion: Literature show that individual resources and characteristics like higher education, lower age, cohabitation, single parenthood, higher household income, higher social class and low degree of religion are all related to more liberal attitudes. (Inglehart & Norris 2003, Batalova & Cohen 2002).

Besides these individual resources, gender relations in the family household are likely to shape gender attitudes.[13] In households where gender relations are asymmetric, we can expect a presence of less egalitarian gender attitudes. *Marital status, household size, education, labor force participation, employment status, employment status of the spouse, children in household* are all variables that can capture women's dependence on men. (Baxter and Kane 1995)

Integrating these variables into our model, we specify the vector of explanatory variables x in (1) as follows

$$(3)\quad A_i^* = RE_i\beta_1 + G_i\beta_2 + D_i\beta_3 + FS_i\beta_4 + SES_i\beta_5 + ES_i\beta_6 + R_i\beta_7 + (Y_i\beta_8) + \varepsilon_i$$

where the variable RE denotes the region individuals are living in, G is people's gender, D captures individual demography, FS refers to the family structure, SES captures the socio-economic status, ES is individuals' and spouses' employment status and R refers to people's religious affirmation. In section 6 where we measure trends in gender attitudes we add also a control capturing the year of the data. These variables and their coding are described in Table 2 below. ε is an error term and the vectors β_1 to β_8 are parameters.

The variables household size, spouse employment status, family structure (number of children and adults in the household), household income and social class have a high number of missing values. However, since these variables are very likely to be related to gender attitudes, they were used by including a dummy variable to indicate non-response[14].

[13] Asymmetric gender relation in the household might shape patriarchal attitudes. However, these variables might also have an endogenous character since patriarchal attitudes might determine women's dependence in the household. One example might be, that couples with liberal gender values are more likely to cohabit before marriage. (Batalova & Cohen 2003)

[14] Missing values are too high for integrating the following variables into the regression: household structure, occupation, self-employment and area (rural/urban).

Table 2: Variables used and coding of variables

	Term in formula	Used variables	Coding of variables
A	**Dependent variable**	**Husband's job to earn money, wife's job to look after home and family**	**1=strongly agree, 2=agree, 3=neither nor, 4=disagree, 5=strongly disagree**
RE	Region	Central and Eastern Europe (CEEC)	1= CEEC, 0= otherwise
		CEEC without Russia (CEE8)	1= CEEC without Russia, 0=otherwise
		Russia	1=Russia, 0=otherwise
		OECD countries	*Control group*
G	Gender	Gender of the respondent	0=male, 1=female
D	Demography	Age (age)	Metric
		Divorced or separated	1 = divorced or separated, 0 = otherwise
		Widow	1=widowed, 0=otherwise
		Married	1= married, 0= otherwise
		Single	*Control group*
FS	Single parent	Respondent single parent	1= single parent, 0= otherwise
	Cohabitation	Respondent is cohabiting	1= Living with steady life partner, 0=otherwise (married or single)
	Household size	Household size /controlled for missing values	Metric
	Children	Children in the household	1=child in household, 0=otherwise
SES	Education	*Primary education*	*Control group (primary education or less)*
		Secondary education	1= some or completed secondary education, 0=other
		Tertiary education	1=Some or completed tertiary, 0=other
	Income	Household income /controlled for missing values	Metric (1 to 10 income categories)
	Social class	Subjective social class / controlled for missing values	1=lower or working class, 0=otherwise
ES	Employment status	*Full-time employed*	*Control group*
		Retired	1 = retired, 0 = otherwise
		Part-time employed	1=part time employed, 0=otherwise
		Housewife or man	1=housewife or –man, 0=otherwise
		Not in labour force (disabled, students, others)	1= not in labour force, 0= others
		Unemployed	1 = unemployed, 0 = otherwise
	Employment status spouse	Spouse full employed / controlled for missing values	1= full employed, 0=otherwise or respondent does not have spouse
		Spouse full employed and female	1= female spouse full employed
R	Religion	Religious degree	From 1= extremely religious to
		Religious service (only if 1994 compared to 1998)	From 1= once a week or more to 6=never
Y	Year	Year of ISSP wave	0=year 1994, 1= year 1998

Note: Variables in cursive serve as control group variables.

Tables A2 and A3 in the Appendix present the summary statistics for the question and the independent variables discussed in the following sub-section for CEEC and OECD countries separately. Table A4 gives the correlation matrix of the explanatory variables. Correlation between the variables age and retirement (0.6), gender and female spouse's full time employment (-0.4) as well as children in household and household size (0.5) is considerably high, so that results need to be interpreted with caution. In general, correlation coefficients of the independent variables remain below 0.3.

4.2.2 Results

Table 3 displays ordered logit regression results where the dependent variable is 'attitudes to gender inequality' (the higher the value the more liberal attitudes) and the independent variables described in (3) and specified in Table 2. Models 1 and 2 measure the regional 'effect' without control variables that are added in Model 3 and 4.

Results reflect patterns of Figure 1 by showing that CEECs are on average indeed significantly more "traditional" than OECD countries that serve as a control group in the ordered logit regression. The absolute difference in the size of the CEEC dummy coefficient is about 1.25 (Model 1). Predicting the probabilities for agreement in this model, shows similar to regional averages calculated on the base of Figure 1 that about 25 percent of people in OECD countries and as many as 54 percent of respondents in transition countries agree with patriarchal gender norms on the division of work (Table 4).

Splitting the CEEC dummy variable into two confirms that people in Russia tend to be substantially more traditional as regards gender roles (coefficient – 1.93, translates into predicted probability 70 percent agreement) than people in Central Europe (coefficient -1.1, 51 percent agreement), who in turn continue to be more traditional than the OECD average (25 percent agreement). It is notable, that adherence to traditional gender values is significantly higher in Russia than in Central Europe given relative small standard errors due to high sample sizes.

Table 3: Are CEECs different from OECD – also split CEE8 and Russia, ordered logit

	(1)	(2)	(3)	(4)
Ceec	-1.244		-1.373	
	(0.022)***		(0.025)***	
cee8		-1.122		-1.254
		(0.023)***		(0.026)***
Russia		-1.937		-2.097
		(0.046)***		(0.052)***
Female			0.637	0.633
			(0.028)***	(0.028)***
Age			-0.023	-0.022
			(0.001)***	(0.001)***
Divorced/separated			0.010	0.033
			(0.049)	(0.049)
Widow			-0.198	-0.170
			(0.055)***	(0.055)***
Married			0.040	0.043
			(0.051)	(0.051)
Household size			-0.080	-0.081
			(0.010)***	(0.010)***
HH size missing			-0.731	-0.710
			(0.058)***	(0.058)***
Secondary education			0.401	0.452
			(0.028)***	(0.028)***
Tertiary education			0.925	0.968
			(0.036)***	(0.036)***
Retired			-0.072	-0.154
			(0.039)*	(0.039)***
Part-time employed			-0.044	-0.034
			(0.038)	(0.038)
Housewife/man			-0.671	-0.668
			(0.041)***	(0.041)***
Not in labour force			0.076	0.168
			(0.039)**	(0.039)***
Unemployed			-0.062	-0.061
			(0.047)	(0.047)
Spouse full-time			0.099	0.085
Employed			(0.037)***	(0.038)**
Female spouse			0.351	0.354
full-time employed			(0.048)***	(0.048)***
Spouse missing			0.196	0.175
			(0.047)***	(0.047)***
Cohabitation			0.179	0.165
			(0.051)***	(0.051)***
Child in household			-0.072	-0.069
			(0.033)**	(0.033)**
Single parent family			0.181	0.164
			(0.078)**	(0.078)**
Child missing			0.676	0.646
			(0.036)***	(0.036)***
Household income			0.064	0.057
			(0.005)***	(0.005)***
Household income			-0.076	-0.070
Missing			(0.028)***	(0.028)**
Low social class			-0.159	-0.147
			(0.025)***	(0.025)***
Class missing			0.287	0.292
			(0.034)***	(0.034)***
Highly religious			-0.631	-0.591
			(0.032)***	(0.032)***
Observations	31511	31511	30232	30232
Pseudo R-squared	0.03	0.04	0.10	0.10
log-lklhd	-48751.12	-48599.71	-43778.29	-43646.28

Source: ISSP 1998, author's calculations

Note: OECD countries are the benchmark and cover the following: West-Germany, Japan, Italy, Swiss, New Zealand, Austria, Ireland, USA, Portugal, Australia, Norway, Netherlands, Spain, Sweden and Denmark. Standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%

If individual resources and variables capturing gender relations in the respondents' household are hold constant we find a slight but at the 1 percent level significant[15] increases of the regional coefficients for CEECs (Model 3) and Central Europe and Russia (Model 4). Table 4 reveals that these differences in the coefficients are marginal once expressed in predicted probabilities of agreement. If we assume mean characteristics of the population for independent variables, the general picture of unconditional results remains, with about 54 percent of respondents in CEECs (Model 3) and 51 percent in Central Europe and 70 percent in Russia (Model 4) adherent to patriarchal attitudes to women's work.

The fact that most of the other individual determinants selected enter highly significantly and with the "right" sign into the regression confirms the validity of the underlying model. Traditional attitudes are increasing in age and decreasing in income, social class and education. Men are more in favour of the traditional role system than women, the retired, the part-time employed, the unemployed and these who are religious. Understandably also housewives (or men)[16] tend to agree with the traditional distribution of family roles.

Table 4: Predicted probabilities for agreement (strongly agree, agree) for models in Table 3

	OECD	CEEC	CEE8	Russia
Model 1	0.252	0.538		
Model 2	0.251		0.507	0.699
Model 3	0.229	0.540		
Model 4	0.229		0.509	0.707

Note: Predicted probabilities for agreement are calculated by assuming mean values of the whole population (OECD and CEECs) for the independent variables.

How does the ranking of countries regarding their traditional value systems (displayed in Figure 1) change once we control for individual background characteristics? We therefore replace the ceec-dummy in our regression of Table 3 with country dummies. Table 5 summarises the results. Again we find that holding individual characteristics constant CEECs still remain the most traditional countries regarding gender stereotypes. Russia, Latvia, Bulgaria, Poland, Slovakia, Hungary and the Czech Republic remain at the top of our ranking. Only the former communist countries East-Germany and Slovenia do not show significantly higher attitudes to

[15] The increase of the coefficient for CEECs from Model 1 to 3 and for Central Europe from Model 2 to 4 is around 3. Comparing the coefficient for Russia in Model 2 and 4 shows a significant difference in the coefficients with a t-value of 2.3.

gender inequality than the benchmark country Austria. On the other end of liberal values not very surprisingly we find mainly Scandinavian countries.

Table5: Country dummies added to model 3 in Table 3. Base country Austria

	β-coefficient	Standard error
Russia	**-1.929**	**0.068**
Latvia	**-1.654**	**0.071**
Bulgaria	**-1.445**	**0.076**
Poland	**-1.319**	**0.074**
Slovakia	**-1.285**	**0.070**
Hungary	**-1.021**	**0.075**
Czech Rep.	**-0.853**	**0.070**
West-Germany	-0.734	0.075
Japan	-0.108	0.070
Italy	-0.087	0.074
Swiss	-0.024	0.070
Slovenia	**-0.014**	**0.164**
East-Germany	**0.063**	**0.075**
New Zealand	0.085	0.075
Ireland	0.160	0.074
USA	0.373	0.073
Portugal	0.373	0.077
Australia	0.443	0.197
Norway	0.557	0.067
Netherlands	0.692	0.071
Spain	0.815	0.158
Sweden	0.843	0.073
Denmark	1.287	0.078

Source: ISSP 1998, author's calculation
Note: Benchmark country is Austria. Same control variables used as Table 3. Pseudo R2=0.12, log-likelihood=-45497. Significant country parameters (5 percent level) are shaded grey, transition countries are printed bold.

Taken together, even if controlled for population characteristics CEECs show in general much higher patriarchal attitudes than Western European Countries. However, our group of post-communist countries is very heterogeneous; Russia, Latvia and Bulgaria are definitely different from OECD countries, but East Germany and Slovenia are comparable to Austria in their gender attitudes on women's homemaker role.

5 Where do regional and gender differences in attitudes to women's work derive from?

What can explain that the share of people agreeing with traditional gender attitudes is twice as high in the East as in the West? In addition, where do gender differences in agreement derive from and are they different between regions? This section examines

[16] Housewife and –men capture also people who are not working in the labour force but helping family members. We estimated the model separately for both groups and received not significantly different β-coefficients. In the

whether regional and gender differences in patriarchal attitudes are due to different impacts of respondents' characteristics determining traditional views.

5.1 Regional differences

The regressions underlying Table 5 examine to what extent the before observed substantial stereotype differences in the regional dummies might be due to the factors determining attitudes to family roles work differing in East and West. To this end we run the regressions separately for OECD (column 1) and CEE countries (column 2) and then compare the size and significance of the coefficients between regions by presenting the regional difference in variables' impact paired with the standard error of this difference (column 3). Coloured fields show that dissimilarity in impacts of population's characteristics are significantly different between countries. Light grey colour indicate that the variable has a higher impact in OECD countries (whether in positive or negative direction), while dark grey colour denotes that the importance of the variable is more pronounced in CEECs.

The factors that determine attitudes in this respect work in the same direction in most cases in both OECD and CEE countries. Nevertheless, comparing selected coefficients to each other in East and West does provide some interesting and surprising insights.

First, the gender dummy reveals that women in OECD countries agree much less with their male counterparts on traditional gender roles than women in Eastern countries and this regional difference is significant at a 1 percent level. This is a surprising result, since patriarchal gender attitudes are more pronounced in the East, so that we might have expected higher disagreement instead of a higher agreement between genders in post-communist countries. This result motivates the examination of gender differences and their determinants in attitudes separately for regions in section 5.2.

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whole population 17 percent of all housewives and –men are men.

Table 6: Are determinants different between CEECs and OECD? Ordered logit regressions

	OECD	CEEC	Difference OECD-CEEC
Female	0.735 (0.034)***	0.428 (0.048)***	0.307 (0.059)***
Age	-0.024 (0.001)***	-0.014 (0.002)***	-0.010 (0.002)***
Divorced/separated	0.095 (0.061)	-0.118 (0.086)	0.213 (0.105)**
Widow	-0.245 (0.068)***	-0.197 (0.095)**	-0.048 (0.117)
Married	0.104 (0.057)*	-0.275 (0.131)**	0.379 (0.143)***
Household size	-0.081 (0.013)***	-0.085 (0.016)***	0.004 (0.021)
HH size missing	-0.575 (0.063)***	-0.276 (0.309)	-0.299 (0.315)
Secondary education	0.536 (0.034)***	0.172 (0.050)***	0.364 (0.060)***
Tertiary education	1.090 (0.043)***	0.568 (0.066)***	0.522 (0.079)***
Retired	-0.256 (0.049)***	0.109 (0.066)	-0.365 (0.082)***
Part-time employed	-0.103 (0.044)**	0.021 (0.082)	-0.124 (0.093)
Housewife	-0.695 (0.048)***	-0.559 (0.094)***	-0.136 (0.106)
Not in labour force	0.120 (0.050)**	-0.043 (0.064)	0.163 (0.081)**
Unemployed	-0.026 (0.070)	0.027 (0.067)	-0.053 (0.097)
Spouse full-time Employed	0.093 (0.047)**	0.086 (0.065)	0.007 (0.080)
Female spouse full-Time employed	0.467 (0.062)***	0.148 (0.078)*	0.319 (0.100)***
Spouse data missing	0.298 (0.053)***	-0.147 (0.123)	0.445 (0.134)***
Cohabitation	0.281 (0.061)***	-0.169 (0.104)	0.450 (0.121)***
Child in household	0.077 (0.042)*	-0.222 (0.053)***	0.299 (0.068)***
Single parent family	0.199 (0.097)**	0.036 (0.137)	0.163 (0.168)
Child data missing	0.553 (0.045)***	0.976 (0.064)***	-0.423 (0.078)***
Household income	0.067 (0.006)***	0.062 (0.008)***	0.005 (0.010)
HH income missing	-0.179 (0.034)***	0.222 (0.051)***	-0.401 (0.061)***
Low social class	0.039 (0.033)	-0.520 (0.041)***	0.559 (0.053)***
Class data missing	0.280 (0.039)***	0.168 (0.077)**	0.112 (0.086)
Highly religious	-0.689 (0.039)***	-0.482 (0.055)***	-0.207 (0.067)***
Observations	20145	10087	
Pseudo R2	0.08	0.05	
log-lklhd	-28542.17	-14809.57	

Source: ISSP 1998, author's own calculations. Note: standard errors in parentheses; * significant at 10 per cent; ** significant at 5 per cent; *** significant at 1 per cent, light grey colour means that impact is significantly more pronounced in other OECD countries, dark grey colour means that characteristic is significantly more important in transition countries.

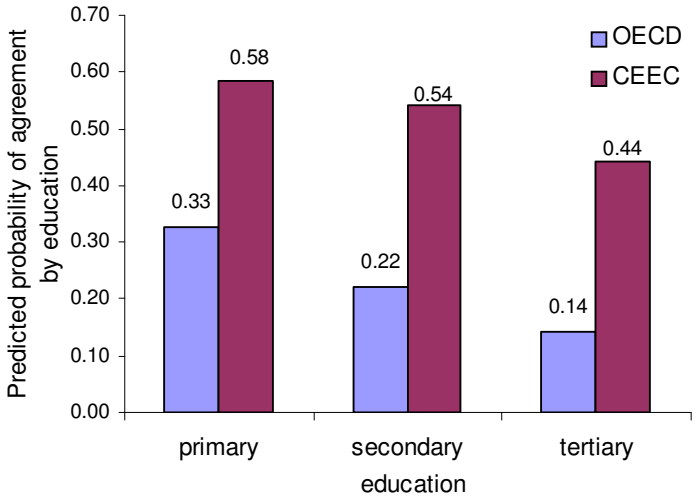
Besides gender, Table 5 shows that also age has a significantly lower impact on the abandonment of traditional values in the East than in the West. Since age cohort differences can give some indices on changes in gender attitudes we will discuss this impact in Section 6 in detail.

Compared to being single, being married leads to a higher adherence to traditional values in the East , while we cannot find a similar effect in the West. Regional differences are significant at the 1 percent level.

The most important regional difference in determinants turns out once we focus on education. Respondents with secondary and tertiary education disagree significantly more with the gender stereotype in both regions than the benchmark respondent with primary education. However, education matters much more in magnitude of impact in OECD than in former communist countries at a significance level of 1 percent. The absolute difference between a person with primary and secondary education is three times higher and compared to a person with tertiary education twice as high in the West than in the East.

As an aid for estimating the lower impact of education on traditional values in the East, Figure 3 graphs the predicted probabilities for agreeing with the gender stereotype by educational level for both regions based on the regression model applied for Table 6. Again, we set all other independent variables to the regional mean.

Figure 3: Predicted probability of respondents to agree with patriarchal gender stereotype by education and region



Source: ISSP 1998, author's calculations
Note: Calculations are based on regional means for demographic variables and on model 1 and 2 in Table 5. Agreement refers to answer categories 'agree' and 'strongly agree'.

The predicted probabilities for respondents with secondary education in the East is 0.54 and for respondents in the West is 0.22 for agreeing with the patriarchal gender norms on work. Both figures are very similar to the average agreement of the whole population in both regions once controlled for respondents' background characteristics (given in Table 4)[17]. How does agreement change for respondents with primary and tertiary education in the regions? 11 percent or one third more of people with primary education stick to traditional gender norms than people in secondary education in the West. This difference is high compared with former communist countries, where agreement differs just with 4 percent point between primary and secondary educated respondents. The same regional pattern can be found for tertiary education: agreement shrinks with about one third for the West but only 10 percent in the East.

We find a reverse effect for respondents who group themselves in the lower or working class. While this dummy variable is not correlated with a dummy on secondary education, the correlation is still moderate with a coefficient of -0.23 regarding tertiary education (Table A4). In the West, class attribution does not explain the degree of traditional gender values once controlled for socio-economic status. On the contrary, people in the lower class in the East believe more in traditional gender norms. The size of the 'effect' is as big in magnitude as that of tertiary education or that of housewives or -men.

Retired people have – in addition to the already captured age 'effect' - a greater adherence and single parents a smaller adherence to patriarchal values in the West while there are no sizable effects in the East. In addition, cohabitation leads to significantly higher liberal gender attitudes in the West, but is not effecting gender stereotypes in the East. Differences between both regions are significant at the one percent level. This confirms results of Batalova and Cohen (2002) indicating that cohabiting couples share housework more equally than married couples even though this effect could not be found as pronounced in several CEE countries.

For the East we find that respondents with children in the household are more traditional than other respondents but there is no similar pattern for the West.

In both regions, the interaction variable of males and full-time working spouses indicates male respondents' lower adherence to gender stereotypes once their

[17] In Figure 4 we set the independent variables to the regional mean, in Table 4 it was set to the whole population mean.

spouse if full-time working. However, the effect is marginal in transition countries but significantly bigger in the West and almost as important in the size of the effect as a change from primary to secondary education. Further differences between genders will be discussed in the next section.

Taken together, we find three main results by comparing the impact of individual characteristics on gender attitudes between regions. First, in both regions individual characteristics impact generally in the same direction on the degree of tradition gender attitudes. However, there are some interesting differences in the explanatory power and size of those effects. This can be seen second in the fact that different individual backgrounds gain importance in the regions. Lower social class, children in the household and being married leads to more traditional values in the East but have rather no importance in the West. However, in the West single parenthood and cohabitation have some impact on gender attitudes but there is no similarly significant pattern in the East. Third, the size of the impact seems to differ between regions. Without taking into account significant differences for variables that just control for missing values there is a considerable higher number of 'light grey' fields, indicating that in general individual background factors have a bigger sizeable effect in the West than in the East. Especially education, retirement, female full-time employment and age gain a much higher explanatory power for differences in gender attitudes in the West than in the East.

5.2 Gender differences

Results of Section 4 revealed that gender differences in agreement with gender stereotypes on work are anything but substantial and seem not to be related to the degree of patriarchal attitudes in the society. In Section 5.2 the interaction variable of gender and full-time employment was significant indicating that there is a different impact of individual characteristics on attitudes by gender. This Sub-Section aims at examining these variations by running ordered logit regressions separately for men and female in the East and the West. Table 7 shows the results and presents for each region the gender difference of the β-coefficient with the standard error. Light grey fields indicate that males with the specific characteristic are more traditional than their female counterparts (negative values), while dark grey fields show a greater female adherence to gender inequality (positive value). Table 8 presents predicted

probabilities for some regional population characteristics by gender based on regression model results given in Table 7.

Table 7: Determinants by region and gender

	OECD		Difference	CEEC		Difference
	male	female	Male-female	male	female	Male-female
Age	-0.028	-0.022	-0.006	-0.016	-0.013	-0.003
	(0.002)***	(0.002)***	(0.003)**	(0.003)***	(0.003)***	(0.004)
Divorced/separated	0.142	0.061	0.081	0.094	-0.271	0.365
	(0.093)	(0.083)	(0.125)	(0.136)	(0.113)**	(0.177)***
Widow	-0.229	-0.193	-0.036	-0.068	-0.281	0.213
	(0.128)*	(0.087)**	(0.155)	(0.177)	(0.120)**	(0.214)
Married	0.186	0.109	0.077	-0.171	-0.345	0.174
	(0.082)**	(0.080)	(0.115)	(0.202)	(0.173)**	(0.266)
Household size	-0.117	-0.053	-0.064	-0.074	-0.096	0.022
	(0.018)***	(0.017)***	(0.025)***	(0.024)***	(0.022)***	(0.033)
HH size missing	-0.491	-0.659	0.168	-0.195	-0.386	0.191
	(0.090)***	(0.088)***	(0.126)	(0.470)	(0.409)	(0.623)
Secondary education	0.594	0.500	0.094	0.166	0.182	-0.016
	(0.051)***	(0.045)***	(0.068)	(0.077)**	(0.066)***	(0.101)
Tertiary education	1.073	1.119	-0.046	0.536	0.585	-0.049
	(0.062)***	(0.060)***	(0.086)	(0.101)***	(0.089)***	(0.135)
Low social class	0.044	0.034	0.010	-0.504	-0.528	0.024
	(0.048)	(0.046)	(0.066)	(0.062)***	(0.056)***	(0.084)
Class missing	0.286	0.284	0.002	0.320	0.046	0.274
	(0.057)***	(0.052)***	(0.077)	(0.116)***	(0.102)	(0.154)
Retired	-0.032	-0.573	0.541	0.169	0.054	0.115
	(0.070)	(0.074)***	(0.102)***	(0.103)	(0.088)	(0.135)
Part-time employed	0.165	-0.328	0.493	0.200	-0.081	0.281
	(0.079)**	(0.056)***	(0.097)***	(0.139)	(0.102)	(0.172)
Housewife, -man	0.288	-0.915	1.203	-0.620	-0.547	-0.073
	(0.218)	(0.057)***	(0.225)***	(0.219)***	(0.105)***	(0.243)
Not in labour force	0.383	-0.194	0.577	0.255	-0.237	0.492
	(0.072)***	(0.071)***	(0.101)***	(0.101)**	(0.083)***	(0.131)***
Unemployed	0.054	-0.179	0.233	0.066	-0.008	0.074
	(0.098)	(0.102)*	(0.141)	(0.098)	(0.092)	(0.134)
Spouse full-time employed	0.620	0.007	0.613	0.277	0.074	0.203
	(0.056)***	(0.057)	(0.080)***	(0.072)***	(0.075)	(0.104)**
Spouse missing	0.306	0.267	0.039	-0.171	-0.090	-0.081
	(0.075)***	(0.077)***	(0.107)	(0.190)	(0.162)	(0.250)
Cohabitation	0.125	0.441	-0.316	-0.119	-0.223	0.104
	(0.088)	(0.086)***	(0.123)***	(0.160)	(0.137)	(0.211)
Child in household	0.097	0.114	-0.017	-0.225	-0.214	-0.011
	(0.061)	(0.059)*	(0.085)	(0.079)***	(0.072)***	(0.107)
Single parent	0.435	0.112	0.323	0.195	0.017	0.178
	(0.207)**	(0.112)	(0.235)	(0.382)	(0.149)	(0.410)
Child missing	0.528	0.599	-0.071	0.923	1.034	-0.111
	(0.064)***	(0.064)***	(0.091)	(0.095)***	(0.088)***	(0.129)
Household income	0.078	0.059	0.019	0.053	0.073	-0.020
	(0.009)***	(0.009)***	(0.013)	(0.013)***	(0.012)***	(0.018)
HH income missing	-0.188	-0.168	-0.020	0.207	0.244	-0.037
	(0.052)***	(0.045)***	(0.069)	(0.076)***	(0.069)***	(0.103)
Highly religious	-0.673	-0.710	0.037	-0.471	-0.452	-0.019
	(0.064)***	(0.050)***	(0.081)	(0.093)***	(0.068)***	(0.115)
Observations	9292	10853		4530	5557	
Pseudo R-squared	0.07	0.09		0.04	0.05	
log-lklhd	-13521.23	-14957.79		-6530.57	-8251.64	

Source: ISSP 1998

We find that 20 percent women and 26 percent men in the West agree[18] that it is women's job to look after the home and family (Table 8). Table 5 showed a value of 23 percent for the whole population once controlled for the same background characteristics. In the East 50 percent of females and 58 percent of males would probably agree with the statement that compares to 54 percent of the whole population. Compared to Figure 1 that showed results uncontrolled for respondents' characteristics gender differences appear to be about 2 percent points higher.

Table 8: Predicted probability of agreement (agree+ strongly agree) by gender and region

		Average respondent (mean population characteristics of gender and region)	30 year old respondent without spouse/partner or with partner but not full-time working	30 year old respondent with partner and both full-time employed	30 year old respondent who is housewife/man with a spouse or partner full-time employed	65 year old pensioner
West	Women	0.200	0.149	0.105	0.225	0.376
	Men	0.258	0.198	0.122	0.094	0.377
East	Women	0.501	0.454	0.422	0.556	0.550
	Men	0.577	0.539	0.483	0.636	0.625

Note: Calculations refer to population characteristics of gender of CEE or OECD countries respectively.

In how far do respondents' characteristic impact differently on women's and men's attitudes to gender inequality. In Table 7 the variable 'spouse full employed' is highly significant for men but insignificant for women in both regions.[19] If female spouses work full-time this leads to men's higher adherence to liberal gender values (compared to male respondents without a spouse or with a spouse who does not work full-time), while men's full-time work does not impact upon female spouses' attitudes. The 'effect' of females' full time work is almost three times higher in the West than in the East. If we compare an average 30 year old male respondent without a spouse or partner full-time working[20] with a 30 year old male whose partner is full time working (all other characteristics set equal), agreement with the gender stereotype shrinks by 8 percent points in the West (20 to 12 percent) and 6 points in the East (Table 8, column 2 and 3). Regional changes in results are more pronounced once we express them in percent of males' agreement. Compared to a 30 year old man without a partner working full time a man in the West with a full-time employed

[18] The calculation is based on the means of the gender and the region.
[19] The same effect was measured in Table 6 focusing on regions but using a gender interaction variable.
[20] This might be due to the fact that the respondent does not have a spouse/partner or that he has a spouse not full-time working.

spouse is about 40 percent less likely to agree with the gender stereotype, whereby it is only a 10 percent lower probability in the East.

A similar effect to that of women's full-time employment appears once we focus on people not in the labour force (without being pensioner or housewife/man) who make up about 10 percent of the sample size in both regions (Tables A2 and A3 in the Appendix). Men not working are more likely to reject patriarchal values while female counterparts show greater patriarchal values while other variables are hold constant. This pattern is very similar in both regions.

Table 5 showed that housewives and –men are more likely to show patriarchal gender attitudes. Now split up by gender Table 7 reveals, that housewives and -men show similar adherence to gender stereotypes in the East, while the regional effect is mainly driven by conservative housewives in the West. Nevertheless, sample sizes for housemen are very low[21] so that gender differences are not very reliable. The focus on female housewives can show regional differences. In the West predicted probability of agreement is twice as high for a 30 year old housewife compared to a women working fulltime both having a full-time employed partner and other characteristics set equally. We find a similar increase in percentage points but only a 30 percent higher increase in the probability of agreement of housewives in the East. (Table 8)

Part-time employment does not impact significantly on gender attitudes in the East, but the regional regression showed a significant but small relation to more traditional values in the West (Table 6). Splitting up the explanatory variable by gender shows that male part-time employees disagree with patriarchal gender attitudes while female part-time employees adhere to gender stereotypes on work in the West. Part-time working men themselves must have given up traditional values on work, while part-time working females still fit into the pattern of devoting more time to the household. However, there exists no similar pattern in the East where the opportunity of part-time employment is still quite rare[22].

While cohabitation is not significant in the East, less traditional values of cohabiting respondents is mainly due to women's greater liberal gender attitudes in the West.

[21] In OECD the sample size is 83, in CEEC 97. .
[22] Summary statistics in Tables A2 and A3 show that 12 percent of respondents in the West but only 5 percent of respondents in the East are part-time employees.

On the other hand, divorced respondents are not significantly different to singles in the West but they are more traditional in the East.[23] Surprisingly, it is mainly female divorcees who stick more to traditional gender attitudes. The magnitude of the effect is comparable to the absolute size of the β-coefficient for males with full time working spouses.

Only in the West gender differences are significant for pensioners and older people. While a rise in age increases traditional believes more for men than for women, female pensioners are more traditional than male counterparts. This effect offsets the general lower agreement on the gender stereotype for women once we focus on 65 pensioners: both male and female pensioner agree with about 38 percent with the statement. However, in the East still 7 percent less elderly women than men show preferences for gender inequality.

Taken together, if there are significant gender differences in explanatory variables they indicate females higher believes in traditional values compared to men given the average benchmark (female or male) respondent who is a full-time employed single with primary education. In addition, there are more gender differences in the impact of independent variables in the West than in the East: males not in the labour force or having a full-time employed partner show more liberal gender attitudes than their female counterparts in both regions. However, we find only in the West that retired, part-time employed men and men working at home have fewer preferences for gender inequality than women.

In addition, the magnitude of gender differences is bigger for the West than for East. This is similar to the pattern we found for regional differences. Summarising both, the regional and gender differences in the impact of explanatory values, we find that the influence of demographic factors in forming traditional values is generally lower in CEE than in OECD countries. In addition, comparing Table 7 with Table 6 we see that regional differences seem to be more important than gender differences in explaining attitudes to gender inequality. This indicates that people in transition countries seem to be more homogenous in their traditional believes.

However, are regional differences indeed as important for explaining preferences to gender inequality as their high significance given in Table 6 implies? Does a higher homogeneity in the East account indeed for the higher adherence to

[23] This might be explained by the fact that every third person in this group is separated in the West but only every sixth in the East. Separated people might be more liberal than the divorced.

gender inequality in this region? The next section aims at estimating in how far regional differences in preferences for gender inequality can be explained by regional differences in the impacts of independent variables.

5.3 Decomposition analysis

It might be that the higher traditional value orientations in the East are not so much determined by a lower impact of explanatory variables but by differing regional population characteristics. Hence, in this section we estimate the portion of the differences in the probability to agree with traditional values between CEECs and OECD that is due to i) differences in respondents' characteristics and ii) the different regional impact of determinants we examined in the previous section. Our estimation method uses the Oaxaca decomposition that is described in Sub-section 5.3.1. Results are discussed in 5.3.2.

5.3.1 Theoretical considerations

The decomposition analysis, introduced by Oaxaca (1973) and Blinder (1973) separately, offers a way of determining the extend to which any observed differences is a consequence of characteristic differences (e.g. in the West education is higher than in the East) or the consequence of a different impact of characteristics (e.g. age explains gender attitudes more in the West than in the East).

Gomulka and Stern (1990) extended the Oaxaca and Blinder method for decomposing group differences in means into an explained and residual component for group differences in probabilities for probit models.

We choose here the logit model that is based on the following function for CEE countries:

$$(1) \qquad P(\hat{\beta}^{CEEC} X_i^{CEEC}) = \frac{1}{1+\exp(-\hat{\beta}^{CEEC} X_i^{CEEC})}$$

where $P(\hat{\beta}^{CEEC} X_i^{CEEC})$ is the probability of the a person i in the CEE countries to agree or strongly agree with the gender stereotype, $\hat{\beta}^{CEEC}$ is the vector of the estimated coefficients and X_i^{CEEC} is the associated vector of characteristics like socio-economic background and gender. We fit a second logit model using the same characteristics for OECD countries.

Using equation (1) we construct the probability of acceptance for each individual separately for East and West and then average the probability for both regions. The differences in the average probabilities Pr between regions is then

(2) $$\overline{\Pr}_{CEEC} - \overline{\Pr}_{OECD} = \overline{P}(\hat{\beta}^{CEEC} X_i^{CEEC}) - \overline{P}(\hat{\beta}^{OECD} X_i^{OECD})$$

By subtracting and adding the term $\overline{P}(\hat{\beta}^{OECD} X_i^{CEEC})$ this difference (PR_{Dif}) can then be decomposed into the two components:

(3)
$$\overline{\Pr}_{CEEC} - \overline{\Pr}_{OECD} = [\overline{P}(\hat{\beta}^{CEEC} X_i^{CEEC}) - \overline{P}(\hat{\beta}^{OECD} X_i^{CEEC})] + [\overline{P}(\hat{\beta}^{OECD} X_i^{CEEC}) - \overline{P}(\hat{\beta}^{OECD} X_i^{OECD})]$$
$$Pr_{Dif} = \quad CT \quad + \quad PT$$

Hence, we make use of the OECD coefficients to predict the CEEC average probability using the CEEC characteristics. The first term in square brackets (CT) is the contribution of the coefficients and the second term (PT) is the contribution of population characteristics to the total differences in regional average probabilities.

We could construct a second decomposition for CEEC by simply adding and subtracting the term $\overline{P}(\hat{\beta}^{CEEC} X_i^{OECD})$ in (2), if we want to use CEEC coefficients to predict the OECD probabilities. However, the result of this decomposition and (3) would be very similar, since in general it does not make a great difference whether we choose CEEC coefficients for predicting OECD probabilities or OECD coefficients for determining CEEC probabilities.

Our estimation model is equal to Model 1 in Table 3 regarding the assumption on independent variables determining attitudes. However, by using a logit model, we use the binary variable as dependent variable A_i= 0 / 1 whereby A_i= 1 if respondents agree or strongly agree with the traditional statement. Otherwise we set A_i=0.

5.3.2 Results

Table 9 displays the results.[24] In OECD countries the predicted probability of agreement with traditional gender stereotypes is 0.260 and it is about twice as high with 0.534 in CEECs. Hence, in post-transition countries there is a 0.274 higher probability to agree with gender stereotypes. If the impact of determinants in CEEC were that of OECD countries the probability of agreement in post-communist

[24] There are slight differences between these and Table 4 Model 1 results even though results are based on a similar assumption of determinants of agreement (in Table 4 we used an ordered logit model while we use a logit model for the Oaxaca decomposition). In Table 4 the predicted probabilities are estimated by setting independent variables to the mean of both regions. The Oaxaca decomposition shows that in transition countries population characteristics are slightly more in favour of disagreement compared to OECD countries. Hence, taking the mean of both regions as benchmark for calculating predicted probabilities (as done in Table 4) deteriorates population characteristics assumed for CEECs and leads hence to higher agreement than just taking CEECs characteristics into account. The reverse effect regards OECD countries where agreement falls slightly compared to results based on the separate mean of both regions.

countries would be rather similar to that in OECD countries (0.256). On the other hand, if we applied the coefficients of CEECs to the sample of OECD countries, the degree of agreement in OECD countries would be slightly lower than in transition countries (0.506). Hence, it is the different impact of coefficients (CT=0.278) that explain differences between regions, whereby differing populations characteristics have a rather neglectable explanatory power (PT=-0.004).

Table 9: Decomposition analysis showing probabilities depending on regional coefficients and characteristics

	β_{OECD}	β_{CEEC}
X_{OECD}	0.260	0.506
X_{CEEC}	0.256	0.534

Source: ISSP 1998, authors' own calculations

However, results need to be viewed with some caution. Some unobserved variables not included into our model might drive results. In case we exclude a variable that is very important for explaining differences in agreement in transition but not in OECD countries results of the decomposition analysis are very likely to be different. It is very difficult to judge the inclusiveness of the model used. The low pseudo R^2 of the regression results indicates that other factors besides gender, family structure, demography, socio-economic status, employment status and religion are at work. However, results in Table 6 using the same assumption on determinants of agreement as applied in the Oaxaca decomposition analysis show consistently a greater homogeneity in transition countries. In addition, the decomposition results are very clearly indicating the high explanatory power of differing regional coefficient for tracing varying agreement between West and East.

What does this result mean in practical terms regarding the further development of liberal values in both regions? Assuming that our regression results would be in some way valid in the future, an increase of people with higher education, lower average age etc. would decrease traditional values in OECD countries significantly but not so in CEECs. Even if people are very different in their characteristics within CEECs they are much more homogenous and constant in their traditional beliefs in post-communist countries than people with different background characteristics in Western industrialized countries. Hence, while in the West traditional values are contested between different population groups, gender

stereotypes are a common and widely accepted feature among people in post-communist countries.

Given the much lower impact of individual background factors, increases of liberal gender views over time might be lower in post-communist countries. How patriarchal values might be changing by region over years will be the focus of the next section.

6 How will gender-role attitudes change over time in the East and West?

Explanations for changes of gender stereotypes over time are mainly twofold but interlinked. First, changes in attitudes might simply reflect the trend, that older, more traditional generations are replaced by younger, more egalitarian-minded ones ("cohort succession"). Hence, assuming that generational effects are the most important regarding changes in gender attitudes we measure differences in these norms by examining changes throughout age cohorts across regions. (6.1). However, the examination of age cohort effects does not take into account that there might be a deeper underlying value shift among the respective populations in form of a gradual change across all populations segments. (Rice & Coates 1995). For CEE countries an important argument in favour of this value shift might be that the impact of transition did not only change peoples' life in the economic sphere but had also a direct influence on individuals' cultural and societal norms. For catching this effect, we compare cross-sectional data collected in the ISSP waves for the rather short period from 1994 to 1998. (6.2)

6.1 Change over time estimated by different attitudes of age cohorts

In this sub-section we assume that social trends have only a marginal effect on cultural norms but that, through the socialization process, the experience of predominant conditions during the formative years of childhood and early adolescence make an indelible impression on people. (Ingelhart & Norris, 2003) Even if certain decisive events can alter gender attitudes in age cohorts we assume that most predominantly values held in later life can be attributed to experiences in early years.

Figure 4: Share of respondents agreeing (agree + strongly agree) with traditional gender roles by age cohort and region

Source: ISSP 1998
Note: OECD agreement refers to unweighted country results.

Figure 4 presents the agreement (agree + strongly agree) with the traditional gender-role statement for different age cohorts and regions. The graph does not only display the already examined higher liberal values in OECD countries given the relative low agreement in general but reveals also the much more pronounced increase in agreement with rising age in the West compared to the East. In OECD countries 40 percent more people in the oldest age cohort agree (75 + year olds) with the gender stereotype compared to the youngest cohort (18 to 24 year olds). These differences are less than 30 percent in CEECs. Hence, there is a higher consensus between age cohorts on traditional gender attitudes in the East than in the West.

As Table 6 showed, these regional differences in the impact of age on traditional value orientation are still significant if we control for background characteristics. Controlled for individuals' characteristics almost twice as many 65 year old pensioners in the West have patriarchal values on women's work compared to a 30 year old average man. On the other hand, in the East differences in preferences between both age groups are marginal (see Table 8).

However, Figures A6 and A7 in the Appendix display that transition countries are heterogeneous regarding the impact of age on traditional values.

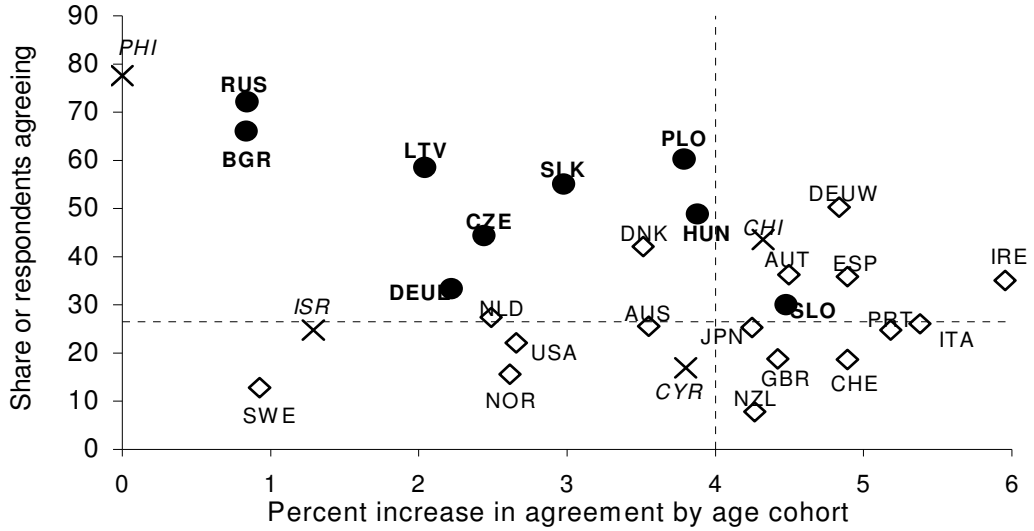
Compared to OECD countries we find similar impacts of age on consent in East-Germany, Slovenia and Poland (even though at different levels)[25].Very different to these countries is the agreement between age cohorts in Russia, Bulgaria and Latvia. In all three countries only 20 percent more elderly than youngsters agree with the tradition gender statement. Hence, expressed in absolute differences age has a twice as high impact in Western European countries (with 40 percent difference) than in these three transition countries.

Changes in age cohorts can probably reveal time trends of societal traditional value adherence. We can assume that greater variation in agreement between age groups in one country leads to a greater shift of traditional values to liberal values by cohort succession over time (since much more traditional age cohorts are taken over from younger much less traditional age cohorts). In order to estimate changes over time within countries we run an OLS regression for each country separately, where agreement (agree + strongly agree) with the gender stereotype is the dependent variable and age cohorts build the continuous independent variable. The resulting β-coefficient captures the share of people agreeing more with each age cohort (that comprises 5 years). Table A5 in the Appendix shows the regression results for the CEE and the OECD region separately. In OECD countries the constant and the β-coefficient are both about 4 percent. This means that in the first age cohort (18 to 24 year olds) about 8 percent of people are likely to agree with the gender stereotype in OECD countries, in the next age cohort (25 to 29 year olds) it is 12 percent and in the last age cohort (75 + year olds) agreement is about 52 percent – assumed that there is a linear relation between agreement and age cohorts. These results are similar to the OECD line given in Figure 4.

Figure 5 presents a similarly calculated β-coefficient for each country on the x-axis and the agreement (agree + strongly agree) for the whole society on the y-axis.

[25] This different impact of age cohorts on traditional value orientations might confirm that the discussion of gender issues on the Western political agenda influenced more pronouncedly people's value orientations over time, while the lack of a similar discussion in the East could not fortify the abandonment of tradition values in the Eastern younger age cohorts.

Figure 5: Relation between changes of traditional values by age cohorts and the percentage of people agreeing with traditional gender stereotypes



Source: ISSP 1998

Note: The y-axis shows the percentage of people in a county that agree or strongly agree with the statement that women should stay at home. The x-axis shows the country-specific slope of the curve (see Figure A6 and A7 in Appendix) regarding the increase of traditional values for each age cohort that comprises 5 years. Gridlines show the OECD average (without transition countries).

In OECD countries higher agreement with traditional values is positively correlated with a greater variation between age cohorts (correlation coefficient between societal agreement and change 0.39). Hence, in Western industrialised countries we can assume that the gap between more traditional and less traditional countries will decrease over time. The extreme case is Ireland, where an about 38 percent of agreement is likely to shrink rapidly over time, since there is about 6 percent less agreement in gender stereotypes in the younger age cohort compared to people 5 years older.

In contrast, the trend is the other way round in transition countries (correlation coefficient -0.61). These transition countries that are highly traditional in gender attitudes are also those countries where changes are most unlikely. This indicates an increasing gap between transition countries with a higher and lower average in patriarchal norms. The average agreement with the gender stereotype of 70 percent in Russia is difficult to overcome given that there is only about 1 percent point difference in agreement between each age cohort. Attitudes to gender inequality are also very probable to persist in Bulgaria and Latvia over time.

On the other hand, Poland with about an average agreement of 60 percent and Hungary with 50 percent show a relative high change in traditional values over

cohorts. This might indicate, that these countries are very likely to follow the path of greater gender equality in the future. The Czech Republic and Slovenia are situated between countries with low change over time and those with the prospect of adapting to OECD average gender attitudes. Slovenia and Eastern Germany show similar gender attitudes like those on average predominant in the OECD.

6.2 Changes of gender attitudes between 1994 and 1998

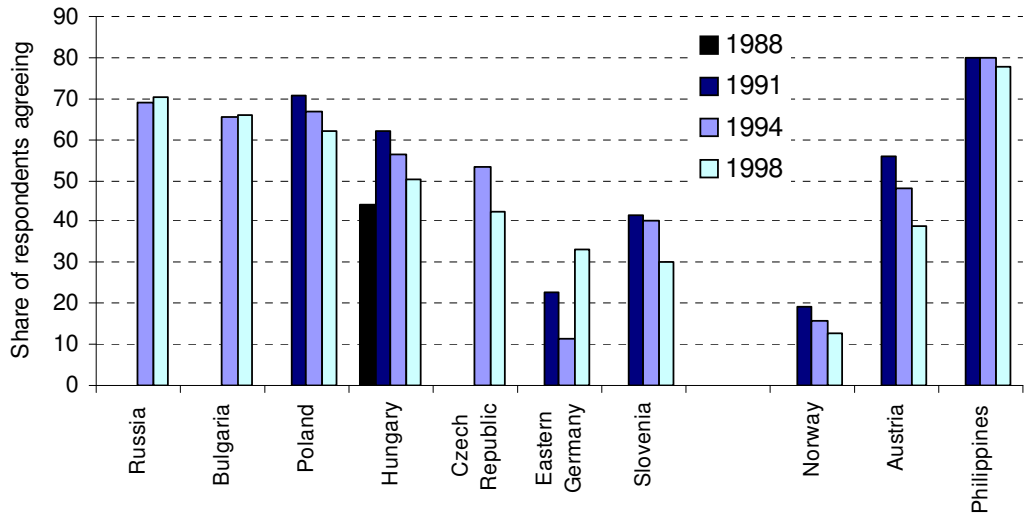
The cross-sectional focus on changes in gender attitudes cannot disentangle generational effects (cohort succession) from life-cycle effects that may alter attitudes as people move from youth to middle age and to retirement. In the following we use two waves of the ISSP survey for an alternative estimation of life-cycle effects. Given that comprehensive data is only available for 1994 and 1998 life cycle effects need to be huge for being visible in this short period of time. However, since the transition process was a decisive historical event changing people's political and economical environment dramatically societal changes might be at stake in this region in the 90s. If changes in attitudes to gender inequality are as big as changes in the economic and political sphere four years of differences might already be sufficient for showing trends.[26]

Figure 6 presents the changes of agreement (agree + strongly agree) with gender stereotypes for some CEE countries in comparison to two OECD countries with highly liberal gender attitudes (Norway) and moderate attitudes to gender inequalities (Austria) and a country with a high average consent on gender stereotypes (Philippines) between the years 1988 and 1998.

In general, countries' results on agreement changes between both years are partly similar to those discussed when we examined age cohort effects. Between 1994 and 1998 there is little change in agreement with the gender stereotype in Russia, Bulgaria and the Philippines. These are the countries in which changes in traditional values between age cohorts were very small. With the exception of Eastern Germany in all other countries attitudes to gender inequality were decreasing in the time period of four or eight years. From 1991 to 1998 greatest changes in agreement seem to appear in Austria and Hungary. Both countries were characterised with a relative high variation in gender attitudes between age cohorts (Figure 5).

[26] In addition, changes in trends measured from 1994 to 1998 are also likely to reflect the before discussed change from on age cohort to the next, since the time span of one age cohort was set to 5 years.

Figure 6: It is a husband's job to earn money and a wife's job to look after the home and family; percentage of people who agree or strongly agree by country and year



Source: ISSP 1988, 1991, 1994 and 1998. Countries are ordered first by region and second by agreement in 1998

Nevertheless, in Hungary from 1988 to 1991 and in Eastern Germany from 1994 to 1998 data suggest an increase in traditional values, that is difficult to explain.

Differences in gender attitudes over years might derive from different population characteristics between countries and years. Hence, we estimate the 'conditional' effect of the year change by applying ordered logit regression described in 4.2.1. By using a dummy variable for years (year 1994=0, year 1998=1) and interaction variables for years and regions we can compare whether agreement to the gender stereotype changed significantly between 1994 and 1998. In this analysis data refer solely to the 12 OECD and seven CEE countries that were covered in both ISSP waves.

Table 10 presents only these results important for examining changes over years[27]. Model 1 and Model 2 of Table 10 are similar to Model 1 and Model 2 in Table 3 where we examined regional differences in agreement. We added simply the year dummy and results refer now additional to the 1994 data. The magnitude of adherence to gender inequality is relatively equal between both Tables regarding CEECs (Models 1). However, once we split up transition countries[28] and Russia, we

[27] The whole regression results are displayed in the Annex in Table A8.
[28] In Table 3 we covered 8 transition countries with the dummy variable; data on Latvia and Slovakia were not available in 1994, so that Table 10 covers only 6 transition countries.

find even greater attitudes to gender inequality in Russia for both years 1994 and 1998 compared to Table 3.

Table 10: Changes of attitudes to gender inequality over years? Ordered logit

	(1)	(2)	(3)	(4)
Year 1998	0.226 (0.029)***	0.245 (0.029)***	0.244 (0.032)***	0.220 (0.032)***
Ceec	-1.131 (0.021)***		-1.102 (0.030)***	
Ceec in 1998			-0.051 (0.038)	
cee6		-1.279 (0.021)***		-1.325 (0.031)***
Russia		-2.243 (0.042)***		-2.224 (0.060)***
cee6 in 1998				0.082 (0.040)**
Russia in 1998				-0.040 (0.082)
Observations	40612	40612	40612	40612
Pseudo R-squared	0.08	0.10	0.08	0.10
log-lklhd	-59401.34	-58225.01	-59400.42	-58222.50

Source: ISSP 1994, 1998, author's own calculations
Note: Regression model similar to that given in Table 3. This table shows only the results for the year and regional variables and their interaction; see Table A8 in Appendix for full results. OECD countries refer to Australia, Germany West, UK, USA, Austria, Italy, Ireland, Netherlands, Norway, Sweden, New Zealand and Spain; CEECs are Eastern Germany, Hungary, Czech Republic, Slovenia, Poland, Bulgaria and Russia

In all models of Table 10 the year dummy shows a highly significant positive value indicating that in 1998 there is less agreement in the gender stereotype than in 1994 for all countries. This result confirms our descriptive results in Figure 6. In order to examine whether there is a different decrease in gender attitudes between regions we introduce interaction variables in Model 3 and 4. Model 3 captures time trends in CEECs and Model 4 uses a year-region interaction variable for Russia and the remaining other six transition countries.

The 'CEEC in 1998' dummy proves not to be significant, indicating that there is no noteworthy difference between OECD and transition countries in the decline of traditional values during both years (Model 3). Once we split up transition countries and Russia, also the 'Russia in 1998' dummy does not show any significant effect in time changes. However, the dummy for the remaining 6 transition countries becomes slightly significant with a positive values. Hence, there is a slight trend of an even increased abolishment of traditional values in the transition countries of Eastern Germany, Hungary, Czech Republic, Slovenia, Poland and Bulgaria once pooled together and compared to OECD countries. Nevertheless the 'effect' is rather small in

magnitude (0.082) given that it is 16 times lower than the general higher traditional agreement in traditional values in these transition (-1.325) compared to OECD countries.[29]

Taken together, results suggest that traditional values in post-communist countries will not be overcome as quickly as in Western industrialised countries. If we assume – and there is some reason to assume - that traditional gender values are decisively moulded by early adolescence experience the relation between age cohorts and agreement with gender values shows indeed that though there is a higher traditional believe in gender roles in post-transition countries this will be transformed slower into liberal beliefs than in Western industrialised countries. Hence, the gap between the East and West regarding the adherence to traditional values on women's work might even increase. However, transition countries are very heterogeneous: Changes in societies to liberal gender attitudes are much less likely in Russia, Bulgaria and Latvia where attitudes on gender inequality are very pronounced than in Poland, Slovakia and Hungary where societies are more moderate in the coherence of traditional believes. This indicates, that the gap in traditional believes between transition countries is likely to increase. However, once interested in changes within age cohorts in gender attitudes our data are limited given the short time span of four years they illuminate. Nevertheless, results show a slight but not very significant trend that in some transition countries value changes have taken place more pronounced than in Western industrialised countries. In case this effect is persistent over greater time periods it might overlap with the widening gap in traditional values between East and West forecasted by just focusing on changes across age cohorts.

7 Conclusion

Economic indicators on women's access to tertiary education, women's employment share and the gender pay gap revealed a similar level of gender equality in the labour force for East and West. This stands in contrast to the regional differences in what people actually think on women's societal role: a strikingly higher share of people in the East than in the West believe that women should be homemakers and men breadwinners. In Russia - the country with the longest history of communism - the prevalence of traditional attitudes to women's work is more than

[29] The effect vanished once we created a second dummy variable for Bulgaria and focused only on the other 5 transition countries.

twice as high as in a pooled sample of Western industrialised countries. In Sweden agreement with patriarchal values is significantly lower than in every other transition or OECD country covered by the data.

If population characteristics between East and West were similar, we would still observe a similarly high gap in gender attitudes between regions. However, different impacts of population characteristics explain the regional divergences in gender attitudes as could be shown by applying an Oaxaca decomposition analysis. This reveals that people in the East are very homogeneous in their strong patriarchal beliefs that are mainly unaffected by their socio-economic background. Patriarchal values in the West, quite the reverse, are predominantly shaped by individual background. Hence, increasing education would diminish patriarchal values substantially in the West, but would not have a great effect on societal norms in the East.

By running ordered logit regressions separately for OECD and transition countries we find a much greater impact of education, female full-time employment, gender, retirement and age shaping attitudes in the West than in the East. In addition, some different individual backgrounds gain varying importance in the regions. Single parenthood and cohabitation leads to more liberal gender attitudes only in OECD countries. On the other hand, only in former communist countries lower social class, children in the household and being married account for more traditional values.

Surprisingly, gender differences in agreement with gender stereotypes on work are anything but substantial and seem not to be related to the degree of patriarchal attitudes in the society. This proves also to be true once controlled for population characteristics. However, gender differences in determinants of attitudes are much greater in the West than in the East. Part-time employed and retired women and housewives show a significantly greater tendency to believe in patriarchal values than their male counterparts in similar position in the West. There is no comparable effect in the East. However, men whose partner is full-time working show in both regions a greater liberal tendency than women with a full-time employed partner but this effect is three times greater in the West.

Since there is a huge regional gap in patriarchal attitudes it is important to know how preferences for gender-roles will change over time. First, we assumed that changes in attitudes simply reflect the trend that older more traditional generations are replaced by younger, more egalitarian minded ones. Comparing OECD with transition

countries shows that agreement with patriarchal values is more conform between age cohorts in the East than in the West. Hence, the regional gap in patriarchal values might even increase between transition and OECD countries since liberal values are accumulating more quickly in the West than in the East. For OECD countries we find that those countries with an average high agreement with the gender stereotype show greater variation between age cohorts. This indicates that the gap between OECD countries regarding patriarchal values will decline over time. The contrary is true for transition countries. Those countries that are most in favour of gender inequality show also the highest conformity between age cohorts. The average agreement with the gender stereotype of 70 percent in Russia and Bulgaria is difficult to overcome given that there is only about 1 percent point difference in agreement between age cohorts (that comprise 5 years of age difference).

Nevertheless, the transition process might have lead to a deeper underlying value shift among the whole population. We measures this by comparing attitudes between the years 1994 to 1998. Results show a very slight trend for some transition countries (but not Russia) that value changes have taken place more pronouncedly in the East than in the West. However, the effect is very small in magnitude and not very significant. Nevertheless, if this effect is persistent over greater time periods it might diminish the widening gap between the West and East forecasted by just focusing on age cohort succession.

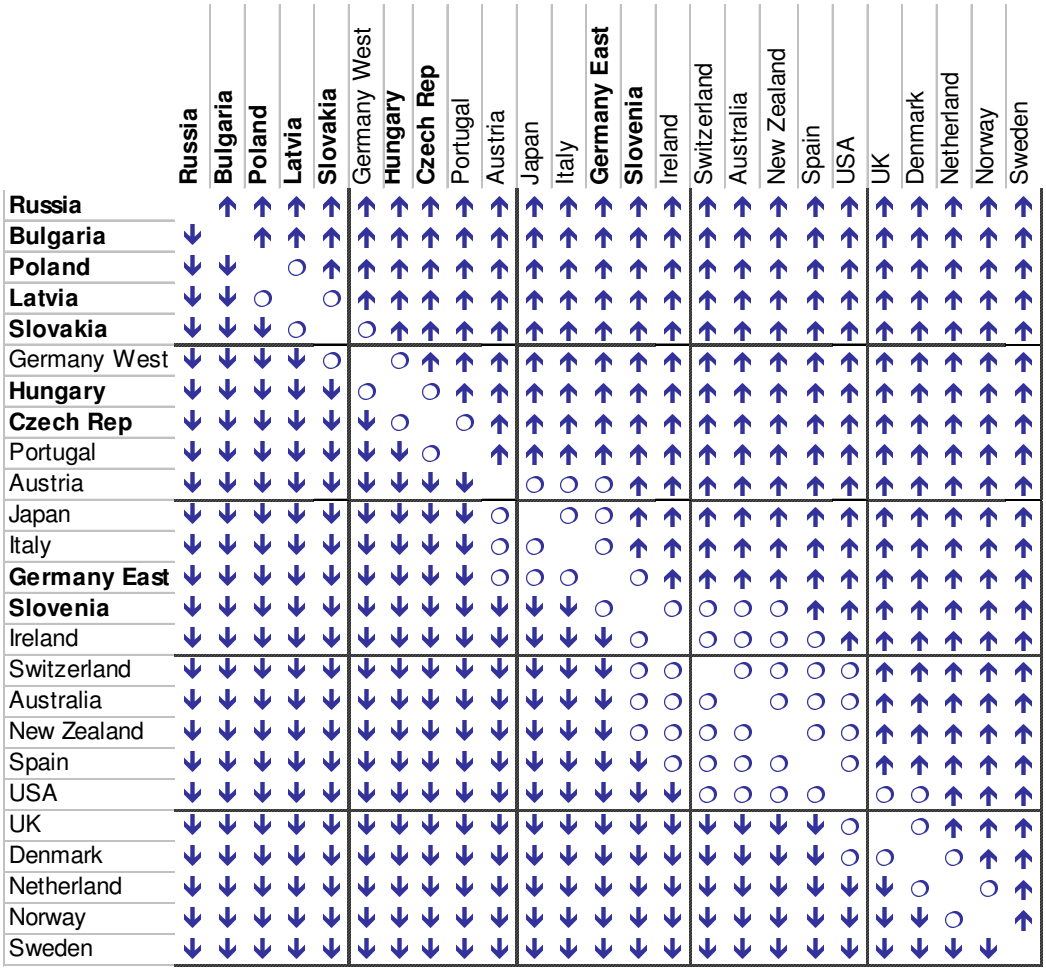
The high adherence to patriarchal values regarding women's work as well as their probable persistence over time are of a great concern for CEECs. These attitudes are likely to impact upon labour market policies and peoples (e.g. employers') behaviour. Therefore, they will probably shape women's opportunities in labour market. Hence it is astonishing, that the high patriarchal attitudes to women's work cannot be revealed once focusing on economic indicators. One reason might be that economic factors discussed do not capture the already existing gap between East and West in gender equality in the labour market that the analysis of attitudes revealed. Another explanation is, that economic indicators show still the inherited 'gender equality' in the labour market having been forced upon the society by the communist grip. In this case, societal agreement on patriarchal values is very likely to change labour market structures and decrease women's opportunities in transitional labour markets over time.

Appendix

Table A1: Response rate, field work and sample size of ISSP 1998

Country	Response rate in percent	Sample size	Field work	Sample
Austria	60.7	1002	Face-to-face	Stratified multi-stage random sample
Australia	Na	1310	Na	Na
Bulgaria	94.1	1102	Face-to-face	Two stage randomised clustered sample
Canada	29.1	974	Self-completion Mail, one reminder	Stratified random sample
Czech Republic	39.6	1223	Face-to-face	Three stage random stratified sample
Denmark	64.0	1114	Face-to-face	Stratified random sample
France	10.3	1133	Mail, no reminder	Stratified random sample
Germany West	60.1	1000	Face-to-face + self-completion questionnaire	Multistage random sample
Germany East	66.0	1006		
Hungary	52.2	1000	Face-to-face	Three stage random stratified sample
Ireland	Na	1010	Na	Na
Italy	73.7	1369	Face-to-face	Na
Japan	80.4	1368	Self-completion	Two-stage stratified random sample
Latvia	83.4	1200	Face-to-face	Multi-stage stratified sample
Netherlands	96.1	2020	Face-to-face	Random sample
New Zealand	64.9	998	Mail survey with four waves	Random sample
Norway	61.6	1532	Mail-survey, one reminder, two follow ups	Stratified random sample
Poland	67.2	1147	Face-to-face	Multi stage random sample
Portugal	79.7	1201	Face-to-face	Random sample
Russia	52.9	1703	Face-to-face	Multi-stage stratified random sample
Slovenia	35.3	1006	Face-to-face	Stratified random sample
Slovakia	Na	1284	Face-to-face	Stratified random sample
Spain	96.0	2488	Face-to-face	Stratified random sample
Sweden	59.7	1189	Postal survey with two reminders	Stratified random sample
Switzerland	Na	1204	Telephone interviews	Random sample
UK merged	45.3	804	Face-to-face + self-completion questionnaire	Multi-stage random sample
Great Britain				
Northern Ireland	Na	812		Na
USA	68.6	1284	Face-to-face	Multistage probability sample

Table A2: Multiple comparisons of agreement (strongly agree and agree) with statement between countries



Note: Refers to significance at 1 percent level. Without Bonferroni adjustment.

❍not statistically significant difference
🡻country in row significantly smaller agreement with gender stereotype than country in column
🡹country in row significantly higher agreement with gender stereotype than country in column

Table A3a: Summary statistics for OECD based on ISSP 1998

Variable	Obs	Mean	Std. Dev.	Min	Max
Gender stereotype	21040	3.500	1.338	1	5
Female	21320	0.534	0.499	0	1
Age	21291	45.931	17.356	16	95
Divorced/separated	21248	0.069	0.254	0	1
Widow	21248	0.074	0.262	0	1
Married	21248	0.605	0.489	0	1
Household size	21344	2.956	1.451	1	13
HH size missing	21344	0.069	0.253	0	1
Secondary education	21255	0.522	0.500	0	1
Tertiary education	21255	0.217	0.412	0	1
Retired	21220	0.180	0.384	0	1
Part-time employed	21220	0.125	0.330	0	1
Housewife, - men	21220	0.133	0.339	0	1
Not in labour force	21220	0.098	0.297	0	1
Unemployed	21220	0.040	0.196	0	1
Spouse full employed	21344	0.286	0.452	0	1
Female spouse full emp.	21320	0.091	0.288	0	1
Spouse missing	21344	0.428	0.495	0	1
Cohabitation	21344	0.066	0.248	0	1
Child in household	21344	0.301	0.459	0	1
Single parent	21344	0.023	0.149	0	1
Child missing	21344	0.194	0.395	0	1
Household income	21344	5.035	2.575	1	10
HH income missing	21344	0.190	0.393	0	1
Low social class	21344	0.252	0.434	0	1
Class missing	21344	0.195	0.396	0	1
Highly religious	20705	0.132	0.338	0	1

Table A3b: Summary statistics for CEEC based on ISSP 1998

Variable	Obs	Mean	Std. Dev.	Min	Max
Gender stereotype	10471	2.552	1.287	1	5
Female	10672	0.534	0.499	0	1
Age	10660	44.568	16.963	16	92
Divorced/separated	10665	0.085	0.279	0	1
Widow	10665	0.109	0.312	0	1
Married	10665	0.604	0.489	0	1
Household size	10672	3.120	1.531	1	15
HH size missing	10672	0.004	0.059	0	1
Secondary education	10655	0.611	0.488	0	1
Tertiary education	10655	0.161	0.368	0	1
Retired	10646	0.228	0.420	0	1
Part-time employed	10646	0.053	0.224	0	1
Housewife, - men	10646	0.044	0.206	0	1
Not in labour force	10646	0.116	0.320	0	1
Unemployed	10646	0.097	0.296	0	1
Spouse full employed	10672	0.339	0.473	0	1
Female spouse full emp.	10672	0.143	0.350	0	1
Spouse missing	10672	0.357	0.479	0	1
Cohabitation	10672	0.058	0.233	0	1
Child in household	10672	0.360	0.480	0	1
Single parent	10672	0.021	0.143	0	1
Child missing	10672	0.100	0.300	0	1
Household income	10672	5.252	2.579	1	10
HH income missing	10672	0.165	0.371	0	1
Low social class	10672	0.433	0.495	0	1
Class missing	10672	0.070	0.255	0	1
Highly religious	10305	0.133	0.339	0	1

Table A4: correlation matrix

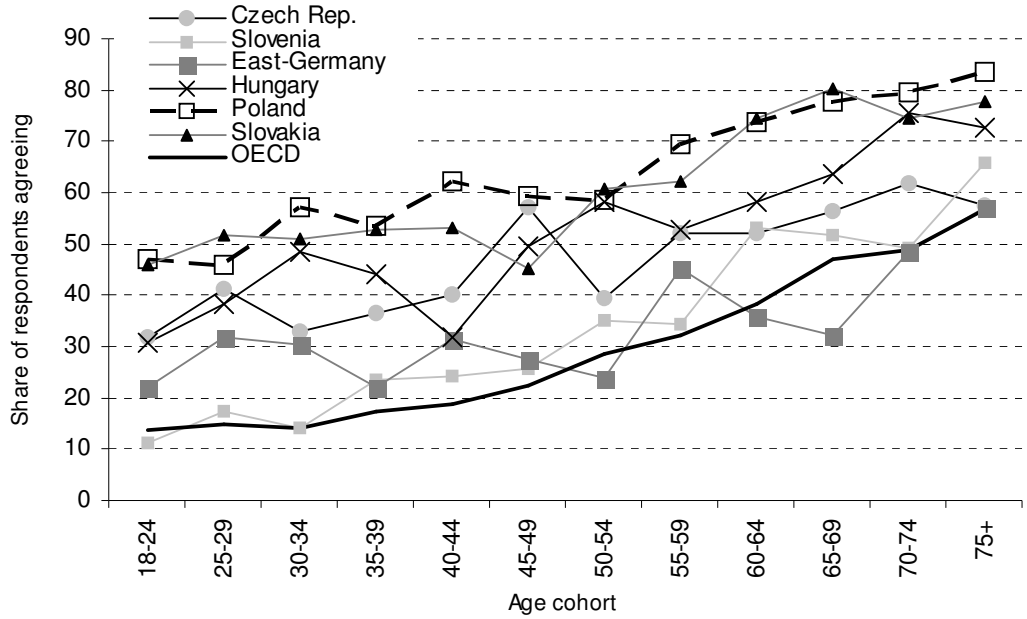
	Female	age	HH size	Secondary	Tertiary	retired	Part-empl.	House wife	Not labour	Unemployed	Spouse empl.	Female s e	Child HH	HH income	Low class	religious
femaler	1															
Age	0.013	1														
HH size	-0.016	-0.318	1													
secondary	-0.018	-0.196	0.072	1												
Tertiary	-0.025	-0.109	-0.020	-0.564	1											
Retired	-0.023	0.642	-0.277	-0.142	-0.096	1										
Part-empl.	0.126	-0.093	0.049	0.012	0.049	-0.162	1									
Housewife	0.303	0.031	0.114	-0.011	-0.110	-0.170	-0.123	1								
Not labour	0.024	-0.202	0.024	0.005	0.023	-0.158	-0.115	-0.121	1							
Unemploy	-0.015	-0.118	0.048	0.037	-0.048	-0.116	-0.084	-0.088	-0.082	1						
Spouse empl.	0.171	-0.153	0.187	0.069	0.061	-0.253	0.055	0.110	-0.123	-0.017	1					
Female s e	-0.361	-0.028	0.064	0.034	0.058	-0.115	-0.076	-0.115	-0.082	-0.020	0.515	1				
Child HH	0.043	-0.305	0.518	0.076	-0.013	-0.275	0.065	0.097	-0.030	0.014	0.226	0.075	1			
HH income	-0.085	-0.176	0.235	0.025	0.214	-0.207	0.019	-0.075	-0.066	-0.089	0.287	0.199	0.132	1		
Low class	-0.021	0.057	0.044	0.038	-0.229	0.056	-0.038	-0.005	-0.039	0.080	-0.035	-0.009	0.026	-0.207	1	
religious	0.072	0.126	0.016	-0.072	-0.019	0.081	-0.021	0.074	0.010	-0.019	-0.043	-0.041	-0.002	-0.086	0.047	1

Table A5: Slopes of agreement by age cohort in respective countries

	slope	s.e.	const	s.e.
Slovenia	4.48	0.42	4.42	2.78
Hungary	3.88	0.45	23.46	3.43
Poland	3.79	0.43	38.75	2.98
Slovakia	2.98	0.44	41.55	2.41
Czech Republic	2.44	0.42	28.18	2.84
Germany East	2.22	0.44	19.04	3.21
Latvia	2.04	0.45	47.84	2.75
Bulgaria	0.84	0.43	60.91	3.04
Russia	0.84	0.36	65.89	2.23
OECD	3.97	0.09	3.46	0.59

Note: Figures refer to Figure 6 and are ordered by the increase of traditional values by older age cohorts. Results can be interpreted as follows: in OECD countries agreement increases for about 4 percent with each older age cohort that comprises 5 years.

Figures A6 and A7: Agreement with traditional gender roles by age cohort and country[30]



Source: ISSP 1998
Note: OECD refers to unweighted average.

[30] See Table A2 for respective values of slopes.

Table A8: Agreement with gender stereotypes by years

	(1)	(2)	(3)	(4)
Year 1998	0.226	0.245	0.244	0.220
	(0.029)***	(0.029)***	(0.032)***	(0.032)***
Ceec	-1.131		-1.102	
	(0.021)***		(0.030)***	
cee6		-1.279		-1.325
		(0.021)***		(0.031)***
Russia		-2.243		-2.224
		(0.042)***		(0.060)***
cee6 in 1998				0.082
				(0.040)**
Russia in 1998				-0.040
				(0.082)
Ceec in 1998			-0.051	
			(0.038)	
Female	0.592	0.583	0.591	0.583
	(0.025)***	(0.025)***	(0.025)***	(0.025)***
Age	-0.021	-0.023	-0.021	-0.023
	(0.001)***	(0.001)***	(0.001)***	(0.001)***
Divorced/separated	-0.109	-0.032	-0.107	-0.035
	(0.044)**	(0.044)	(0.044)**	(0.044)
Widow	-0.406	-0.306	-0.404	-0.308
	(0.049)***	(0.049)***	(0.049)***	(0.049)***
Married	0.077	0.169	0.077	0.163
	(0.044)*	(0.045)***	(0.044)*	(0.045)***
HH size	-0.087	-0.079	-0.087	-0.079
	(0.008)***	(0.008)***	(0.008)***	(0.008)***
HH size missing	-0.126	-0.221	-0.125	-0.221
	(0.042)***	(0.042)***	(0.042)***	(0.042)***
Secondary edu.	0.383	0.395	0.383	0.396
	(0.023)***	(0.024)***	(0.023)***	(0.024)***
Tertiary edu.	0.947	0.992	0.946	0.991
	(0.030)***	(0.030)***	(0.030)***	(0.030)***
Low social class	-0.064	-0.078	-0.064	-0.079
	(0.022)***	(0.022)***	(0.022)***	(0.022)***
Class missing	0.158	0.080	0.154	0.086
	(0.026)***	(0.026)***	(0.026)***	(0.026)***
Retired	-0.155	-0.202	-0.157	-0.203
	(0.033)***	(0.033)***	(0.033)***	(0.033)***
Part-time	-0.004	-0.015	-0.003	-0.016
employed	(0.034)	(0.034)	(0.034)	(0.034)
Housewife/man	-0.682	-0.656	-0.681	-0.658
	(0.035)***	(0.035)***	(0.035)***	(0.035)***
Not in labour	-0.027	0.046	-0.025	0.047
force	(0.037)	(0.037)	(0.037)	(0.037)
Unemployed	0.000	-0.137	0.003	-0.138
	(0.042)	(0.042)***	(0.042)	(0.042)***
Spouse full	0.067	0.063	0.067	0.062
employed	(0.032)**	(0.032)**	(0.032)**	(0.032)**
Female spouse	0.329	0.322	0.328	0.323
Full employed	(0.040)***	(0.040)***	(0.040)***	(0.040)***
Spouse missing	0.396	0.444	0.395	0.438
	(0.039)***	(0.040)***	(0.039)***	(0.040)***
Cohabitation	0.391	0.359	0.389	0.364
	(0.034)***	(0.034)***	(0.034)***	(0.034)***
Child in HH	-0.008	-0.016	-0.008	-0.014
	(0.031)	(0.031)	(0.031)	(0.031)
Single parent	0.233	0.177	0.233	0.179
	(0.078)***	(0.078)**	(0.078)***	(0.078)**
Child missing	0.416	0.424	0.414	0.424
	(0.028)***	(0.028)***	(0.028)***	(0.029)***
HH income	0.068	0.060	0.068	0.059
	(0.004)***	(0.004)***	(0.004)***	(0.004)***
HH income miss	-0.027	-0.015	-0.028	-0.014
	(0.024)	(0.024)	(0.024)	(0.024)
Highly religious	-0.185	-0.154	-0.187	-0.153
	(0.024)***	(0.024)***	(0.024)***	(0.024)***
Observations	40612	40612	40612	40612
Pseudo R-squared	0.08	0.10	0.08	0.10
log-lklhd	-59401.34	-58225.01	-59400.42	-58222.50

Source: ISSP 1998 and 1994. Note: Standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%

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