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**Preferences for Inequality:  
East vs. West**

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## Abstract

Do preferences for income inequality differ systematically between the post-socialist countries of Central and Eastern Europe and the Western established market economies? This paper analyses 1999 data from a large international survey to address this question. In particular, we examine whether attitudes to inequality differ between East and West even after the ‘conventional’ determinants of attitudes are controlled for. Results suggest that this is indeed the case. A decade after the breakdown of communism, people in transition countries are indeed significantly more “egalitarian” than those living in the West, in the sense that they are less willing to tolerate existing income inequalities, even after the actual level of income inequality and other determinants of attitudes are taken into account. These results do not seem to be driven by a recent change in attitudes owing to a rapid rise in inequality during transition, but rather appear to constitute an attitudinal legacy carried over from socialism. This is very likely to have important implications for the political support of reform policy, in particular for the political feasibility of future welfare state reforms in these countries.

**Keywords:** Inequality, transition countries, attitudes

JEL Classification: D30, D63, P5.

## 1. Introduction

Under the former central planning regime the countries of Central and Eastern Europe were characterised by a more “egalitarian” income distribution than western market economies (Atkinson and Micklewright, 1992), broadly in line with the underlying socialist ideology. This has changed dramatically after the onset of transition, which has sent income inequality rising much faster than in any of the established market economies during the same time period. By 1999, income inequality in the former socialist countries has caught up with – and in the CIS countries even surpassed – the average level observed in the OECD countries.<sup>1</sup> In response to this quite extraordinary phenomenon, a number of studies have recently examined its underlying causes.<sup>2</sup> However, there is relatively little research on people’s attitudes to income inequality in the transition countries.<sup>3</sup> This paper attempts to fill this gap by using 1999 data from the International Social Survey Programme (ISSP).

<sup>1</sup> See chapter 2 ‘Income inequality and child poverty’ in UNICEF (2001).

<sup>2</sup> See e.g. Milanovic (1998), Flemming and Micklewright (2000), World Bank (2000).

<sup>3</sup> A partial exception is Corneo and Grüner (2000), who use a similar approach to ours, looking at determinants of attitudes to redistribution in a set of countries including some transition countries. Their data, however, is taken from the 1992 wave of the International Social Survey Programme (ISSP), which is only shortly after the start of transition. Other studies have examined ISSP data from a more sociological perspective (see Toš et al. (2000)).

The main purpose of the paper is to assess whether ten years after the breakdown of the communist system attitudes to inequality are significantly different in East vs. West even after the “conventional” determinants of attitudes are controlled for. Should this be the case, in the sense that people living in the East are less willing to tolerate the current income differences compared to people in the West, then there would be reason to conclude that this constitutes an attitudinal legacy left over from the more egalitarian socialist ideology. If so, this will have a number of implications, for instance concerning the political feasibility of badly needed welfare state reforms in the Central and Eastern European countries CEECs.<sup>4</sup>

Apart from providing an answer to the above very specific question, the paper also makes a contribution to the empirical literature on the determinants of attitudes to inequality in general. To the best of our knowledge the survey used for the analysis extends over the largest number of countries hitherto examined in any of the previous studies in this field of research. This allows us to test the theoretical hypotheses derived in the literature in a broader cross-country setting.

Results suggest that a decade after the breakdown of communism, people in transition countries are indeed significantly more “egalitarian” than those living in the West, in the sense that they are less willing to tolerate existing income inequalities, even after the actual level of income inequality and other “conventional” determinants of attitudes are controlled for. This is very likely to have important implications for the political support of reform policy, and in particular for the political feasibility of future welfare state reforms in these countries.

The remainder of the paper is structured as follows: Section 2 derives the hypotheses to be tested, Section 3 describes the data used, Section 4 presents the results, and Section 5 concludes.

## **2. Determinants of Attitudes to Inequality – Theoretical Considerations**

What determines an individual’s attitudes to current income differences? First of all, the individual’s own income position should play a role in that the rich should be expected to tolerate existing income differences to a greater extent than the poor (and therefore would not favour a reduction thereof, which would affect their own position). This is a straightforward application of the standard economic public choice argument of the self-interested median voter hypothesis (see e.g. Romer, 1975, Meltzer and Richards, 1981).

<sup>4</sup> On the urgent need for reforms of the welfare states in the CEECs, see e.g. Barr (2001).

However, the income hypothesis may well be too simplifying. In evaluating income differences and in assessing whether government should reduce them, people do not only take the status quo into account, but also consider expectations about their future welfare. Currently poor people who view themselves on a rising trajectory may well favour the current extent of income inequality (and likewise oppose redistribution), because they soon expect themselves to be further up the income ladder (and would in the future eventually have to pay for the government's redistributive activities). This mechanism may also be at work in the reverse direction, i.e. if the currently rich do not tolerate current income differences and favour redistribution because they expect to be poor in the near future.

Hirschman (1973) has coined the term “tunnel effect” to describe this phenomenon, which can help explain why rising inequality might be tolerated in rapidly developing countries. It can also explain why some currently poor people resist lasting redistributions, and hence why we do not see more pressure for redistribution in democracies where (given that income distribution is skewed) the median voter will have an income below the mean. A formal model rationalising such behaviour has been developed by Bénabou and Ok (2001). Assuming that redistributive policies cannot be changed too frequently, they show that there can be a range of individuals with income below the mean who oppose such policies because they rationally expect to be above the mean in the future, and the mass of people who oppose redistribution can be a majority in the population. Bénabou and Ok have termed their theory the “prospect for upward mobility hypothesis” (POUM).

In forming their expectations about future individual mobility, people may be guided by their own past economic mobility experience and/or by the general mobility pattern in society (Alesina and La Ferrara, 2001). Following the model by Piketty (1995), one's own mobility experience also influences attitudes to inequality by updating the individual's beliefs about the incentive costs of redistribution. This is based on the idea that people have different views about inequality and redistribution because they have different beliefs about the costs of redistribution, and that these beliefs are determined by individual economic mobility experience. One surprising key result of the model is that in equilibrium high income agents tend to believe more in effort and therefore to favour less redistribution, even in the case where nobody is selfish and everybody has the same social objective. That is, according to this model the alleged effect of income on attitudes is spurious, as it is mediated by endogenous beliefs about effort.<sup>5</sup>

Whether beliefs about the incentive costs of “too small” income differences and of redistribution are or are not determined by mobility experience, the acceptance of current income differences hinges to a large

<sup>5</sup> For an empirical confirmation of the model see e.g. Piketty (1996, 1999).

extent upon what people perceive as the main cause for the existing income differences. In case they are considered to be the result of people's hard work and effort, people would tend to consider existing income inequality as justified, on ethical and/or economic grounds (see Corneo and Grüner, 2000). To the extent that the "moral" entitlement to one's income is stronger if his or her income was generated by factors the individual is entirely responsible for, the importance of personal hard work may justify income inequality. Conversely, the importance for income generation of factors which lie beyond an individual's control may legitimate the government's attempt to reduce inequality (Roemer, 1996 ch. 8). From an economic efficiency perspective, this hypothesis may also be justified, because – following again Piketty (1995) – if hard work is mainly responsible for actual income generation, then one expects the incentive costs of redistributive taxation to be high. This may lead one to oppose redistribution because society's aggregate income shrinks.

Somewhat surprisingly, previous studies on the determinants of attitudes to inequality or governmental redistribution have not taken into account the potential influence of existing income differences on people's attitudes to them. There are, however, reasons to believe that attitudes to inequality are likely to be influenced by the individual's perception of *actual* income inequality, even after conditioning on the individual's income position. Part of the aversion to inequality may therefore be driven by something other than pure self-interest. This could be because inequality (which is often associated with high poverty rates) may be considered as a social "evil", so, that irrespective of the individual's income position, people will tend to dislike higher levels of inequality. However, self-interest may still explain such a relationship, given that inequality is known to breed crime and to threaten property rights (Alesina, Di Tella and MacCulloch, 2001).

On top of these "conventional" determinants of attitudes, most of which have been discussed and tested for in previous studies in a single-country or (a smaller) multi-country context (see e.g. Ravallion and Lokshin, 2000, Alesina and La Ferrara, 2001, Corneo and Grüner, 2000), it is our particular interest to examine if – ten years after the breakdown of communism – the post-socialist countries are still influenced by the "egalitarian" legacy of the old socialist days.<sup>6</sup> And why should this be the case, given that in terms of structural economic indicators at least the advanced transition countries are no longer recognisably different from "normal" countries at similar development levels?<sup>7</sup>

According to sociological theories of attitude formation, people's attitudes to inequality are not the product of an economic-rational analysis of their own

<sup>6</sup> Corneo and Grüner (2000) find evidence for this for the year 1992 and for a somewhat smaller sample of countries.

<sup>7</sup> See Gros and Suhrcke (2000).

situation, but are socially and politically constructed world-views. If so, then there is ample reason to suppose that people in transition countries and in the West might have differing world-views on a wide range of subjects, including inequality. Andreß and Heien (1999) suggest that attitudes can be the product of socialisation in a specific type of welfare regime (“regime-specific socialisation”). Through everyday confrontation with a regime’s institutions and structures as well as its “dominant welfare state ideology” people are assumed to absorb at least part of this ideology. This does not imply a strictly uniform socialisation (Wegener and Liebig, 1995), but on average people socialised under Regime Type A may be expected to exhibit attitudes that are significantly different from those of people who are socialised under Regime Type B. Moreover, regime-specific attitudes which have been built up over perhaps decades are likely to remain relatively stable over time.<sup>8</sup> According to this hypothesis, therefore, one might still expect to find a significant degree of support for the egalitarian properties of the communist system, even after ten years of transformation towards capitalism, simply because many people were used to living under relatively egalitarian conditions during the communist period.<sup>9</sup>

In sum, theory suggests the following – not necessarily mutually exclusive – possible determinants of attitudes to inequality:

- a) Individual’s current income position
- b) Individual’s expected future income position
- c) Individual’s mobility experience
- d) Perception of determinants of income generation (“achievement vs. ascription”)
- e) Perception of actual income inequality in society
- f) Legacy of communist ideology

In the rest of this paper we test the significance of these determinants.

<sup>8</sup> See also Delhey (1999).

<sup>9</sup> See Atkinson and Micklewright (1992) for an encompassing analysis of income inequality in central planning times.



### 3. Data

The data used to measure attitudes to inequality and redistribution is taken from the 1999 “Social Inequality III” module of the International Social Survey Program (ISSP). The survey covers 23 countries, including 13 market economies, 7 former socialist countries and 3 “other” countries. Table 1 provides the list of countries included in the survey up to September 2001. For each country a representative sample of respondents was surveyed (see Table A1 for the national sample sizes).

Table 1: *Countries included in the survey*

<b>OECD</b>	<b>Transition countries</b>	<b>Other</b>
Austria	Bulgaria	Chile
Canada	Czech Rep.	Israel
France	Hungary	Philippines
Germany	Latvia	
Japan	Poland	
Netherlands	Russia	
New Zealand	Slovenia	
Norway	<i>(East Germany)</i>	
Portugal		
Spain		
Sweden		
Switzerland		
UK		
<i>(West Germany)</i>		

*Source:* ISSP (1999).

The group of market economies comprises a very diverse set of countries with markedly different welfare-system histories that may well have shaped their citizens’ attitudes to egalitarian ideas. France and Portugal for instance are very likely to display very different attitudes to the UK (Andreß and Heien, 1999). Although the group of seven formerly socialist countries excludes most of the poorer and very unequal countries of the former Soviet Union, the simultaneous presence of countries where transition is probably most advanced (Czech Republic, Hungary, Poland, Latvia, Slovenia), the somewhat less successful reformers (Bulgaria and Romania) and the unsuccessful reformer Russia, still leaves us with a sufficiently heterogeneous sample of transition countries.

The ISSP 1999 module includes a range of questions more or less broadly relating to the issue of inequality.<sup>10</sup> There are also a number of questions on

<sup>10</sup> For an analysis of a larger set of questions from ISSP 1999, see Redmond et al. (2001).

demographic and household characteristics, which will serve as useful control variables in the regressions below.<sup>11</sup> To capture people's attitudes to inequality, i.e. the LHS variable in the regressions, we have selected the answers to the following question.

Statement asked of respondents	Response categories and coding
'Differences in income are too large in your country'	1 = 'Strongly agree' 2 = 'Agree' 3 = 'Neither agree nor disagree' 4 = 'Disagree' 5 = 'Strongly disagree'

This question captures directly the extent to which people do or do not tolerate current income differences in their country. A further, complementary interpretation is that the answers indirectly capture the degree to which people desire a reduction in income inequality, most probably to be achieved through governmental redistribution. This is confirmed by cross-tabulations with another question in the survey, in which respondents are asked to express their agreement or disagreement with the statement, "It is the responsibility of government to reduce differences in incomes between people with high and low incomes". 86 per cent of those who "strongly agree" that income differences are too large, also "strongly agree" or "agree" that government should reduce income differences. Nevertheless, we favoured the question we have selected, because it unequivocally focuses on the post-tax/transfer income differences (i.e. the current income distribution), while the alternative question leaves it up to the respondent to decide whether he or she is referring to the pre- or post-tax/transfer distribution. Furthermore, the way in which the alternative question is posed does not refer explicitly to the respondent's country of residence.<sup>12</sup>

It is also important to note that – as applies to all international surveys of this sort – language differences might restrict cross-country comparability of the answers. Depending on how the questions are actually translated in the respective country questionnaires, they may convey slightly different meanings to respondents residing in different countries. This is the main reason why we do not lay too much emphasis on the regression results below using the single country dummies (see Table 6), as they may in part reflect these language differences and not necessarily differences in attitudes.<sup>13</sup>

<sup>11</sup> See Table A2 for the variables used in the regressions and their coding and Table A3 for summary statistics of all the variables used in the regressions.

<sup>12</sup> Despite these caveats which are likely to introduce an undesirable bias into individual answers, we find qualitatively identical results (available on request) when using the alternative question as dependent variable.

<sup>13</sup> Theoretically, a country dummy can have a significant coefficient, even if people in the different countries do in principle (i.e. were there no language differences) display exactly identical attitudes

The detailed distribution of the country-specific answers to each of these questions is presented in Table 2.

Table 2: *Are income differences in your country too large: distribution of answers*

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	TOTAL
Bulgaria	84.0	12.8	1.4	0.8	0.9	100
Czech Rep	60.3	27.5	6.0	4.2	2.1	100
Hungary	68.2	25.0	3.5	2.9	0.3	100
Latvia	57.2	39.5	1.8	1.3	0.2	100
Poland	47.7	41.6	6.3	3.5	0.9	100
Russia	79.1	16.7	1.9	1.1	1.3	100
Slovenia	49.7	41.3	4.8	3.6	0.6	100
<b>Average-CEECs</b>	<b>63.8</b>	<b>29.2</b>	<b>3.7</b>	<b>2.5</b>	<b>0.9</b>	<b>100</b>
Austria	41.6	44.7	9.1	4.5	0.1	100
Canada	26.7	41.5	16.3	12.5	3.1	100
France	60.0	26.8	7.4	5.0	0.8	100
Germany	29.4	52.8	10.7	6.5	0.6	100
Great Britain	30.6	50.7	12.3	5.8	0.6	100
Japan	38.6	30.5	18.3	7.5	5.0	100
Netherlands	15.7	48.2	21.7	12.6	1.8	100
New Zealand	29.4	43.8	13.5	11.8	1.6	100
Norway	22.4	50.1	13.8	12.0	1.8	100
Portugal	82.2	13.8	1.8	1.4	0.9	100
Spain	35.9	53.4	7.4	3.1	0.3	100
Sweden	29.2	41.9	18.1	8.4	2.4	100
Switzerland	18.8	36.1	37.0	7.3	0.7	100
<b>Average-OECD</b>	<b>35.4</b>	<b>41.1</b>	<b>14.4</b>	<b>7.6</b>	<b>1.5</b>	<b>100</b>
Chile	42.6	49.7	3.3	4.4	0.1	100
Israel	53.9	36.0	3.9	5.5	0.7	100
Philippines	22.4	42.9	17.5	13.9	3.3	100

Source: ISSP (1999), own calculations.

to inequality. Suppose there are two countries A and B that differ in nothing but their language. If these language differences make the respondents in country A understand the survey-question differently from those in country B, this may be entirely absorbed by a significant country dummy coefficient. This would be most strongly so, if – were the countries not pooled – all cut-points were to be shifted in the same direction when comparing country A to country B results. Pooling would then make the dummy coefficient highly significant exclusively because of language differences.

As Table 2 shows, the majority of people in all countries of the sample agrees or strongly agrees that income differences in their country are too large.<sup>14</sup> This in itself is a very surprising result, which illustrates why inequality ought to rank high on the political agenda. Yet, this aversion to existing income inequality appears even more pronounced in the transition countries. The share of people who “strongly agree” or “agree” that income differences are too large is on average around 20 per cent higher in the East compared to the Western OECD countries.<sup>15 16</sup>

Nevertheless, given the variety of determinants of attitudes to inequality outlined above, it is too early to attribute these unconditional results to the legacy of communist ideology. For it may well be that the Eastern attitudes are the result of chunks of the population having suffered sharply declining incomes during transition. Hence, they have experienced (absolute and relative) downward mobility on a major scale, which via for instance the effect on their expectation of future incomes leads them to favour a reduction of income differences. If this were the case, the observed unconditional differences would have nothing to do with communist ideology, but would simply be due to the extraordinary socio-economic development the transition countries have experienced. Any other country that would have undergone a similar development, would have displayed the same attitudes.

For these reasons we need to use a multivariate framework, which takes the determinants theoretically derived above, into account.

How do we capture the other determinants described in section 2?<sup>17</sup>

a) Individual current income position

To quantify the self-interest hypothesis, we use the answers to the following question:

*“In our society there are groups which tend to be toward the top and groups which tend to be toward the bottom. Below is a scale that runs from top to bottom. Where would you put yourself on this scale?”*

The response scale runs from 1 (=top) to 10 (=bottom).

This measure serves as a reliable proxy for the respondent’s income position and it has advantage of a much higher response rate than the income question.

<sup>14</sup> As expected, this coincides with the majority of people who agree or strongly agree with the statement that government should reduce income differences (see Redmond, Schnepf and Suhrcke, 2001).

<sup>15</sup> Note that we do not include the Czech Republic and Hungary, who have already become OECD members, in the OECD category here.

<sup>16</sup> See Table A10 for the unconditional ranking of countries by their share of “agree” and “strongly agree”.

<sup>17</sup> See also Table A2 for a summary table of all variables used and their coding.

b) Individual expected future income position

There is no direct measure of this hypothesis available.<sup>18</sup> However, given that these expectations are influenced by the individual's past mobility experience, this hypothesis must be considered jointly with the following:

c) Individual mobility experience

To capture own mobility experience, we use the individual answer to the question used for the income hypothesis (a) and subtract this value from the individual answer to the question, which directly succeeds this one in the questionnaire:

*“And ten years ago, where did you fit in then?”* Again, the response categories are scaled from 1 (=top of society) to 10 (=bottom of society). Hence, the experience of upward (downward) mobility is indicated by a negative (positive) value of the indicator. Table A4 gives the national averages indicator. The results reveal the very different social mobility experiences between East and West during the last decade. While people in all CEEC countries have on average experienced downward mobility (most in Russia and Bulgaria), all OECD countries (except for a minor downward trend in the UK) have enjoyed upward mobility.

d) Individual perception of determinants of income generation

The influence of this factor is captured by the answers to the following two questions:

- “Do you agree or disagree: In your country people get rewarded for their effort”.
- “Do you agree or disagree: In your country people get rewarded for their intelligence and skills”.

The response categories are the same as for the dependent variable and range from 1 (=strongly agree) to 5 (=strongly disagree). The country-specific distribution of this answer is given in tables A5 and A6 of the annex.

e) Perception of actual income inequality in society

To proxy for this indicator we use the latest available national Gini value for each country (see Table A6 in the annex). We are well aware of the fact that individuals do not perceive their national degree of income inequality in the same way. And even if they did, it is highly unlikely that this perception

<sup>18</sup> Alesina and La Ferrara (2001) derive such a measure using a long time series of survey results from the US General Social Survey.

would equal the Gini measure used by us. Nevertheless, in the absence of more adequate measures it may well serve the purpose of a “proxy”.

f) Legacy of communist ideology

As we are looking for a systemic effect here – that is, one which is common to all formerly centrally-planned economies – the most straightforward way of capturing this is to employ a single dummy variable for all Eastern European countries. In this respect, Russia may even be different from the other transition countries, given that it has accumulated by far the longest experience of communist rule.

In addition to these variables we use a number of commonly used individual, demographic and household characteristics:<sup>19</sup>

Individual characteristics	a) Age
	b) Gender
	c) <i>Education</i>
	d) marital status
	e) unemployed
	f) retired
	g) self-employed
Individual ideology	a) <i>Political orientation ('far left' and 'left')</i>
	b) Trade union membership
	c) <i>Church attendance</i>
Household characteristics	d) Log of household size
	e) <i>Single parent</i>
	f) <i>Have children</i>

<sup>19</sup> The variables in italics are not available for all countries in the sample in a harmonised way as of yet and are therefore omitted in the main regressions presented here. Running the same regressions including the variables, and thereby reducing the sample size, delivers qualitatively identical results (see Table A8).

## 4. Results

Based on our general empirical model we assume that the attitudes to inequality of individual  $i$  can be characterised by a latent variable:

$$A_i^* = X_i \mathbf{b} + E_i \mathbf{c} + M_i \mathbf{d} + P_i \mathbf{f} + G \mathbf{g} + D \mathbf{h} + \mathbf{e}_i$$

where  $X$  is a vector of individual and household characteristics as well as proxies for individual “ideology”.  $E$  is the individual socio-economic position;  $M$  is the personal mobility experience;  $P$  is the individual perception of income determinants in  $i$ 's country;  $G$  is the national Gini coefficient;  $P$  is a vector of regional and/or country dummies, and  $\mathbf{e}$  is an error term. The vectors  $\mathbf{b}, \mathbf{c}, \mathbf{d}, \mathbf{f}, \mathbf{g}$ , and  $\mathbf{h}$  are parameters.

The variable  $A_i^*$  is not directly observed, but a variable  $A_i$  taking values from 1 to 5 **decreasing** in individual tolerance of current income differences.

In particular, we have

$$A_i = 1 \text{ if } A_i^* \leq \mathbf{m}_1$$

$$A_i = 2 \text{ if } \mathbf{m}_1 < A_i^* \leq \mathbf{m}_2$$

...

$$A_i = 5 \text{ if } \mathbf{m}_4 < A_i^* \leq \mathbf{m}_5$$

where  $\mathbf{m}_1, \dots, \mathbf{m}_5$  are unknown parameters to be estimated with  $\mathbf{b}, \mathbf{c}, \mathbf{d}, \mathbf{f}, \mathbf{g}$ , and  $\mathbf{h}$ . Assuming that the distribution of the error term is logistic, we estimate an ordered logit model.

In the regressions below we proceed as follows:

The idea behind the first set of regressions in section 4.1 is to answer the question whether the CEECs are different from the Western market economies “*on average*”, once the other determinants of attitudes are controlled for. We therefore use a common dummy variable for the seven transition countries (“CEEC”) as suggested above.<sup>20</sup> In order to illustrate the size of the influence of each variable we also present marginal effects. We then go on to examine to what extent the results in 4.1 are influenced by the potentially unjustified inclusion of Russia into the same dummy variable as the more advanced transition countries. It is certainly fair to assume that Russia differs in many ways from the other more advanced transition countries, not solely because it is the only country out of the CEECs in the sample which has not applied for EU membership. One might argue that this demonstrates a comparatively small preference for the Western market economy model and therefore a still closer attachment to the “old” ideology,

<sup>20</sup> We also use a dummy variable for the three other countries Chile, Philippines, Israel.

which in turn may have left an even stronger mark on the egalitarian attitudes of Russians. Russia is also the only transition country in the sample in which communism was already in place before World War II. To capture these potential differences we split the CEEC-dummy into a dummy for the CEEC\_6 and one for Russia alone.

As the next step (4.2) we scrutinise the reliability of the results gained so far by introducing a CEEC interaction term for each of the LHS variables in addition to the regional dummy variables. This helps us to assess to what extent the potential differences in attitudes (examined in the first set of regressions) are due to the fact that the determinants of attitudes in Western market economies may not work in the same way in the former socialist countries.

As a final step (4.3) we employ dummy variables for each single country in order to allow for potentially significant differences among the transition countries themselves. While this may be an intuitively very appealing idea, one should warn against reading too much into the results of this exercise, since the single country dummies may capture a number of national idiosyncracies other than a potential legacy of communism (e.g. country-specific differences in the interpretation of the wording of the survey question). To answer our main research question, we believe that the most adequate approach remains the common regional dummy variable (and its minor modifications) presented in 4.1. Nevertheless, bearing these reservations in mind, one might still gain interesting insights from this exercise. In particular it allows us to derive a country ranking of “*residual*” attitudes to inequality according to the size of each country’s dummy coefficient. In a version of this specification we also separate Germany into its Eastern and Western parts. This allows us to assess the current state of “attitudinal unity” between the two parts, at least as far as the attitudes analysed by us are concerned. However, before setting up any such country rankings we will have to test for the significance of the bilateral differences in the country dummy coefficients.

#### ▪ 4.1 Are CEECs “*different*” on average?

Table 3 presents the results of the first approach, using

- one dummy variable for all transition countries “Ceec” (equation (1) and (2)), and
- one dummy variable for Russia and one for the remaining six transition countries “Ceec\_6” (equation (3) and (4)).

Equation (2) and (4) include the national Gini index as an additional RHS variable.



Table 3: Are CEECs different on average?

<i>Ordered logit – Dependent variable: ‘Income differences in your country are too large’ (1 ‘strongly agree’ - 5 ‘strongly disagree’)</i>				
	(1)	(2)	(3)	(4)
Age	-0.005 (4.46)***	-0.005 (4.69)***	-0.005 (4.62)***	-0.005 (4.65)***
Female	-0.129 (4.90)***	-0.137 (5.20)***	-0.132 (5.01)***	-0.137 (5.20)***
Married	-0.056 (1.76)*	-0.051 (1.57)	-0.059 (1.85)*	-0.049 (1.51)
Unemployed	-0.063 (1.00)	-0.065 (1.01)	-0.059 (0.93)	-0.067 (1.05)
Retired	-0.091 (1.91)*	-0.130 (2.72)***	-0.095 (1.98)**	-0.134 (2.79)***
Self-employed	0.018 (0.42)	-0.021 (0.47)	0.013 (0.30)	-0.024 (0.55)
Household size	-0.176 (5.86)***	-0.162 (5.37)***	-0.172 (5.70)***	-0.162 (5.37)***
Subjective social class	-0.212 (23.88)***	-0.204 (22.86)***	-0.212 (23.79)***	-0.203 (22.74)***
Social mobility experience	-0.053 (6.44)***	-0.047 (5.71)***	-0.048 (5.80)***	-0.049 (5.85)***
Union member	-0.182 (5.64)***	-0.258 (7.84)***	-0.170 (5.23)***	-0.273 (8.15)***
People get rewarded for effort	-0.258 (16.28)***	-0.261 (16.45)***	-0.258 (16.28)***	-0.261 (16.47)***
People get rewarded f. intell.,skills	-0.140 (8.71)***	-0.118 (7.29)***	-0.129 (8.02)***	-0.119 (7.36)***
Income inequality (Gini)		-0.039 (14.71)***		-0.044 (13.00)***
Ceec	-0.690 (20.29)***	-0.736 (21.46)***		
Develop	-0.055 (1.07)	0.798 (10.27)***	-0.057 (1.10)	0.911 (10.05)***
Ceec_6			-0.622 (17.79)***	-0.769 (20.82)***
Russia			-1.182 (15.78)***	-0.532 (5.91)***
<i>Cutpoint 1</i>	-3.60	-4.78	-3.57	-4.95
<i>Cutpoint 2</i>	-1.58	-2.75	-1.55	-2.92
<i>Cutpoint 3</i>	-0.49	-1.66	-0.46	-1.82
<i>Cutpoint 4</i>	1.32	0.15	1.35	-0.009
Observations	22657	22657	22657	22657
Pseudo-R2	0.083	0.087	0.084	0.087
Log likelihood	-24629.5	-24599.7	-24599.7	-24514.8

Note: Absolute value of z-statistics in parentheses; \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

Before turning to the interpretation of the dummy coefficients and hence an evaluation of our main research question, we first comment on the evidence for the other hypotheses as outlined in section 2.

The economic self-interest hypothesis is strongly confirmed by the results, as the highly significant and negative coefficient<sup>21</sup> of the variable “subjective position” indicates. Hence, the higher an individual ranks her/himself within society, the more he/she tolerates current income differences.

Similarly, the social mobility variable is also a very powerful predictor of attitudes to inequality in that the more an individual has experienced upward mobility in the past ten years, the more he/she tolerates existing income differences. This may both be due to the effect of mobility experience on future expected income or to the effect of social mobility on the perception of the incentive costs of redistribution (Piketty, 1995). Unfortunately, it is not possible to discriminate between these effects with the data at hand.

The direct effect of the individual perception of the determinants of income generation (“getting rewarded”) also appears strongly significant in the expected direction. The more the individual believes that people in their country are rewarded for effort, intelligence and skills, the more he/she tolerates income differences.

As mentioned above, we tried to capture the perception of actual income differences in the respondent’s country by the country-specific Gini value. As this has not been taken into account in other studies, we report the regression results first excluding and then including the Gini variable. The latter specification unambiguously reveals that the Gini is a significant determinant of attitudes to inequality: the higher actual income inequality (and hence the perception thereof), the less people tend to tolerate it. This is a somewhat surprising result, since it shows that it is not only the absolute or relative position of the individual that matters for his or her attitudes. It does confirm our hypothesis that in addition to individual rationales people include the general level of inequality (and poverty) in their utility functions, maybe because they consider it as a social evil. Nevertheless, this remains a surprising result, for one might just as well have expected there to be no significant relationship at all, assuming that people tend to adjust their attitudes to the actual situation.

Some individual, demographic and household characteristics also turn out to be significant in the expected direction. People tend to dislike current income differences,

- the older they are
- if they are female

<sup>21</sup> Note that the dependent variable increases with tolerance of income differences and the subjective position indicator decreases with its ranking in society.

- the more people are part of the household
- and if they are members of a trade union.

Turning now to the interpretation of the dummy variables, we find that in both specification (1) and (2), the CEEC dummy enters with a strongly significant negative sign, implying that compared to the average western market economy, people living in the CEECs are significantly less in favour of the existing income differences. As the second specification shows, this result does not change, even if we control for the actual level of income inequality.

The large size of the CEEC-dummy relative to the other coefficients already indicates the predominance of the systemic effect on the measured attitude. This is even better illustrated when looking at the marginal effects of each explanatory variable. Table 4 presents the marginal effects based on equation (2) for the probability that the respondent “strongly agrees” with the statement that income differences are too large.

Table 4: *Marginal effects for the probability of “strongly agree”*

	<b>dY/dX</b>	<b>X</b>
Age	0.001***	45
Female	0.032***	0
Married	0.012	0
Unemployed	0.015	0
Retired	0.030***	0
Self-employed	0.005	0
Household size (log)	0.037***	1.099
Subjective social class	0.047***	5
Social mobility experience	0.011***	0
Union member	0.060***	0
People get rewarded for effort	0.060***	3
People get rewarded for intell.,skills	0.027***	3
Income inequality (Gini)	0.009***	32.1
Ceec	0.173***	0
Develop	-0.162***	0

*Note:* Y = Probability (“strongly agree” that income differences are too large) = 0.3584. In case of dummy variables, dY/dX is for discrete change of dummy variable from 0 to 1. \*\*\* indicates significance at 1%-level. The marginal effects are calculated on the basis of equation (2).

The table shows that the probability to respond “strongly agree” is 36 per cent for a respondent with the following “characteristics”:

- 45 years old
- male
- unmarried

- not unemployed
- not retired
- not self-employed
- not a trade union member
- shares a household with two other persons
- considers him/herself to belong to the middle class (i.e. class no. 5 on a scale between 1=top and 10=bottom)
- who has experienced neither upward nor downward social mobility in the past ten years
- neither agrees nor disagrees with the statements that people get rewarded for effort or for intelligence and skills
- lives in a country with a national Gini of 32.1 (i.e. the OECD average of the Western countries in the sample), and
- lives in the Western OECD.

Suppose now that for this hypothetical individual all of the above characteristics stay the same except that he now becomes a resident in the CEECs. Other things equal this would increase the probability for him to “strongly agree” by 17 per cent. If one sought to achieve the same marginal effect by increasing income inequality, this would require an approximately 20-point leap in the Gini, which would constitute a more than drastic step (almost corresponding to the difference in the Gini between Sweden and the Philippines). Hence, although the general level of inequality seems to influence attitudes to inequality significantly, the absolute size of this influence remains comparatively small.

If we wished to obtain the same marginal effect by changing the relative income position of the respondent, one would have to place the individual almost four ranks down starting from class 5 in the subjective ranking from 1-10. There would be no chance at all to compensate for the CEEC-effect if we could only change the social mobility experience of the hypothetical individual. Even if we were capable of endowing the individual with the maximum downward social mobility experience, corresponding to a social decline from class 1 (=top) ten years ago to class 10 (=bottom) today, we would still not achieve the same probability of him or her “strongly agreeing” as we would by making him or her a CEEC resident. Likewise, an increase in his or her age could not be a feasible option either, given the current (and probably future) constraints on life expectancy.

Turning now to the specification in which we split the CEEC dummy into CEEC\_6 and Russia, expectations are confirmed when we look at equation (3) – i.e. excluding Gini – in that Russia shows a significantly more negative

coefficient than the other relatively more advanced transition countries. The absolute size of the coefficient on the Russia-dummy turns out to be almost double the one for the CEEC\_6. However, these large differences between the coefficients disappear once we control for the Gini, which reflects the extraordinarily high level of inequality in Russia.<sup>22</sup>

Consequently, we can provide a preliminary answer to our main question of interest. It does indeed appear as though ten years into the transition towards the market economy the CEECs are systematically different – in the sense of being more “egalitarian” – from the western market economies, after the “usual” determinants of attitudes to inequality are controlled for. The basis for this statement will be further scrutinised in the following section.

#### ▪ *4.2 Similar effects in East and West?*

In the regressions (5) and (6) we check the robustness of the above conclusions by examining whether the slopes for each of the explanatory factors are different between CEEC and the OECD. For this purpose we drop the three “other” countries from the sample and include interaction terms for each factor. This serves the purpose of examining whether the significant differences of the transition dummy coefficients observed in equations (1) to (4) may have been due to the fact that the determinants of attitudes function differently in East and West. To assess this in general terms we perform a likelihood-ratio test of the unconstrained model (without interaction terms) against the constrained model (including the interaction terms).

According to the likelihood-ratio test the data rejects the constrained model in favour of the unconstrained one at the 1 per cent level, implying that there seem to be significant differences in the way attitudes are determined in East and West. Table 5 and in particular the significance and size of the interaction terms inform us about the exact nature of these differences. First of all, it is surprising to see that through the use of the interaction terms, the size of the dummy even increases when compared to the results in Table 3. Hence, while attitudes do seem to be determined differently in the East, taking into account the particular way in which these attitudes are determined in the East does not reduce but rather augment the residual differences in egalitarian attitudes between East and West. Technically, this is due to the interaction terms of those variables in the regressions (5) and (6), which show a different sign to the respective variable alone. The bigger the size of the interaction term with the opposite sign, the more this difference will be absorbed by the CEEC-dummy. This can be observed most strongly in the case of the influence of the subjective social class (see below).

<sup>22</sup> Statistical testing even reveals that the hypothesis that the coefficient on the Russia-dummy is smaller than the coefficient on the CEEC\_6-dummy cannot be rejected.

Table 5: Are attitudes to inequality determined differently in East and West?

<i>Ordered logit – Dependent variable: ‘Income differences in your country are too large’ (1 ‘strongly agree’ - 5 ‘strongly disagree’)</i>		
	(5)	(6)
	income dif. in country	income dif. in country
Age	too large -0.007 (4.51)***	too large -0.006 (4.12)***
Age*Ceec	-0.000 (0.01)	-0.002 (0.65)
Female	-0.208 (6.19)***	-0.218 (6.50)***
Female*Ceec	0.199 (3.28)***	0.203 (3.35)***
Married	-0.017 (0.40)	0.009 (0.22)
Married*Ceec	-0.102 (1.40)	-0.137 (1.86)*
Unemployed	-0.094 (1.01)	-0.141 (1.50)
Unemployed*Ceec	0.159 (1.18)	0.218 (1.61)
Retired	-0.135 (2.13)**	-0.214 (3.34)***
Retired*Ceec	0.100 (0.93)	0.190 (1.76)*
Self-employed	-0.076 (1.33)	-0.060 (1.05)
Self-employed*Ceec	0.206 (1.88)*	0.183 (1.67)*
Household size	-0.255 (6.64)***	-0.257 (6.69)***
Household size*Ceec	0.267 (3.69)***	0.288 (3.97)***
Subjective social class	-0.297 (25.26)***	-0.285 (24.13)***
Subjective social class*Ceec	0.212 (10.08)***	0.207 (9.77)***
Social mobility experience	-0.038 (3.24)***	-0.041 (3.48)***
Social mobility experience*Ceec	-0.080 (4.32)***	-0.068 (3.65)***
Union member	-0.195 (5.06)***	-0.354 (8.68)***
Union member *Ceec	0.008 (0.11)	0.172 (2.21)**
People get rewarded for effort	-0.247 (11.68)***	-0.247 (11.65)***
People get rewarded for effort *Ceec	-0.090 (2.52)**	-0.099 (2.76)***
People get rewarded f. intell.,skills	-0.124 (5.63)***	-0.124 (5.64)***
People get rewarded f. intell.,skills *Ceec	-0.028 (0.78)	0.003 (0.08)
Ceec	-1.896 (8.73)***	-3.114 (11.06)***
Income inequality (Gini)		-0.059 (12.20)***
Gini*Ceec		0.037 (6.32)***
<i>Cutpoint 1</i>	-4.19	-6.02
<i>Cutpoint 2</i>	-2.18	-4.00
<i>Cutpoint 3</i>	-1.04	-2.85
<i>Cutpoint 4</i>	0.74	-1.07
Observations	20365	20365
Pseudo-R2	0.096	0.10
Log likelihood	-21986.4	-21890.8

Note: Absolute value of z-statistics in parentheses; \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Nevertheless it remains comforting for the underlying theories of attitude formation that none of the explanatory factors effectively changes sign from a significantly positive to a significantly negative one or vice versa. In particular this is the case for the factors explicitly derived from theory and discussed above, i.e. the subjective income position, the social mobility experience, and the perception of factors responsible for income generation. In both East and West all of these factors determine attitudes in the same predicted direction and at high significance levels, although the size of the coefficients statistically differs for most of these factors. The influence of the individual (subjective) income position is stronger in the West than in the East.<sup>23</sup> When forming their attitudes towards inequality people in the West are driven significantly more by the perception of their own income position (and hence self-interest) than people in the East. This relative “lack of self-interest” in the CEECs may or may not be interpreted as an “insufficient” adjustment to the market economy.

In contrast, the social mobility experience within the last ten years does affect attitudes to a greater extent in the East than in the West. This is in considerable contrast to prior expectations. Corneo and Grüner (2000) find in their analysis of the 1992 ISSP module on attitudes to inequality - using, however, the answers to the question “*Should government reduce income differences between the rich and the poor*” as the dependent variable<sup>24</sup> - that the effect of the individual social mobility experience<sup>25</sup> is statistically insignificant in the Eastern sample. They attribute this to the idea that - following Piketty (1995) - mobility delivers a learning experience to update one’s beliefs about the contribution of one’s effort in generating income, and thus about the true incentive costs of redistributive taxation. For a respondent from a formerly socialist country, the mobility experience accumulated largely under the old system does not tell us much about the contribution of personal effort in getting rich in the new economic system. Our results using 1999 data show that this is no longer the case, and that personal achievement has come to play an increasingly important role for income generation during

<sup>23</sup> As already mentioned above, this quite large difference in the influence of the subjective position-variable in East vs. West accounts for the largest part of the increase in the CEEC-dummy coefficient (in absolute terms) from the constrained model (e.g. equation (2)) to the unconstrained model. Running regression (6) without the interaction term on the subjective position-variable indeed reduces the absolute size of the CEEC-dummy coefficient by more than one.

<sup>24</sup> As noted earlier, we have also run the regressions using the variable employed by Corneo and Grüner (2000), and find qualitatively similar results to the ones presented in Tables 3, 5 and 6.

<sup>25</sup> The results are perhaps not directly comparable as they use intergenerational mobility as a proxy for the social mobility experience, i.e. the status of the father’s occupation compared to one’s own.

the transition years.<sup>26</sup> This is also confirmed by the greater influence in the East of the individual perception of whether people get rewarded for effort.

The influence of the Gini appears somewhat less strong in the East. This should, however, not be taken too literally since the Eastern sample comprises only seven countries.

### ▪ **4.3 Country rankings**

The idea behind the following regressions is to derive a country ranking by size of dummy coefficients which can be interpreted as an indicator of the national “residual” attitude to inequality. This will allow us - bearing in mind the reservations made above – to compare each country individually. For this purpose we need to test for the significance of the bilateral differences between the dummy coefficients.

Table 6 presents the results of the regressions using the country dummies. Due to collinearity it is not possible to include both the country dummies and the national Gini. Specification (8) differs from (7) in one interesting respect: the previous country dummy for Germany is split into one for East and one for West Germany.

The results for the individual variables appear not to differ markedly from the previously reported ones. Our main interest here is to derive the country ranking according to the size of the country dummy coefficient.

Table 7 reports the ranking based on specification (8), i.e., including the East and West Germany split. Table A9, which reports the test results for the significance of the bilateral differences between the country dummy coefficients, should be seen as background information for the interpretation of Table 7 to the extent that it validates the statistical reliability of the ranking presented.

<sup>26</sup> This is at least partly confirmed by the results on the increasing returns to education in transition (see e.g. Newell and Reilly (1997)). The World Bank (2000) concludes that the largest share of the rise in wage inequality during transition is explained by increasing returns to education.



Table 6: *Country dummy variables*

<i>Ordered logit – Dependent variable: ‘Income differences in your country are too large’ (1 ‘strongly agree’ - 5 ‘strongly disagree’)</i>		
	(7)	(8)
Age	-0.006 (5.50)***	-0.007 (5.67)***
Female	-0.150 (5.57)***	-0.150 (5.58)***
Married	-0.040 (1.23)	-0.038 (1.16)
Unemployed	-0.133 (2.06)**	-0.117 (1.80)*
Retired	-0.001 (0.02)	0.008 (0.15)
Self-employed	0.050 (1.07)	0.054 (1.16)
Household size	-0.051 (1.61)	-0.054 (1.72)*
Subjective social class	-0.182 (19.64)***	-0.180 (19.44)***
Social mobility experience	-0.047 (5.53)***	-0.046 (5.40)***
Union member	-0.276 (7.77)***	-0.278 (7.81)***
People get rewarded for effort	-0.237 (14.59)***	-0.236 (14.49)***
People get rewarded f. intell.,skills	-0.098 (5.86)***	-0.097 (5.83)***
Germany	-0.402 (4.77)***	
Bulgaria	-1.834 (15.35)***	-1.849 (15.47)***
Czech Republic	-1.039 (12.25)***	-1.048 (12.34)***
Hungary	-1.292 (13.66)***	-1.304 (13.78)***
Latvia	-0.898 (9.47)***	-0.910 (9.59)***
Poland	-0.846 (8.95)***	-0.855 (9.04)***
Russia	-1.692 (17.30)***	-1.705 (17.42)***
Slovenia	-0.915 (9.29)***	-0.923 (9.36)***

Table 6: *Country dummy variable* (continued)

	(7)	(8)
Austria	-0.819 (8.97)***	-0.822 (9.00)***
Canada	-0.073 (0.76)	-0.074 (0.76)
France	-1.372 (14.80)***	-1.376 (14.83)***
UK	-0.294 (3.11)***	-0.298 (3.15)***
Japan	-0.133 (1.47)	-0.135 (1.50)
Netherlands	0.449 (5.56)***	0.451 (5.56)***
New Zealand	-0.186 (2.01)**	-0.186 (2.02)**
Norway	0.169 (2.02)**	0.170 (2.02)**
Portugal	-2.530 (20.61)***	-2.535 (20.65)***
Spain	-0.661 (7.49)***	-0.666 (7.53)***
Switzerland	0.324 (3.82)***	0.326 (3.84)***
Chile	-0.659 (7.58)***	-0.666 (7.66)***
Israel	-1.213 (11.32)***	-1.217 (11.36)***
Philippines	0.011 (0.08)	0.007 (0.06)
West Germany		-0.094 (1.02)
East Germany		-0.993 (8.87)***
<i>Cutpoint 1</i>	-3.61	-3.61
<i>Cutpoint 2</i>	-1.46	-1.44
<i>Cutpoint 3</i>	-0.33	-0.32
<i>Cutpoint 4</i>	1.50	1.51
Observations	22657	22657
Pseudo-R2	0.115	0.116
Log likelihood	-23761.3	-23728

Note: Absolute value of z-statistics in parentheses; \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%. The benchmark is Sweden.

Table 7: Country ranking by coefficient of dummy variable

	Dummy coefficients from equation (8)
1. Portugal	-2.535
2. <b>Bulgaria</b>	<b>-1.849</b>
3. <b>Russia</b>	<b>-1.705</b>
4. France	-1.376
5. <b>Hungary</b>	<b>-1.304</b>
6. Israel	-1.217
7. <b>Czech Rep.</b>	<b>-1.048</b>
8. <b>East Germany</b>	<b>-0.993</b>
9. <b>Slovenia</b>	<b>-0.923</b>
10. <b>Latvia</b>	<b>-0.910</b>
11. <b>Poland</b>	<b>-0.855</b>
12. Austria	-0.822
13. Spain	-0.666
14. Chile	-0.666
15. UK	-0.298
16. New Zealand	-0.186
17. Japan	-0.135
18. West Germany	-0.094
19. Canada	-0.074
20. Sweden	0
21. Philippines	0.007
22. Norway	0.170
23. Switzerland	0.326
24. Netherlands	0.451

As the results in Table A9 show, the great majority of the differences between those country dummies which do not follow each other directly in the ranking, are indeed significant. Hence, Table 7 confirms the results of the regressions, which used one regional dummy for all CEECs, in that all 7 (or 8 if we include East Germany) transition countries rank among the upper half of the sample. Bulgaria and Russia rank highest of the CEECs – though significantly behind Portugal – and they cannot be statistically distinguished from one another. Out of the CEECs in the sample, Bulgaria and Russia are also lagging quite substantially behind in terms of their reform process toward the market economy (see e.g. EBRD, 2000) which may explain at least part of the sluggishness in shedding the attitudinal legacies.

Hungary is significantly less “egalitarian” than Bulgaria and Russia, but is statistically comparable to France. The Czech Republic, East Germany, Slovenia, Latvia and Poland form a homogenous group, since there are no statistically significant differences between them. It is very interesting to note that West Germany ranks far below East Germany (with highly significant differences). One might expect that due to East Germany’s unrivalled speed

of transition to the market economy through its incorporation into West Germany, attitudes might as well have adjusted rapidly. Our results suggest the very opposite.<sup>27</sup>

## 5. Conclusion

The main purpose of the paper has been to assess whether ten years after the breakdown of the communist system attitudes to inequality are significantly different in East vs. West, even after the “conventional” determinants of attitudes are controlled for. We have used preliminary and very recent data from a large international survey, which to the best of our knowledge covers the largest number of countries hitherto examined in the literature on attitudes to inequality – including formerly socialist countries, western market economies as well as two developing countries. This has given us a unique opportunity to test for the supposed East-West differences.

Results do confirm the hypothesis of significant differences in attitudes. People living in the transition countries tolerate existing income differences significantly less than people in the West, even after we control for the usual determinants of attitudes to inequality and for the actual level of income inequality. We interpret this result as a manifestation of an attitudinal legacy inherited from socialist times. In the central planning era the population was exposed to the socialist ideology, which involved a strong bias towards “egalitarianism”. Although people may not actually have stood firmly behind this ideology, the mere experience of socialisation within such a regime and of an indeed more equal income distribution is likely to have influenced people’s attitudes. As results from earlier rounds of the ISSP module on Social Inequality in 1987 and 1992 as well as from similar surveys indicate,<sup>28</sup> people in the CEECs have generally expressed more “egalitarian” attitudes than their western counterparts already before transition and in its very early phase. Hence, we may conclude that the hypothesis that this constitutes a legacy cannot be rejected.

Some may argue that the more pronounced Eastern attitudes we observe are a reflection of the disillusion caused by the quite dramatic rise in income inequalities during the last decade in virtually all CEECs. Hence, attitudes today would have nothing to do with any kind of socialist legacy. We can fairly confidently reject this idea, since we have explicitly taken into account a measure of individual mobility experience within the last ten years.

Our results have important implications, most notably for reform of the welfare state, which is after all the vehicle bringing about a potential

<sup>27</sup> It is also interesting to compare the conditional country ranking in Table 7 to the unconditional ranking presented in Table A10.

<sup>28</sup> See e.g. Toš et al. (2000), Redmond et al. (2001), and Corneo and Grüner (2000). Only the latter, however, use a multivariate framework similar to ours.

reduction in the supposedly “too large” income differences, that people in the East so significantly disagree with.

By political and economic measures it is recognised that at least the advanced CEECs have fulfilled the criteria for a functioning democracy and market economy.<sup>29</sup> Given our results, however, it seems that attitudes adapt more slowly than economic or political conditions and are not yet in line with those prevailing in western market economies. While this is an interesting insight in itself, it also has a wider importance. Policymakers in a democratic environment are heavily dependent on the electorate’s support for the implementation of their programmes. Hence, if a majority opposes the reform measures required to prepare the country for market-based *intra-* and *inter-*national competition, such policies are less likely to be implemented. This, in turn, can hamper the country’s mid- and long-term economic development prospects.

From this point of view, policymakers in the transition countries are facing a particularly severe challenge, which looks even more exacting in the light of our results. The population of the former socialist countries experienced very comprehensive and broad-based government-provided welfare benefits in the areas of health, education, and childcare for example, all of which contributed to moderate inequalities. In some respects these achievements compared relatively favourably to those in established market economies, although the level of economic development in the CEECs was much lower, and therefore the resources available for public expenditures were in principle more limited than in the West.<sup>30</sup> When output plummeted in the early years of transition, governments faced great difficulties in sustaining the high levels of public spending, although pressure to do so remained high. Partly giving in to such political pressure, a fairly remarkable degree of welfare support was sustained, at least in the more advanced transition countries whose tax base was less drastically eroded. However, this has come at the cost of severe drains on the public budget. A switch of financing methods in most countries from general tax financing to social insurance financing of unemployment benefits and healthcare for instance was considered a potential solution to the dilemma, but has entailed sharply rising labour costs in some of the advanced accession candidates (especially in Hungary). This tends to weaken the competitive situation of firms and threatens the traditional comparative advantage of the CEECs in labour-intensive areas of production. It is largely uncontroversial to conclude that current levels of spending and service

<sup>29</sup> This is ‘officially’ recognised by the European Commission’s latest annual candidate country assessments (European Commission 2000). For a quantitative assessment of structural adjustment of the CEECs to the market economies, see e.g. Gros and Suhrcke (2000).

<sup>30</sup> These achievements refer more to the quantity of service delivery, less to the quality.

provision will be impossible to sustain,<sup>31</sup> unless adequate reforms are undertaken, to either increase revenues or reduce spending.<sup>32</sup> To the extent that this is expected to further limit government capacity to reduce the widening market-determined wage differences, it will meet particularly strong resistance from the populace.

Unfortunately, the question asked in the survey and used as our indicator of attitudes to inequality is too general to allow the derivation of concrete, politically feasible ways in which government could reform the welfare state. In fact, the widespread preference against income inequality does not necessarily imply that people in the CEECs would not acknowledge a general need for reform. A very recent survey undertaken in four Western European countries by Boeri et al. (2001) shows that while people oppose a reduction in the welfare state, they are aware of the unsustainability of the current situation. They also welcome certain changes in the allocation of benefits. Given a specific distribution of interests among the population they conclude that a strategic bundling of reform strategies could then build a large and mixed coalition of supporters. Assuming that people living in the CEECs do not differ too much in these respects, surveys conducted in the transition countries along these lines would certainly provide politically useful insights and much needed ideas for viable reform strategies, most of which are far more urgent than in the West.

<sup>31</sup> Transition has also entailed a dramatic decrease in fertility, contributing severely to the ageing of the population which is another major problem facing western European welfare states.

<sup>32</sup> This is not to imply that social sector reform in transition is merely about shrinking the size of public involvement. In some cases it also means a building up and in others a redesign of social safety nets. For a more detailed account of the issues involved see e.g. Heller and Keller (2001) and Boeri (2001).

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## Appendix Tables

### A1: Sample size by country

	No. of observations	Percent
Bulgaria	1102	3.77
Czech Republic	1834	6.28
East Germany	511	1.75
Hungary	1208	4.14
Latvia	1100	3.77
Poland	1135	3.89
Russia	1705	5.84
Slovenia	1006	3.45
Austria	1016	3.48
Canada	974	3.34
France	1889	6.47
Germany	1432	4.90
UK	804	2.75
Japan	1325	4.54
Netherlands	1618	5.54
New Zealand	1108	3.79
Norway	1268	4.34
Portugal	1144	3.92
Spain	1211	4.15
Sweden	1150	3.94
Switzerland	1258	4.31
West Germany	921	3.15
Chile	1503	5.15
Israel	1208	4.14
Philippines	1200	4.11
<b>Total</b>	<b>29198</b>	<b>100</b>

## A2: Coding of variables

Variable	Coding
Dependent variable	“Are income differences in your country too large?”
Age	From 1=“strongly agree” to 5=“strongly disagree” (see Table 2)
Female	Metric 1=female, 0=male
Education1	1=some grade school, finished grade school, some high school, 0=other (higher education)
Married	1=married, 0= other (widowed, divorced, separated, single, living with s.o.)
Attend church	1=once a week; 2=2-3 times a month 3=once a month; 4=several times a year 5=less frequently; 6=never
Far left	Political orientation: 1=far left, 0=other
Left	Political orientation: 1=left, 0=other
Unemployed	1=unemployed, 0=other
Retired	1=retired, 0=other
Self-employed	1=self-employed, 0=other
Household size	No. of people living in household (in log)
Single parent	1=single parent, 0=other
Have children	1=have children, 0=other
Subjective position in society	From 1 = top to 10 = bottom
Social mobility experience	Subjective position in society today ./. Subjective position in society ten years ago; From -9 (greatest possible upward shift) to +9 (greatest possible downward shift) (See Table A4 for national averages)
Union member	1=trade union member, 0=otherwise
People get rewarded for effort in your country	From 1 = “strongly agree” to 5 = “strongly disagree” (see Table A5)
People get rewarded for intelligence/skills in your country	From 1 = “strongly agree” to 5 = “strongly disagree” (see Table A6)
Income inequality	Gini coefficient (see Table A7)
Cee	1=transition country (excl. East Germany) 0=other
Develop.	1=Chile, Israel, Philippines, 0=otherwise
Cee_6	1=transition countries without Russia, 0=otherwise
Russia	1=Russia, 0=other

**A3: Summary statistics**

	No. obs.	Mean	Std. Dev.	Min	Max
Age	29111	45.732	16.851	9	98
Female	29150	0.519	0.500	0	1
Education1	25891	0.298	0.457	0	1
Married	29112	0.604	0.489	0	1
Attend church	26140	4.154	1.808	0	6
Far left	18094	0.051	0.219	0	1
Left	18094	0.246	0.430	0	1
Unemployed	28813	0.055	0.228	0	1
Retired	28813	0.196	0.397	0	1
Self-employed	25932	0.105	0.307	0	1
Household size (in log)	28980	0.987	0.554	0	3.219
Single parent	23632	0.026	0.160	0	1
Have children	23632	0.414	0.493	0	1
Subjective position in society	28643	6.059	1.885	1	10
Social mobility experience	28320	0.250	2.023	-9	9
Union member	27290	0.210	0.407	0	1
Get rewarded for effort	28343	3.260	1.147	1	5
Get rewarded for intell./skills	28165	3.046	1.131	1	5
Income inequality (Gini)	29198	34.227	7.996	24	56.5

**A4: Social mobility experience last ten years (national averages)**

	Social mobility experience last ten years (upward=negative)
Bulgaria	2.20
Czech Rep.	0.84
Hungary	1.26
Latvia	1.71
Poland	0.58
Russia	2.30
Slovenia	0.35
<i>East Germany</i>	<i>0.22</i>
Austria	-0.10
Canada	-0.51
France	-0.26
Germany	-0.13
Great Britain	0.04
Japan	-0.11
Netherlands	-0.80
New Zealand	-0.22
Norway	-0.54
Portugal	-0.30
Spain	-0.16
Sweden	-0.14
Switzerland	-0.47
<i>West Germany</i>	<i>-0.13</i>
Chile	-0.22
Israel	0.18
Philippines	0.32

*Source:* ISSP (1999).

*Note:* Data refer to the national averages of the variable measuring the difference between the subjective social class in the year of the survey (1999) minus the subjective social class ten years earlier. Since both terms are ordered inversely (from 1=top to 10=bottom class), a negative (positive) sign implies upward (downward) mobility experience.

**A5: In your country people get rewarded for effort: distribution of answers**

	strongly agree	agree	neither nor	disagree	strongly disagree	TOTAL
Bulgaria	1.8	3.8	3.4	13.4	77.6	100
Czech Rep.	4.1	12.1	18.7	40.1	25.0	100
Hungary	2.3	6.9	19.7	41.7	29.4	100
Latvia	1.9	13.3	15.6	42.8	26.3	100
Poland	5.1	18.7	30.6	38.5	7.1	100
Russia	3.5	4.6	9.2	28.8	53.9	100
Slovenia	1.9	11.0	25.6	44.3	17.2	100
<b>Average-CEECs</b>	<b>3.0</b>	<b>10.1</b>	<b>17.5</b>	<b>35.7</b>	<b>33.8</b>	<b>100</b>
Austria	3.5	40.3	29.6	21.3	5.3	100
Canada	4.2	45.8	28.7	17.4	3.9	100
France	2.4	20.7	28.0	38.9	10.0	100
Germany	2.2	50.2	29.0	15.4	3.2	100
Great Britain	1.9	32.6	34.5	27.7	3.2	100
Japan	13.0	29.1	33.7	12.5	11.8	100
Netherlands	2.1	23.2	31.9	36.9	5.9	100
New Zealand	5.0	36.7	27.5	27.1	3.7	100
Norway	2.5	29.2	30.6	31.7	6.1	100
Portugal	7.6	27.9	9.4	31.3	23.8	100
Spain	3.7	34.5	17.8	35.2	8.7	100
Sweden	2.8	33.1	38.0	20.8	5.2	100
Switzerland	4.7	29.2	54.9	9.2	2.0	100
<b>Average-OECD</b>	<b>4.5</b>	<b>31.9</b>	<b>30.4</b>	<b>25.8</b>	<b>7.5</b>	<b>100</b>
Chile	7.3	31.5	10.9	41.8	8.5	100
Israel	9.4	26.5	17.8	36.4	9.9	100
Philippines	20.1	43.0	16.3	15.4	5.3	100

Source: ISSP (1999).

**A6: In your country people get rewarded for intelligence and skills: distribution of answers**

	strongly agree	agree	neither nor	disagree	strongly disagree	TOTAL
Bulgaria	0.6	4.5	4.9	15.5	74.5	100
Czech Rep.	4.3	19.8	25.7	33.5	16.7	100
Hungary	2.9	21.1	34.9	29.3	11.8	100
Latvia	2.2	18.6	19.5	39.3	20.4	100
Poland	5.0	31.2	34.1	26.8	3.0	100
Russia	2.4	6.7	10.7	30.0	50.2	100
Slovenia	2.1	18.6	26.8	40.9	11.6	100
<b>Average-CEECs</b>	<b>2.8</b>	<b>17.2</b>	<b>22.4</b>	<b>30.8</b>	<b>26.9</b>	<b>100</b>
Austria	5.9	47.1	28.4	15.2	3.4	100
Canada	6.1	52.0	22.9	16.1	2.9	100
France	3.1	33.4	26.2	30.2	7.1	100
Germany	4.8	59.9	20.8	12.8	1.6	100
Great Britain	3.6	46.1	25.9	22.4	2.1	100
Japan	15.7	40.3	27.9	8.5	7.5	100
Netherlands	2.1	36.1	32.9	26.0	2.9	100
New Zealand	6.4	45.4	24.7	21.6	1.9	100
Norway	2.6	36.7	30.4	26.0	4.2	100
Portugal	9.9	34.9	13.1	26.7	15.3	100
Spain	3.7	38.8	23.1	28.1	6.3	100
Sweden	3.1	37.2	39.8	15.7	4.2	100
Switzerland	4.5	37.1	49.6	7.7	1.0	100
<b>Average-OECD</b>	<b>5.6</b>	<b>40.4</b>	<b>28.7</b>	<b>20.4</b>	<b>4.9</b>	<b>100</b>
Chile	6.1	35.6	12.7	37.5	8.1	100
Israel	9.0	28.9	21.2	32.4	8.5	100
Philippines	21.6	47.5	14.7	12.0	4.2	100

Source: ISSP (1999).

**A7: Income inequality (Gini)**

	GINI
Austria	30.4
Bulgaria	34.5
Canada	31.7
Chile	56.5
Czech	25.8
France	32.4
Germany	30.0
Hungary	25.0
Israel	38.1
Japan	31.5
Latvia	33.0
Netherlands	30.2
New Zealand	37.0
Norway	25.7
Philippines	46.2
Poland	35.8
Portugal	38.2
Russia	47.0
Slovenia	24.0
Spain	32.4
Sweden	25.3
Switzerland	35.5
UK	36.6

*Source:* European Community Household Panel (ECHP) microdata for wave 3 (Portugal); J. Flemming and J. Micklewright, 'Income Distribution, Economic Systems and Transition', *Innocenti Occasional Paper* No. 70, 1999 (Czech Republic); World Bank (2000), *Making Transition Work for Everyone* (Russia); UNICEF Innocenti Research Centre MONEE project (Bulgaria, Hungary, Latvia, Poland, Slovakia), UN WIDER World Income Inequality Database (New Zealand), and Luxembourg Income Study (LIS) microdata (all other countries).

*Note:* The data on income inequality refer to the distribution by individuals of per capita household income. The data has kindly been made available to the author by Giorgina Brown and John Micklewright. The years to which the data refer are 1998 for Bulgaria, Hungary, Latvia, Poland, Russia, Slovakia, 1997 for New Zealand, 1996 for Czech Republic, Portugal, 1995 for Austria, Canada, Norway, Sweden and the UK, 1994 for France, Germany, and the Netherlands, 1992 for Japan and Switzerland and 1990 for Spain.

**A8: All independent variables**

*Ordered logit – Dependent variable: Income differences in your country are too large*

*(1 'strongly agree' - 5 'strongly disagree')*

	(A1)	(A2)	(A3)
Age	-0.002 (1.14)	-0.002 (1.03)	-0.004 (2.62)***
Female	-0.104 (2.98)***	-0.108 (3.09)***	-0.124 (3.52)***
Education1	0.029 (0.72)	0.042 (1.06)	-0.008 (0.20)
Single parent	0.003 (0.03)	-0.015 (0.13)	-0.035 (0.30)
Have children	0.054 (1.11)	0.060 (1.24)	0.044 (0.89)
Attend church	0.053 (5.26)***	0.040 (3.90)***	0.016 (1.47)
Far left	-0.838 (9.02)***	-0.823 (8.84)***	-0.679 (7.10)***
Left	-0.404 (10.39)***	-0.418 (10.71)***	-0.433 (11.03)***
Married	-0.105 (2.53)**	-0.124 (2.95)***	-0.091 (2.14)**
Unemployed	-0.255 (2.92)***	-0.249 (2.86)***	-0.162 (1.84)*
Retired	-0.224 (3.76)***	-0.245 (4.09)***	-0.112 (1.82)*
Self-employed	0.005 (0.09)	0.016 (0.30)	-0.070 (1.28)
Household size (log)	-0.121 (2.62)***	-0.095 (2.04)**	-0.118 (2.51)**
Subjective social class	-0.221 (19.60)***	-0.209 (18.18)***	-0.204 (17.50)***
Social mobility experience	-0.077 (7.25)***	-0.081 (7.57)***	-0.044 (3.95)***
Union member	-0.155 (3.37)***	-0.177 (3.84)***	-0.198 (4.25)***
People get rewarded for effort	-0.265 (13.02)***	-0.270 (13.24)***	-0.221 (10.71)***
People get rewarded f. intell., skills	-0.188 (9.04)***	-0.178 (8.52)***	-0.133 (6.27)***
Income inequality (Gini)		-0.010 (4.72)***	-0.037 (10.45)***
Ceec			-0.728 (15.39)***
Develop			0.676 (7.19)***
<i>Cutpoint 1</i>	-3.36	-3.67	-4.62
<i>Cutpoint 2</i>	-1.36	-1.67	-2.59
<i>Cutpoint 3</i>	-0.28	-0.58	-1.50
<i>Cutpoint 4</i>	1.46	1.15	0.23
Observations	12960	12960	12960
Pseudo-R2	0.071	0.072	0.082
Log likelihood	-14525.4	-14514.2	-14352.5

Note: Absolute value of z-statistics in parentheses; \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%



**A9: Testing the significance of the bilateral country dummy coefficients (at 5% significance level)**

	1. Portugal	2. Bulgaria	3. Russia	4. France	5. Hungary	6. Israel	7. Czech R.	8. East Germ	9. Slovenia	10. Latvia	11. Poland	12. Austria	13. Spain	14. Chile	15. UK	16. New Zeal.	17. Japan	18. West Germ	19. Canada	20. Philippines	21. Norway	22. Switzerland	23. Netherlands	
1. Portugal																								
<b>2. Bulgaria</b>	<																							
<b>3. Russia</b>	<	=																						
4. France	<	<	<																					
<b>5. Hungary</b>	<	<	<	=																				
6. Israel	<	<	<	=	=																			
<b>7. Czech Rep.</b>	<	<	<	<	<	=																		
<b>8. East Germ</b>	<	<	<	<	<	=	=																	
<b>9. Slovenia</b>	<	<	<	<	<	<	=	=																
<b>10. Latvia</b>	<	<	<	<	<	<	=	=	=															
<b>11. Poland</b>	<	<	<	<	<	<	=	=	=	=														
12. Austria	<	<	<	<	<	<	=	=	=	=	=													
13. Spain	<	<	<	<	<	<	<	<	=	=	=	=	=											
14. Chile	<	<	<	<	<	<	<	<	=	=	=	=	=	=										
15. UK	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<									
16. New Zealand	<	<	<	<	<	<	<	<	<	<	<	<	<	<	=									
17. Japan	<	<	<	<	<	<	<	<	<	<	<	<	<	<	=	=								
18. West Germ.	<	<	<	<	<	<	<	<	<	<	<	<	<	<	=	=	=							
19. Canada	<	<	<	<	<	<	<	<	<	<	<	<	<	<	=	=	=	=						
20. Philippines	<	<	<	<	<	<	<	<	<	<	<	<	<	<	=	=	=	=	=					
21. Norway	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	=	=			
22. Switzerland	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	=		
23. Netherlands	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	=	

Source: Based on regression (8). Note: '=': no statistically significant (at 5%-level) difference between country dummies, '<': country in row has significantly smaller dummy than country in column.

**A10: Unconditional ranking based on share of respondents who agree and strongly agree with the statement “Income differences are too large”**

Rank	Country	Share of “agree” and “strongly agree”
<b>1</b>	<b>Bulgaria</b>	<b>96.8</b>
<b>2</b>	<b>Latvia</b>	<b>96.7</b>
3	Portugal	96
<b>4</b>	<b>Russia</b>	<b>95.8</b>
<b>5</b>	<b>Hungary</b>	<b>93.2</b>
6	Chile	92.3
<b>7</b>	<b>Slovenia</b>	<b>91</b>
8	Israel	89.9
<b>9</b>	<b>Poland</b>	<b>89.3</b>
10	Spain	89.3
<b>11</b>	<b>Czech Rep</b>	<b>87.8</b>
12	France	86.8
13	Austria	86.3
14	Germany	82.2
15	Great Britain	81.3
16	New Zealand	73.2
17	Norway	72.5
18	Sweden	71.1
19	Japan	69.1
20	Canada	68.2
21	Philippines	65.3
22	Netherlands	63.9
23	Switzerland	54.9

Source: Table 2.

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