

Transition at Work: A Comparison of Job Satisfaction in Eastern and Western Europe

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Abstract

As the transition progresses is there a convergence in terms of job satisfaction between Eastern and Western Europe? I analyze the level of satisfaction with work and its determinants in each of the two regions for the decade and a half following the fall of communism, using data from the World Values Survey and the International Social Survey Programme “Work Orientations” module. Job satisfaction in transition countries is significantly lower than in the West. These countries experience a significant decrease in satisfaction with work between 1990 and 1999, followed by a significant increase by 2005. In non-transition countries, there is no significant change throughout this interval. As a result, the job satisfaction gap between East and West first expands and then shrinks. This gap is mainly the result of differences in macroeconomic conditions between the two regions. Not everyone in Eastern Europe is affected the same way by the transition, young and more educated, more skilled individuals being among the winners of the process.

1 Introduction

This paper compares the level, trend, and determinants of job satisfaction between transition and non-transition countries in Europe. Transition countries are those countries in Central and Eastern Europe (CEE) that changed from a planned economy to a Western free market model at the end of the 1980s or the beginning of the 1990s. Non-transition countries are those of Western Europe. Due to geographic proximity, CEE countries most likely compare themselves with Western European countries, as an example of the capitalist model¹. Presumably, half a century of communism has left deep scars in terms of job satisfaction so a significant difference between the two regions right after the fall of communism would not be surprising. However, as the transition to a market economy in CEE progresses, one might expect convergence between East and West. Looking at the two groups of countries during the first decade and a half of transition, I find that a full convergence in terms of job satisfaction has not yet been achieved. In fact, Eastern Europe is even further behind the West in 1999 compared with 1990 and only between 1997 and 2005 there is some convergence. In transition countries, more educated and skilled people are among the winners of the transformation. People under 30 years old also improve their relative satisfaction compared with other age groups, while the relative satisfaction with work of people between 40 and 49 years old gets worse.

¹Throughout the paper, “Eastern Europe” and “transition countries” will be used interchangeably, and so will “Western Europe” and “non-transition countries”.

Job satisfaction can be defined as “the individual’s response to a specific question designed to elicit his feelings about the job *as a whole*”. This definition assumes that “the individual has some feelings about the entire job and can respond rationally to a well-constructed question about it” (Hamermesh, 1977, p. 54).

The concept of job satisfaction has been developed within sociology and industrial psychology (Blauner, 1964; Herzberg et al., 1957), as well as within the field of organizational behavior (Spector, 1997). Having long studied satisfaction with work, psychologists have looked into the psychometric properties of single-item job satisfaction measures such as the ones used here and found them to have high reliability, significant validity, and substantial predictability (Dolbier et al., 2005; Wanous et al., 1997). It has also been found that there is a positive correlation with occupational status and a weak positive correlation with earnings. The relationship between job satisfaction and age is a little less clear – some studies find a linear, increasing, relationship with age (Brush et al., 1987), while others find a curvilinear, U-shaped relationship (Zeitiz, 1990). One explanation for these seemingly contradictory results might have to do with gender – Clark et al. (1996) find a linear relationship for women, while for men the curvilinear relationship is only apparent if the age distribution starts as early as the late teens. In addition to age, a birth cohort effect has been found, with older cohorts typically more satisfied at work than newer ones. Jürges (2003) finds that for West Germany there is a succession of increasingly dissatisfied cohorts of workers, with intrinsically more satisfied cohorts leaving the labor market and being replaced by less satisfied cohorts. Various hypothesis have been advanced in order to explain this cohort effect. In general, older workers report a closer match between what they have and what they want in terms of job conditions and also a higher salary. It is difficult though to assess to what extent this closer match is due to older cohorts having more skill and better jobs, and to what extent it is their lower, more realistic expectations that explain their higher job satisfaction (White and Spector, 1987; Wright and Hamilton, 1978).

Starting with Hamermesh (1977, 2001), economists have been increasingly interested in studying satisfaction with work. One relationship that has been fairly extensively studied is that between job satisfaction and quit rates (Akerlof et al., 1988; Clark, 1997; Freeman, 1978), with the finding that an increase in satisfaction with work lowers the probability that an employee will subsequently quit. Moreover, low satisfaction typically leads to higher absenteeism (Vroom, 1964) and labor turnover rates and is thus costly to society. It is not surprising then that high organizational performance is related to high satisfaction. Psychologists have pointed out the link between measures of job satisfaction or employee engagement, on the one hand, and firm performance reflected by measures such as profitability, productivity, turnover or absenteeism, on the other (Harter et al., 2002; Judge et al., 2001). They have also found that job satisfaction affects mental health or

physical ailments (Locke, 1976). Because a direct and positive relationship exists in the service industries between employee satisfaction and customer satisfaction, job satisfaction becomes even more important in the context of the shift from manufacturing towards these industries (Rogers et al., 1994). Furthermore, performance of professional and knowledge workers is often difficult to measure and this makes indirect measures, such as employee satisfaction, more useful (Sousa-Poza and Sousa-Poza, 2000b). At the same time, job satisfaction has been linked to a number of specific aspects of the workplace, such as mode of supervision, physical work conditions, and so forth. Because these variables are not generally measured in large data files, this makes satisfaction a potential proxy for such unobserved objective factors (Freeman, 1978). If the individuals' responses to job satisfaction questions were purely idiosyncratic, then such relationships as the ones above would not be so consistently found (Clark, forthcoming).

The ability of job satisfaction to influence the economic outcomes listed above makes it an important variable to analyze. But what are the determinants of satisfaction with work? One can view expressed job satisfaction as a mental mapping of all the objective and subjective characteristics of the job into an index of satisfaction (Hamermesh, 2001). Therefore, satisfaction with work does not depend solely on the respondent's objective circumstances, such as his/ her salary or job type, but also on subjective factors, such as the his/ her psychological state, aspirations, willingness to voice discontent, the hypothetical alternatives to which the current job is compared, or the relative importance for each individual of the various objective measures. For example, if job security is what one values, then this is a signal that more emphasis should be placed on dealing with unemployment. The way objective job characteristics are perceived is important because job satisfaction tends to follow these perceptions. Because it reflects both objective and subjective factors, job satisfaction is more complex than standard economic variables (Freeman, 1978).

When ranking various life domains, individuals often place job towards the top of the ranking (Clark, forthcoming). It is therefore not surprising that satisfaction with work, together with family, finances and health, is one of the most important predictors of overall life satisfaction (Argyle, 1989; Judge and Watanabe, 1993). Furthermore, individuals spend more time at work than they spend doing almost anything else (Clark, forthcoming). The feeling among economic theorists, however, has generally been that subjective outcomes describing work cannot be linked to any underlying concept of utility and that, even if they could, their subjective nature makes them too noisy to be useful (Hamermesh, 2001; Lévy-Garboua and Montmarquette, 2004). Such a reluctance towards dealing with subjective variables – variables that measure “what people say” rather than “what people do” (Freeman, 1978) – comes as a surprise for non-economists (Sousa-Poza and Sousa-Poza, 2000a,b) given that well-being is arguably the central economic variable driving individuals'

decisions.

My focus is on studying job satisfaction from an empirical perspective. Although subjective variables have to be treated cautiously, answers to questions about satisfaction with work can convey important information about economic activity, as the previous literature review has shown. Job satisfaction is therefore a variable worth studying, not as a replacement for objective measures, but as an added dimension.

Labor relations in communist countries were different from those in free market economies and the difference between the two systems started with the educational process. In the East, the young were schooled for the communist system through restrictions that channeled them towards certain study paths and denied them others. The same process continued after school using forms of intervention ranging from channeling toward a place of work to compulsory posting to one (Kornai, 1992). Furthermore, the state set wages, prices, and enterprise budgets in ways that ensured no open unemployment, but produced low real wages and narrow skill and sectoral pay differences. Such policies led to inefficient allocations of labor and a preference towards egalitarianism (Blanchflower and Freeman, 1997). Such a system also gave employees an incentive to shirk because they could be sure to get their wages without any great effort. With a political system embodying the power of the working class, whether they believed this or not, workers were encouraged to act more openly against their bosses and resist them silently, thanks to this illusion of power. At the same time, however, while trade unions were prevalent, they were also characterized by a complete lack of independence (Kornai, 1992). In terms of satisfaction with work, the effect of socialist policies is more ambiguous – if one values job security most, then they have a positive effect, while if one looks to be rewarded commensurately to his/ her skills, then they have a negative effect.

Capitalist countries are facing their own set of problems. Due to the globalization process, jobs become more scarce as unskilled work moves away from the developed countries into the poorer ones, with lower wage costs. Paid work is becoming more and more a privilege, a basic status-forming activity of Western civilization (Vecerník, 2003). This increased risk of losing one's job has stressful consequences on people's lives (Beck, 1992, 2000). As a result, one typically finds a fall in job satisfaction in Western countries such as Britain or Germany (Green and Tsitsianis, 2005). A higher intensity of work effort and declining task discretion are some other possible explanations for such declining trends.

The transformation of political and economic systems that was brought about by the transition of the CEE countries from a planned economy to a free market model means that these countries are now also faced with these challenges of capitalism, while the influence of the half century of communism continues to be felt. The expectations of the population concerning social protection remain high, the pressures put on

work performance and job mobility continue to be weak, and deficiencies in work habits and a reluctance towards flexibility persist in large sections of the labor force (Vecernik, 2003). Because of the persistence of poor working conditions in the former communist countries, in which workers have long been deprived of normal market modes of responding to such conditions, having neither the 'exit' option of finding employment outside the state-run sector nor the 'voice' option of forming free trade unions, employees in these countries are expected to show relatively low levels of job satisfaction at the beginning of the transition process (Blanchflower and Freeman, 1997).

It is therefore interesting to see to what extent there are some systematic differences between the workers in the former communist societies of CEE and the workers in the West in terms of the level and determinants of their job satisfaction. If such differences exist, do they get narrower as the Central and Eastern European countries make progress in their transition to a market economy? I find that job satisfaction in transition countries actually decreases during the 1990s which makes them fall even further behind Western Europe, where no significant change in level occurs. This decrease is mainly the result of birth cohort replacement, younger cohorts having lower levels of satisfaction with work. However, the job satisfaction of younger people relative to older people gradually improves. Together with the improvements at the macroeconomic level, this leads to an increase in job satisfaction in Eastern Europe between 1997 and 2005 and a narrowing of the gap with the West. Are such cross-country comparisons meaningful or do they reflect cultural differences in the way people rate their experiences? Looking at overall life satisfaction, Bolle and Kemp (2009) find that such national differences in rated life satisfaction are real rather than reflecting differences in how satisfaction is rated, and therefore comparisons of international averages of life satisfaction are meaningful.

I will next present the two datasets and the methodology employed in my empirical analysis. The findings are then presented separately for the 1990-1999 and 1997-2005 time interval. The last section sums up the analysis.

2 Data and Methodology

2.1 Data

The data come from two different sources: the World Values Survey (WVS, 2009) and the International Social Survey Programme (ISSP) "Work Orientations" module. The WVS is a multi-country survey that covers people's attitudes toward a broad range of issues, such as economics and politics, family, work, or

religious values. So far three of its waves asked a question on job satisfaction: wave 1 (1981-1984), wave 2 (1989-1993), and wave 4 (1999-2004), but only the last two included transition countries so they will be the only ones used in the current analysis.

Although quite a few CEE countries were surveyed in wave 2 of the WVS, I will focus on those in which the survey was carried out soon enough after the change in regime for the data to roughly reflect the pre-transition situation. Following the methodology described in Easterlin (2009, p. 132), the group of countries for which early transition observations are available includes Belarus, Estonia, Hungary, Latvia, Lithuania, Poland, and the Russian Federation. Belarus will be excluded from the analysis because no job satisfaction question was asked in wave 2, leaving me with six transition countries. For Western Europe, the exact date of the wave 2 survey was not as crucial due to the fact that no regime change occurred in this region. Furthermore, the survey dates for the various countries spanned a shorter period of time than was the case in Eastern Europe, being carried out mostly throughout 1990. The non-transition countries included in the analysis are Austria, Belgium, Denmark, Finland, France, Great Britain, Iceland, Ireland, Italy, Netherlands, Portugal, Spain, and Sweden. In all nineteen countries – six in Eastern Europe and thirteen in Western Europe – the wave 4 survey was carried out between 1998 and 2000. This means that the WVS provides me with data roughly at the beginning of the transition process and a decade later. For simplicity, the wave 2 survey will be dated 1990 and the wave 4 survey will be referred to as 1999.

In order to bring the analysis of job satisfaction and its determinants more up to date, the WVS will be supplemented with data from the ISSP “Work Orientations” surveys, which took place in 1989, 1997, and 2005², and gathered varied objective and subjective job information. The country coverage is much less extensive than the WVS, focusing on OECD members, and it tends to change from one survey to the next. Only one transition country – Hungary – and one Western European country – Great Britain – were included in all three waves. Therefore, I will focus on the 1997 and 2005 surveys. There were five Eastern European and five Western European countries included in both of these surveys. The transition group includes Bulgaria, Czech Republic, Hungary, the Russian Federation, and Slovenia. The Western European group is represented by Great Britain, Denmark, Portugal, Spain, and Sweden.

The sample was reduced to include only employed respondents between 18 and 65 years old. Because the job satisfaction question was typically asked only of those with a job, I focus on employed individuals. The age restriction is meant to ensure that the respondents belong to age categories for which it is typical to be

²Details regarding the questionnaire, sampling, and data collection are available in the Study Monitoring Report for each ISSP wave. That for 2005, for example, is available via the following web page: <http://www.gesis.org/en/services/data/survey-data/issp/modules-studyoverview/work-orientations/2005/>

involved in the labor market and not still be in school or retired. Both surveys use nationally representative data.

Appendix A lists the variables that I use in the job satisfaction analysis. Some of the variables are recoded to ensure a more meaningful analysis, either by grouping certain categories together, or by using indicator variables. As much as possible, the variables in the two surveys are coded in a similar way. However, the scale for the job satisfaction question differs. In the WVS job satisfaction is assessed on a scale from 1 to 10: “Overall, how satisfied or dissatisfied are you with your job?”, with 1 = “Dissatisfied” and 10 = “Satisfied”. In the ISSP, the scale is 1 to 7: “How satisfied are you in your (main) job?”, with 1 = “completely dissatisfied” and 7 = “completely satisfied”. Although an income variable is available, it is quite an imperfect one. In the WVS it is usually coded as a ten-step variable. While in some cases these steps have income brackets attached to them, in others they represent just a subjective ladder on which the respondents place themselves. For simplicity, I assume this variable to represent ten different perceived income brackets. In the ISSP, income is coded on different scales from country to country. In order to have a consistent variable across countries, I use income quintiles to measure the respondent’s relative income. With regards to subjective variables, in the WVS respondents are asked to assess the degree of freedom of decision they have at work. In the ISSP survey, they rate their jobs on a larger number of dimensions which are described in Appendix A. In addition to these individual level variables, I also use some macroeconomic indicators: GDP per capita, the unemployment rate, and inflation. Even if the analysis of job satisfaction focuses on those employed at the time of the survey, the general unemployment rate is an indication of the risk of losing their jobs and is therefore expected to have an effect on their satisfaction with work.

Tables 1 and 2 present descriptive statistics for the WVS variables used in the analysis for each of the two dates covered here for Eastern Europe and Western Europe, respectively. In the case of job satisfaction the descriptive statistics are presented at the regional level, as well as for each of the individual countries. Simply by looking at the sample means, one sees that between the early and the late 1990s, Eastern Europe actually falls behind in terms of the level of job satisfaction. If at the onset of the transition there are a few Western countries – France, Italy, Spain – with mean job satisfaction below that of some of the former communist economies, by 1999 all of the transition countries are below every single country in Western Europe. The individual characteristics of the population are fairly stable in the West, with many more changes happening in the East during this first decade of transition. The education level increases in both regions. Although still higher than in Western Europe, the percentage of married people in transition countries decreases by twelve percentage points. Part time jobs and self employment are more common in the West than in the

East and there is not much change in this respect in any region during the decade covered here. Union membership is considerably lower in 1999 compared with 1990 in both regions, but the decrease is really drastic in Eastern Europe. During communism, trade unions acted as political “transmission belts” and not as independent representatives of the workers, thus producing demotivated, demoralized and unsatisfied workers (Lange and Georgellis, 2007). It is not surprising then, that once given a choice, Eastern European employees prefer to withdraw from labor unions. Finally, while the perceived freedom of decision on the job increases in Western Europe, it actually goes down in the transition countries. This is quite surprising given that the lack of freedom was one of the main negative features of the communist regimes that was supposed to end with the switch to capitalism. In fact, through the many functions it fulfilled (cf. Kornai, 1992, pp. 221-222) the firm could become a cell of totalitarian power, not just a scene of work. At the same time, however, with a political system embodying the power of the working class, during communism employees may have been given the illusion that they had more control than they actually did, and this could explain the decrease in perceived freedom of decision during the post-communist years.

Similar descriptive statistics for the ISSP variables are shown in table 3 for Eastern Europe, and table 4 for Western Europe. Between 1997 and 2005, there is a recovery in job satisfaction among the Eastern European countries. Combined with the lack of change in Western Europe, this leads to some convergence between the two regions, although not enough for the former communist countries to catch up. Even in 2005, four of the five Western countries included in the analysis are above each of their transition counterparts. The education level improves in both regions. The percentage of married people continues to decrease considerably in Eastern Europe, so that by 2005 it is actually lower than in the West. I find a similar decrease in union membership, which is now much lower in the East. In transition countries there is also a decrease in the percentage of people employed in the public sector of almost thirty percentage points. This is in line with the transformations involved in the transition process, such as privatization. Unfortunately, a similar variable is not available in the WVS.

In terms of macroeconomic conditions, figures 1 and 2 show the GDP per capita and the unemployment rate for Eastern and Western Europe over the 1989-2006 time interval, separately for the countries covered in the WVS and for the countries covered in the ISSP survey. The trends are quite similar for the countries in the two different surveys, which supports the idea of complementing the analysis based on the WVS with that using the ISSP. Figure 1 graphs the GDP per capita both as an index (1989=100) and in absolute value. In Western Europe there is a fairly consistent increase, so that in 1999 GDP is almost 20 percentage points higher than in 1990, followed, by 2006, by an increase of another 20 percentage points. In Eastern

Europe, the first few years of transition bring a collapse in GDP. Despite the fact that a recovery was underway in the second half of the 1990s, the GDP index in 1999 is still almost 10 percentage points lower than the 1990 value. Following a steep increase, the GDP index in Eastern Europe by 2005 is around 140, that is, almost the same as in Western Europe. This means that the GDP in the two regions increases by a similar percentage between 1989 and 2006. However, while the change in Western Europe is fairly steady, the transition countries go through a much more tumultuous period, with a collapse followed by recovery. Furthermore, the absolute value of GDP in Eastern Europe is much lower than in the West, the gap being fairly consistently \$10,000 or more.

Figure 2 shows the unemployment rate series. In Western Europe, the mid-1990s are marked by an increase in unemployment but by 1999 the unemployment rate is already lower than in 1989. The situation continues to improve until 2006. Just like in the case of GDP, in Eastern Europe during the first few years of transition the unemployment conditions become dramatically worse. However, while the recovery in terms of GDP has almost been achieved by 1999, the increase in unemployment continues until around 2000. As a consequence, in 1999 the unemployment rate in Eastern Europe is in the double digits. An improvement follows in the 2000s, so that in 2006 the rate is similar to that in Western Europe. Looking at the overall change in the unemployment rate between 1989 and 2006, while in Western Europe there is an improvement, in Eastern Europe the rate is still higher in 2006 compared with the pre-transition situation. Such dramatic increases in unemployment, from virtually zero to double digits, even if followed by a partial recovery, inevitably have a negative effect on the job satisfaction of the workers in the transition countries through the decrease in job security. In fact, Clark (forthcoming) shows that an employed individual in a high unemployment area is less likely to report high levels of job satisfaction than one living in a low unemployment area.

Although the country coverage of the WVS and the ISSP is different, the two groups representing each region are quite similar at the macroeconomic level, as figures 1 and 2 showed for GDP and unemployment. Therefore, the conclusions based on these two different surveys can reasonably complement each other for an analysis that covers a longer time period. The main downside of these two datasets is that they are not longitudinal studies which makes it difficult to deal with reverse causation problems. For example, it may be that an interesting job is what makes an employee satisfied, but it is also possible that a satisfied employee is more likely to consider his job interesting. Or it may be that being a union member makes one less satisfied, but it can also be the case that workers joined the union because they were dissatisfied with their jobs.

2.2 Methodology

The analysis will first focus on job satisfaction in Eastern and Western Europe during the 1990s, using the data of the WVS. Are there any significant differences in job satisfaction at the onset of the transition process? How do the trends in job satisfaction during the first decade of transition compare between the two regions? Are there signs of convergence? To the extent that there are differences in the level and trend of job satisfaction between the two groups of countries, are these due to differences in the objective macroeconomic conditions in the two regions? How about the impact of other objective circumstances, at the individual level? What role do subjective perceptions play? Are these determinants of job satisfaction the same in transition and non-transition countries? Do they differ over time? In order to get a more updated view, I then extend the analysis to the 1997 - 2005 time interval, using data from the ISSP, with similar questions being asked.

As far as the determinants of job satisfaction are concerned, it is reasonable to think that macroeconomic conditions have a strong impact on people's job satisfaction. Also important are individual circumstances as captured in the survey data. Finally, it is possible that subjective perceptions of what one's job has to offer also influence the way people assess their level of job satisfaction beyond what objective conditions would predict. Therefore, in a simplified manner, a job satisfaction function could be described as follows:

$$JS_{it} = f(\text{macroeconomic conditions}_{ct}, \text{individual circumstances}_{it}, \text{job characteristics rating}_{it}) \quad (1)$$

where JS stands for job satisfaction, i indexes individuals, t indexes time, and c indexes countries.

Based on the survey data from the WVS and the ISSP and on the outside information regarding country level variables, this can be written as a model of the following form:

$$JS_{it} = f(\mathbf{Y}_{ct}, \mathbf{X}_{it}, \mathbf{Z}_{it}) + \epsilon_{ict} \quad (2)$$

where \mathbf{Y} = a vector of macroeconomic indicators, consisting of log GDP per capita, unemployment rate, and inflation*10⁻¹; \mathbf{X} = a vector of individual controls, consisting of gender, age, education, marital status, employment level, union membership, sector, occupation type, and income; \mathbf{Z} = a vector of job characteristics, including freedom of decision on the job, pay and other job aspects.

This model can be implemented through regression analysis, which in this case is carried out using or-

dinary least squares (OLS) regressions.³ In all the regressions the standard errors are adjusted to allow for clusters in the error term within countries. This makes the standard errors substantially larger, and therefore the coefficients are less likely to be significant. Of course, labor market outcomes are likely to differ among former communist countries, as well as among Western countries. Despite any national differences though, the hypothesis here is that the communist experience is sufficiently similar to leave an identifiable common legacy affecting outcomes and views of the labor market in these countries (Blanchflower and Freeman, 1997).⁴ In order to account for any heterogeneity within regions though, country fixed-effects regressions are used where appropriate. This approach also removes the unobserved characteristics that are constant across individuals from the same country, thus removing the estimation bias caused by individual-invariant country characteristics.

The analysis first focuses on the general determinants of job satisfaction. In order to do this, I look at the overall sample, including both Eastern and Western Europe, and both surveys available in each dataset:

$$JS_{it} = \alpha_0 + \alpha_1 T_c + \alpha_2 W_t + \beta'_1 \mathbf{Y}_{ct} + \gamma'_1 \mathbf{X}_{it} + \eta'_1 \mathbf{Z}_{it} + \epsilon_{ict}. \quad (3)$$

The above equation does not show whether the determinants of job satisfaction have a differential effect in the two groups of countries. This can be investigated by interacting the transition country dummy, T_c , with the variables of interest, according to the following equations:

$$JS_{it} = \alpha_0 + \alpha_3 T_c W_t + \alpha_4 T_c Y_{ct} + \beta'_1 \mathbf{Y}_{ct} + \gamma'_1 \mathbf{X}_{it} + \eta'_1 \mathbf{Z}_{it} + \epsilon_{ict}, \quad (4)$$

for $Y_{ct} \in \mathbf{Y}_{ct}$,

$$JS_{it} = \alpha_0 + \alpha_3 T_c W_t + \alpha_5 T_c X_{it} + \beta'_1 \mathbf{Y}_{ct} + \gamma'_1 \mathbf{X}_{it} + \eta'_1 \mathbf{Z}_{it} + \epsilon_{ict}, \quad (5)$$

for $X_{it} \in \mathbf{X}_{it}$,

$$JS_{it} = \alpha_0 + \alpha_3 T_c W_t + \alpha_6 T_c Z_{it} + \beta'_1 \mathbf{Y}_{ct} + \gamma'_1 \mathbf{X}_{it} + \eta'_1 \mathbf{Z}_{it} + \epsilon_{ict}, \quad (6)$$

for $Z_{it} \in \mathbf{Z}_{it}$. If the coefficient for the interaction term of a certain variable with the transition country

³Because the answers to the job satisfaction questions take on ordered, discrete values, an ordered logit regression would be recommended for this type of analysis. The results, however, are quantitatively similar to those from the OLS specifications, not surprising given that the answer scales are fairly wide – 1 to 10 in the WVS and 1 to 7 in the ISSP. Therefore, only the OLS results are reported in the paper due to their easier interpretation.

⁴A series of F-tests were carried out to compare the overall regional results with the outcomes for the individual countries within each group, and enough homogeneity was found to support the grouping of countries in Eastern and Western Europe.

dummy is significantly different from zero, then the effect of that variable on job satisfaction is different in transition and non-transition countries. The expectation, however, is that these coefficients are not usually different from zero so that differences in satisfaction with work between the two groups of countries are mainly the result of differences in the level of the determinants and not in their nature.

It is also possible that the determinants of job satisfaction change over time. While this is less likely in Western Europe, such changes are expected in the East as a result of the transition process. Furthermore, if a change is indeed found in the relative level of job satisfaction of various demographic groups, it can be indicative of who the winners and losers of the transition process are. Interacting W_t with the various determinants of job satisfaction allows me to see if any significant changes occurred over time:

$$JS_{it} = \alpha_0 + \alpha_2 W_t + \alpha_7 W_t Y_{ct} + \beta'_1 \mathbf{Y}_{ct} + \gamma'_1 \mathbf{X}_{it} + \eta'_1 \mathbf{Z}_{it} + \phi_c + \epsilon_{ict}, \quad (7)$$

for $Y_{ct} \in \mathbf{Y}_{ct}$,

$$JS_{it} = \alpha_0 + \alpha_2 W_t + \alpha_8 W_t X_{it} + \beta'_1 \mathbf{Y}_{ct} + \gamma'_1 \mathbf{X}_{it} + \eta'_1 \mathbf{Z}_{it} + \phi_c + \epsilon_{ict}, \quad (8)$$

for $X_{it} \in \mathbf{X}_{it}$,

$$JS_{it} = \alpha_0 + \alpha_2 W_t + \alpha_9 W_t Z_{it} + \beta'_1 \mathbf{Y}_{ct} + \gamma'_1 \mathbf{X}_{it} + \eta'_1 \mathbf{Z}_{it} + \phi_c + \epsilon_{ict}, \quad (9)$$

for $Z_{it} \in \mathbf{Z}_{it}$. These equations are estimated for transition and non-transition countries separately, using country fixed-effects regressions.

The next step is to see the extent to which these determinants are able to explain the difference in the level of job satisfaction between transition and non-transition countries. This is done at each date for which surveys are available. Versions of the following equation are estimated:

$$JS_{it} = \alpha_0 + \alpha_1 T_c + \beta'_1 \mathbf{Y}_{ct} + \gamma'_1 \mathbf{X}_{it} + \eta'_1 \mathbf{Z}_{it} + \epsilon_{ict}, \quad (10)$$

for each $t \in \{1990, 1999\}$ for the WVS, and each $t \in \{1997, 2005\}$ for the ISSP data. T_c is an indicator variable equal to one if the respondent lives in a transition country. If α_1 is significantly different from zero then the level of job satisfaction is different in Eastern and Western Europe. The various country level and individual level controls will be added to the regression incrementally in order to see what the role of each

group of variables is in explaining any differences in satisfaction with work between regions. This role is measured through the impact that the added regression controls have on α_1 .

The job satisfaction trend in transition and non-transition countries for each of the two time intervals – the 1990s, using the WVS, and 1997 to 2005, using the ISSP survey – as well as its determinants are analyzed using the following equation:

$$JS_{it} = \alpha_0 + \alpha_2 W_t + \beta_1' \mathbf{Y}_{ct} + \gamma_1' \mathbf{X}_{it} + \eta_1' \mathbf{Z}_{it} + \phi_c + \epsilon_{ict}, \quad (11)$$

estimated for Eastern and Western Europe separately. W_t is a dummy variable equal to one for the latter date in the survey and zero for the earlier date. Therefore, if α_2 is significantly different from zero then job satisfaction displays a significant trend in the respective region. Country fixed-effects will be used and they are denoted by ϕ_c . The extent to which the trend is due to various country or individual level variables is captured in the impact that controlling for these variables has on α_2 . It is possible, however, that the job satisfaction trend is not only the result of changes in circumstances, but also of cohort replacement. If the new generations entering the sample are intrinsically more or less satisfied with their jobs, irrespective of their circumstances, this can influence the results. In order to further examine this hypothesis, I also include year of birth controls in my regressions.

The next section details the results obtained through the empirical implementation of the equations above.

3 Findings

3.1 Job Satisfaction in the 1990s

The first part of the analysis focuses on job satisfaction during the 1990s, using the data of the WVS. The purpose is to look at how job satisfaction in Eastern Europe is affected by the transition process and to compare this with the situation in Western Europe. The earliest survey available dates from around 1990. Although the transformation in the former communist countries had in many cases started before 1990, this survey can still serve as a rough reflection of the starting point of what was expected to be a convergence towards Western standards. Table 5 shows the mean job satisfaction in the two regions at the two dates available, 1990 and 1999, for the overall population, as well as for women and men separately. The differences in job satisfaction level between East and West are calculated in column (3). Job satisfaction in Western

Europe is significantly higher than in the former communist countries both in 1990 and in 1999. In fact, the difference is even bigger ten years into the transition than it was at the beginning of the process – 1.02 compared with 0.78 – and this gap increase is statistically significant. This means that by 1999, when asked to assess their job satisfaction on a scale from one to ten, people in Eastern Europe would on average pick a value about one point lower than their Western European counterparts. This considerable difference shows that the process of transition did not automatically bring an improvement in one of the most important life domains, work. This lack of convergence is mostly due to a statistically significant decrease in job satisfaction in Eastern Europe from 6.74 to 6.53. In Western Europe there is a slight, but statistically insignificant increase in job satisfaction from 7.52 to 7.56. Table 5 also shows the levels and changes in satisfaction with work for women and men separately. The trends are very similar to those for the overall population in both regions, while the levels are slightly higher for men than for women. The two genders are therefore similar enough to justify a unitary analysis of satisfaction with work for the overall population.

Table 6 looks at the job satisfaction trend in the various countries within each region, individually. Columns (1) and (3) use no controls, making them the equivalent of the regional results shown in table 5. Columns (2) and (4) take into account any demographic changes that might have occurred in the sample between the two dates. Some heterogeneity at the regional level is apparent. In general, the former Soviet republics seem to maintain their levels of job satisfaction better than Hungary and Poland, but they also start off at lower levels as table 1 showed. In Western Europe, over half of the countries show no significant change in satisfaction with work, while the rest are equally divided between increasing and decreasing trends. This lack of complete homogeneity within each region supports the inclusion of country fixed-effects whenever possible.

The general determinants of job satisfaction are analyzed in table 7. All countries and both surveys are included. The first two columns focus on objective variables, while the last column adds perceived freedom of decision to the picture. As expected, macroeconomic conditions have a statistically significant influence, with GDP per capita having a positive impact on job satisfaction, and unemployment and inflation a negative one. The job satisfaction of men is held back by their occupation and income because controlling for these in column (2) makes them significantly more satisfied than women, as opposed to the not significant difference found in column (1). Perceived freedom of decision on the other hand, helps them because the coefficients become negative in column (3). People in the oldest group, 50 to 65 years old, are the most satisfied with work. There is also an education premium in column (1) but it dissipates when occupation and income are accounted for, and it actually becomes negative when subjective perceptions are included. This means that

education pays off through the income and freedom of decision it typically leads to. Married people have higher job satisfaction than unmarried ones, but the direction of causality here is less clear. In terms of employment level, part time jobs are associated with a lower satisfaction, potentially because many people work part time only due to a lack of availability of full time jobs. The self employed are the most satisfied, with subjective perceptions accounting for their increased satisfaction because the coefficient becomes negative in the last column. Similarly, freedom of decision explains why people with white collar occupations are more satisfied at work. Income and freedom of decision turn out to be the two main determinants of job satisfaction at the individual level, both having a positive effect.

Is the impact of these factors on job satisfaction different in Eastern and Western Europe? In order to answer this question, I add interaction terms between the transition country dummy and the different explanatory variables. The expectation is that most of the difference in the level of satisfaction with work between the two regions is due to differences in circumstances and not to their differential impact on job satisfaction and therefore, the coefficients on the interaction terms should typically not be significant. Some differences, however, do arise (table 8). Because unemployment decreases job satisfaction, while its interaction term has a positive sign, this means that a higher unemployment rate is less likely to decrease job satisfaction in Eastern Europe compared with the West – column (1). This could be the result of the fact that transition countries start off with lower levels of job satisfaction in 1990 despite lower levels of unemployment, which is the opposite relationship to what one usually expects. The relative satisfaction with work of people between 30 and 49 years old compared with the reference age group, those 18 to 29, is lower in transition countries than in non-transition ones, since the coefficients for their interaction with the transition country dummy is negative and significant. Finally, the positive impact of occupation and income on job satisfaction – columns (3) and (4) – is stronger in transition countries. It will be interesting to see to what extent these differences between East and West get narrower as the transition progresses into the new millennium.

Within each group of countries, it is also possible to see changes in the impact of various circumstances on job satisfaction over time. Indeed, such significant interactions with time do arise, as shown in table 9, especially for transition countries. The relative position of older age groups compared with those between 18 and 29 years old worsens in transition countries – column (1) – pointing to young people as winners of the transition process. A similar improvement for young people also occurs in Western Europe, but the magnitude is lower. In Eastern Europe, the likelihood that a white collar job and a higher income lead to a higher level of job satisfaction increases between 1990 and 1999. The education premium also increases, which is not surprising given that the capitalist economy is more likely to reward education through a better

job and a higher income than was the case during communism. Additionally, in column (5) I find that the impact of perceived freedom of decision at work on satisfaction becomes stronger. To sum up, young and more educated people fare quite well during the transition, at least compared with older and less educated individuals, and the role of subjective perceptions in determining job satisfaction increases during the 1990s.

The next step is to look at how the level of job satisfaction differs between transition and non-transition countries and to find what accounts for any difference. This is done through ordinary least square regressions separately for 1990 (table 10) and 1999 (table 11). Column (1) in each table replicates the increasing gap found in table 5, transition countries having lower levels of job satisfaction. Columns (2) through (4) look at the role of objective conditions in explaining the gap, while column (5) focuses on freedom of decision. The potential determinants are added gradually in order to isolate the role of each set. Among the individual level controls, occupation and income are added in a separate step because they have a smaller number of observations. This way I can assess the role of the other objective determinants without the diminished sample size. The addition of subjective variables among the regression controls can produce exogeneity issues. As a result, I incorporate them in the analysis separately from the objective variables. The role of each set of determinants is measured through the impact on the coefficient for the transition country dummy compared with its magnitude in column (1). Differences in objective conditions are accountable for the difference in job satisfaction between Eastern and Western Europe at both dates because the coefficients in column (4) are no longer statistically different from zero in either table. Among these determinants, macroeconomic conditions have by far the most explanatory power. In fact, in 1990 (table 10), the coefficient in column (2) is no longer significant, while in 1999 (table 11) almost 70 per cent of the gap between the two groups of countries is explained, but at this latter date the difference remains statistically significant. Occupation and income appear to have the most explanatory power among objective individual circumstances. What matters more at the individual level are differences in terms of perceived freedom of decision at work. Not only do subjective perceptions explain some of the job satisfaction gap, although at both dates the coefficient on the transition country dummy is still significant when only freedom of decision at work is controlled for in column (5), but the R-squared values are bigger than when any other set of variables is included among the explanatory variables. This confirms that subjective perceptions generally have a strong impact in determining one's level of job satisfaction.

What role do these same objective and subjective circumstances play in explaining the job satisfaction trend in Eastern Europe? I attempt to answer this question in panel A of table 12. The reference year is 1990, so the coefficient on the dummy variable for 1999 reflects the change between the two dates. Because country

fixed-effects are used, the coefficients in column (1) are slightly different from the mean differences shown in table 5. However, the same downward trend is found as in table 5. The various potential determinants are added in the same order as in the previous two tables. Accounting for macroeconomic conditions in column (2) makes the downward trend even more pronounced. Indeed, as figures 1 and 2 showed, after the economic collapse that quickly followed the onset of the transition process, by 1999 the situation had improved considerably. The much lower coefficient in column (2) (-0.758) compared with that in column (1) (-0.138) reflects the fact that had it not been for the positive macroeconomic developments in transition countries after the initial collapse, the job satisfaction downward trend would have been even more pronounced. A similar impact, although of a lower magnitude, is found for the individual level circumstances, when occupation and income are included in column (4). When the effect of the other individual level characteristics is isolated in column (3), the coefficient is no longer significant, meaning that these mostly demographic variables account for the lower job satisfaction in 1999 compared with 1990. Freedom of decision also makes the time coefficient virtually zero – column (5). This could mean that people in transition countries might still feel unsure about the new system and this explains why the recovery in satisfaction with work lags behind the economic recovery in Eastern Europe. What else can explain the failure of job satisfaction in transition countries to recover commensurately with the economic recovery? If younger cohort are in fact intrinsically less satisfied than older ones, as Jürges (2003) found in Germany, then this could be an explanation. Indeed, adding controls for year of birth in the form of dummy variables for each separate year in panel B of table 12 makes the time coefficient no longer significant in column (1), when no other controls are used.

The cohort effect becomes even more obvious in table 13 when I divide the sample in six separate birth cohorts and I look at their mean job satisfaction in 1990 and 1999. In both Eastern and Western Europe there is a fairly clear succession of less satisfied cohorts. If I only look at the middle four birth cohorts which are surveyed both in 1990 and in 1999, the decrease in job satisfaction in Eastern Europe is no longer statistically significant, while in Western Europe there is an increase, although not a statistically significant one. What drives the overall decrease in the East and causes a lack of change in the West is the replacement of the most satisfied cohort with the least satisfied, youngest, one between the two dates.

To sum up, during the first decade of transition, differences in macroeconomic conditions play quite an important role in explaining the difference in the level of job satisfaction between transition and non-transition countries, but the role of subjective perceptions becomes more important over time as well. The fact that job satisfaction in Eastern Europe in 1999 is still significantly lower than in 1990 is mainly the results of cohort replacement with “newer” cohorts intrinsically less satisfied than “older” ones, which cancels the positive

effect of the economic recovery. Over time, however, the relative job satisfaction of young people improves, especially in transition countries, as the interactions of age with time showed. Even so, in Western Europe people under 30 remain the least satisfied group. The positive effect of education, white collar occupation, and income also increases in Eastern Europe, pointing to young and more educated people as the winners of the first decade of transition.

3.2 Job Satisfaction in the New Millennium

The main downside of the WVS is that there is no job satisfaction information beyond 1999. Therefore, I use the ISSP “Work Orientations” survey to extend the analysis to the 1997 to 2005 time interval. The scale for the job satisfaction question is different, being one to seven instead of one to ten as in the WVS. There is some overlap with the time coverage of the WVS, but it is short enough to allow the ISSP analysis to be interpreted as an extrapolation of the WVS data had it extended to 2005. One way to ensure this is to look at the one transition country – Hungary – and three Western European countries – Great Britain, Netherlands, and Italy – which were included in both the 1989 and the 1997 ISSP surveys. In terms of mean job satisfaction, I find a similar trend with the WVS: decrease in the transition country, although not quite as dramatic as in the WVS, and overall lack of change in the Western countries. I will focus my analysis from now on on those countries that were surveyed in 1997 and 2005: Bulgaria, Czech Republic, Hungary, the Russian Federation, Slovenia, Great Britain, Denmark, Portugal, Spain, and Sweden. They are different from the countries studied in the WVS, but Figures 1 and 2 show enough macroeconomic similarity to make the analysis comparable. The same steps are followed as in the analysis of the WVS data.

Table 14 shows the mean job satisfaction in Eastern and Western Europe, in 1997 and 2005, for the overall population, as well as for women and men separately. Column (1) finds a significant increase in job satisfaction for the transition countries by 2005, from 4.92 to 5.06. Among the two genders though, the increase is statistically significant only for men. In Western Europe, as shown in column (2), there is no significant change in job satisfaction, neither for the overall population, nor for any of the two genders separately, the lack of trend therefore continuing between 1997 and 2005. This means that, unlike during the first decade of transition, there is some convergence between the two regions by 2005. Although transition countries continue to have lower levels of job satisfaction than non-transition ones, the difference in column (3) significantly decreases from 0.38 in 1997 to 0.25 in 2005. The gap between East and West only narrows significantly for men, not for women.

Looking at the changes in job satisfaction at country level (table 15), I find that in Eastern Europe the increase in job satisfaction is mainly driven by Bulgaria and Hungary, who by 2005 become the transition countries with the highest levels of job satisfaction although they start off fairly low in 1997. Less changes occur in the other three countries. In Western Europe, three of the five countries show the same stability, while two countries, Denmark and Spain, actually show significant decreases in job satisfaction. These two countries start off with the highest levels of satisfaction in 1997, and despite the decrease, Denmark still tops the ranking in 2005.

The general determinants of job satisfaction in 1997 and 2005 are similar to what I found in the WVS. For the additional variable of sector, people employed in the public sector on average have higher levels of job satisfaction than those working in the private sector. The various subjective variables in the ISSP tend to have the positive effect that one expects. The impact of having a high pay and an interesting job are particularly strong. Also very important for satisfaction is to have a job that is not very stressful. Table 16 shows the objective and subjective variables whose impact significantly differs between transition and non-transition countries. The importance of income in determining job satisfaction continues to be bigger in transition countries – column (2), with the education premium also being higher in Eastern Europe – column (1). Subjective perceptions – how interesting one’s job is, how much independent work it allows for, and how dangerous it is – tend to matter less in transition than in non-transition countries. In general, it appears that people in transition countries focus more on objective conditions, while in non-transition countries subjective perceptions have a stronger impact on satisfaction with work. Overall though, compared with the 1990s, the results are indicative of a convergence between the two regions not just in terms of the level of job satisfaction, but in terms of its determinants as well, especially the objective ones.

The ability of these various circumstances to explain the difference in job satisfaction between Eastern and Western Europe is tested next. For 1997, this is done in table 17. The coefficient on the transition country dummy is no longer significantly negative after controlling for objective macroeconomic conditions in column (2). This means that these variables account for the gap in job satisfaction observed in 1997. In table 18, however, the coefficient is still as high as without any controls, so the macroeconomic conditions are no longer accountable for the gap observed in 2005. This is in line with the diminishing role of macroeconomic conditions in explaining satisfaction with work differences that I found in the WVS between 1990 (table 10) and 1999 (table 11). The objective variables at the individual level that I consider, including sector, occupation, and income, have even less explanatory power, as columns (3) and (4) show. The variables that seem to be the reason behind the persisting gap are those reflecting the respondents’ subjective appraisal of

their job characteristics, with the coefficient in column (5) no longer significantly different from zero, neither in 1997 nor in 2005. As was the case for freedom of decision at work in the WVS, the cumulative power of the subjective variables in the ISSP towards explaining variations in individual job satisfaction is quite high, as reflected by relatively high R-square values.

Table 19 identifies the determinants of the upward trend in job satisfaction in Eastern Europe. In panel A, controlling for macroeconomic variables in column (2) makes the coefficient no longer significant. This shows that by 2005 the effect of the economic recovery in Eastern Europe are also felt in terms of job satisfaction. The role of objective individual level variables in driving this upward trend is quite low, because their addition among the controls in columns (3), (4) does not make a big difference. The impact of subjective variables is also fairly low – column (5). Adding controls for year of birth in panel B does not make a big difference during this time interval. Indeed, in Eastern Europe there is no longer a big difference in the job satisfaction of the “old” and the “new” cohort, in 1997 and 2005 (table 20). This is probably the result of the relative improvement in the satisfaction of younger people compared with older ones that was already underway before 1999. It is the job satisfaction of cohorts included at both dates that drives the increase in transition countries. In Western Europe, the cohort effect persists but it is canceled out by the slight increase observed for the four middle cohorts.

Because the data come from two different datasets, it is difficult to assess how job satisfaction in 2005 compares with its level in 1990, at the onset of the transition. However, if I only consider the seven countries that were included in both the WVS and the ISSP – Hungary, Russia, Denmark, Great Britain, Sweden, Spain, and Portugal – it appears that the recovery in job satisfaction has been achieved in Eastern Europe because mean satisfaction in 2005 is higher than in 1990. However, with data coming from two different datasets, with two different answer scales, making any inferences about statistical significance is hazardous.

4 Summary and Conclusions

In 1990, soon after the beginning of the transition process in Eastern Europe, job satisfaction was significantly lower than in the West, but a quick convergence was commonly expected as people in the East were adopting the “Western” lifestyle. However, as the WVS data show, transition countries still have lower levels of job satisfaction than Western European countries in 1999. In fact, the difference between the two regions becomes even bigger due to a significant decrease in satisfaction with work in Eastern Europe between 1990 and 1999 combined with a lack of change in the West. The same patterns are found for the overall popu-

lation, as well as for men and women separately. The ISSP “Work Orientations” surveys of 1997 and 2005 allow me to extend the job satisfaction analysis into the new millennium. I thus find a significant increase in satisfaction with work in transition countries between these two dates, while in Western Europe the lack of a significant trend persists. Therefore, there is some convergence between the two regions during this time interval, but Eastern Europe is still below the West at both dates.

The determinants of job satisfaction are quite similar in Eastern and Western Europe, but the impact of subjective variables on job satisfaction is stronger in the West, while objective conditions, such as income, matter more in the East. The fact that satisfaction with work in transition countries is lower is mainly the result of differences in macroeconomic conditions between the two regions. Indeed, the former communist countries start off at a lower economic level than the West and go through a dramatic collapse in the first few years of the transition. Despite the swift recovery, they are not quite back to the pre-transition level in 1999 and still considerably behind Western Europe. Among the individual level variables, occupation and perceived relative income also account for some of the difference in job satisfaction between the two regions, but the impact of differences in perceived freedom of decision at work is actually slightly stronger. In fact, the inability to close the gap with the West by 2005 is also due to the way people in transition countries subjectively perceive their job characteristics.

In Western Europe, job satisfaction does not change significantly between 1990 and 2005. In Eastern Europe, there is a decline, followed by recovery. The decline is mostly driven by cohort effects – younger cohorts are intrinsically less satisfied than older ones, all things equal, so as they enter the labor market, this has a negative effect on satisfaction with work, even when objective conditions improve. The transition, however, appears to benefit young people more than older ones. The young are better adapted to the new market conditions, which is consistent with the findings of Alesina and Fuchs-Schündeln (2007), and this allows them to improve their relative position compared with older people more than in the West. This phenomenon counteracts the cohort effect between 1997 and 2005, one of the reasons why there is an increase in job satisfaction in Eastern Europe in this time interval. At the same time, I find a deterioration in transition countries in the relative job satisfaction of people between 40 and 49 years old compared with the other age groups. It is beyond the scope of this paper to find the reasons behind this deterioration, but one can speculate that people in this age group were already well-embarked on a life course set under the conditions of socialism, they had trained to function in this system, and were left in turmoil when the political and economic system changed. This is made worse by the fact that many of these people are at a peak in parental obligations generating a considerable financial burden which could explain why they do not consider their jobs satisfying.

Using two different datasets, with two different scales, makes it impossible to assess with certainty whether job satisfaction in Eastern Europe is back to pre-transition levels. The results, however, indicate that the path to recovery has started and that convergence with the West is possible.

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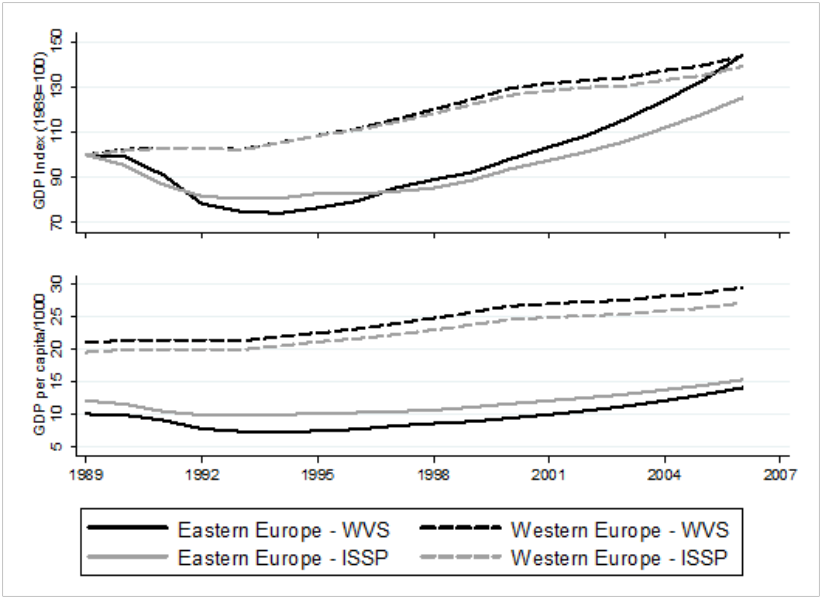
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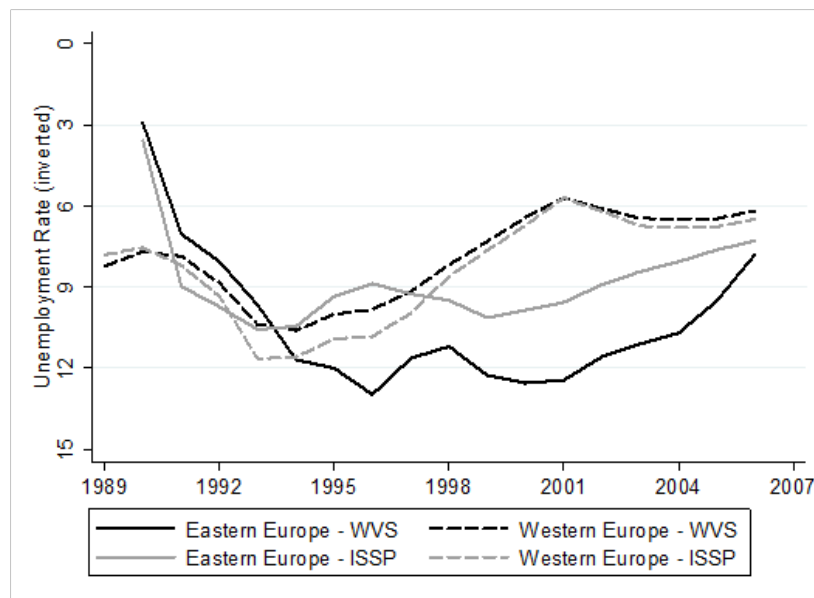
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Figure 1: GDP per capita index (1989=100) and absolute GDP per capita in transition and non-transition countries for the WVS and ISSP groups of countries, respectively, 1989-2006



Source: World Bank (2009) World Development Indicators data in PPP constant 2005 international dollars, except Lithuania (1989), Poland (1989), Slovenia (1989), and Czech Republic (1989), extrapolated using the Economic Commission for Europe (2003).

Figure 2: The unemployment rate in transition and non-transition countries for the WVS and ISSP groups of countries, respectively, 1989-2006



Source: International Labor Organization (2009) KILMS database, except Hungary (1990, 1991), Latvia (1992-1995), Lithuania (1992, 1993), Poland (1990, 1991), Bulgaria (1990, 1991, 1992), and Slovenia (1990, 1991), from Economic Commission for Europe (2003).

Note: When the unemployment rate for one country is missing in a certain year, the regional average is obtained using the remaining countries in the respective region. The following rates are missing: Iceland (1989, 1990), Hungary (1989), Latvia (1989, 1990, 1991), Lithuania (1989, 1990, 1991), Poland (1989), Russia (1989, 1990, 1991), Slovenia (1989, 1990), Bulgaria (1989), Czech Republic (1989), and Slovenia (1989).

Table 1: Descriptive Statistics for Key Variables in the World Values Survey, wave 2 and wave 4, transition countries

Variable	Wave 2: 1989-1991			Wave 4: 1998-2000		
	Number of obs.	Sample mean	Standard deviation	Number of obs.	Sample mean	Standard deviation
<i>Job satisfaction</i>	5,061	6.74	2.37	3,739	6.53	2.46
Estonia	754	6.70	2.33	561	6.67	2.25
Hungary	551	7.34	2.26	419	6.85	2.31
Latvia	660	6.46	2.45	445	6.74	2.33
Lithuania	665	6.89	2.27	515	6.84	2.45
Poland	1,131	7.12	2.18	499	6.62	2.34
Russian Federation	1,300	6.26	2.49	1,300	6.17	2.64
<i>Individual characteristics</i>						
Male	5,059	0.49	0.50	3,739	0.52	0.50
Age	5,061	39.26	11.30	3,739	38.98	10.92
ACE	4,313	18.81	3.12	3,722	19.74	2.85
Married	5,054	0.76	0.43	3,728	0.64	0.48
Single	5,054	0.13	0.34	3,728	0.18	0.39
Div./separated/widowed	5,054	0.11	0.31	3,728	0.18	0.38
Full time	5,061	0.85	0.36	3,739	0.86	0.35
Part time	5,061	0.10	0.30	3,739	0.09	0.29
Self employed	5,061	0.05	0.22	3,739	0.05	0.22
White collar	3,431	0.45	0.50	3,707	0.45	0.50
Union	4,492	0.59	0.49	3,739	0.22	0.42
Income bracket	4,831	4.88	1.92	3,468	5.36	2.51
<i>Subjective variable</i>						
Freedom of decision	4,945	6.03	2.84	3,661	5.54	2.93

Table 2: Descriptive Statistics for Key Variables in the World Values Survey, wave 2 and wave 4, non-transition countries

Variable	Wave 2: 1989-1991			Wave 4: 1998-2000		
	Number of obs.	Sample mean	Standard deviation	Number of obs.	Sample mean	Standard deviation
<i>Job satisfaction</i>	10,146	7.52	1.99	8,408	7.56	1.85
Austria	698	8.00	1.75	759	7.72	2.03
Belgium	1,294	7.72	1.81	852	7.61	1.80
Denmark	642	8.23	1.66	623	8.05	1.79
Finland	424	7.55	2.03	504	7.73	1.50
France	461	6.79	1.97	773	7.11	1.90
Great Britain	837	7.36	2.09	479	7.33	1.88
Iceland	549	7.83	1.74	714	7.86	1.56
Ireland	527	7.76	2.01	522	7.77	2.00
Italy	1,036	7.27	2.10	972	7.31	2.01
The Netherlands	435	7.49	1.67	631	7.55	1.34
Portugal	614	7.34	2.30	438	7.63	1.98
Spain	1,862	7.07	2.08	495	7.32	1.90
Sweden	767	7.92	1.84	646	7.32	1.85
<i>Individual characteristics</i>						
Male	10,132	0.61	0.49	8,405	0.57	0.50
Age	10,146	37.81	11.88	8,408	38.94	11.29
ACE	9,783	17.89	3.79	8,227	18.70	3.70
Married	10,132	0.69	0.46	8,351	0.59	0.49
Single	10,132	0.24	0.43	8,351	0.31	0.46
Div./separated/widowed	10,132	0.07	0.26	8,351	0.11	0.31
Full time	10,146	0.78	0.41	8,408	0.75	0.44
Part time	10,146	0.11	0.31	8,408	0.15	0.35
Self employed	10,146	0.11	0.32	8,408	0.11	0.31
White collar	9,428	0.55	0.50	8,157	0.58	0.49
Union	10,146	0.26	0.44	8,408	0.30	0.46
Income bracket	8,463	5.88	2.67	6,810	6.07	2.41
<i>Subjective variable</i>						
Freedom of decision	10,091	6.89	2.56	8,379	7.06	2.34

Table 3: Descriptive Statistics for Key Variables in the International Social Survey Programme, 1997 and 2005, transition countries

Variable	1997			2005		
	Number of obs.	Sample mean	Standard deviation	Number of obs.	Sample mean	Standard deviation
<i>Job satisfaction</i>	2,923	4.92	1.26	2,998	5.06	1.25
Bulgaria	459	4.96	1.17	477	5.22	1.23
Czech Republic	514	5.13	1.14	659	5.02	1.06
Hungary	624	4.78	1.16	439	5.10	1.20
Russia	812	4.86	1.48	925	4.95	1.44
Slovenia	514	4.97	1.13	498	5.08	1.16
<i>Individual characteristics</i>						
Male	2,923	0.54	0.50	2,998	0.53	0.50
Age	2,923	38.63	10.33	2,998	39.76	11.19
Less than high school	2,921	0.38	0.48	2,947	0.31	0.46
High school	2,921	0.48	0.50	2,947	0.53	0.50
University	2,921	0.14	0.35	2,947	0.16	0.37
Married	2,916	0.72	0.45	2,972	0.63	0.48
Single	2,916	0.16	0.37	2,972	0.24	0.42
Div./separated/widowed	2,916	0.12	0.32	2,972	0.14	0.34
Full time	2,923	0.84	0.37	2,998	0.86	0.34
Part time	2,923	0.06	0.23	2,998	0.05	0.23
Self employed	2,923	0.10	0.30	2,998	0.08	0.27
Public sector	2,879	0.59	0.49	2,942	0.36	0.48
White collar	2,761	0.55	0.50	2,800	0.56	0.50
Union	2,923	0.40	0.49	2,923	0.23	0.42
Income quintile	2,399	2.87	1.39	2,181	2.88	1.44
<i>Subjective variables</i>						
Job security	2,887	3.44	1.23	2,956	3.54	1.11
Pay	2,901	2.50	1.09	2,978	2.70	1.13
Promotion	2,844	2.38	1.06	2,956	2.57	1.11
Interesting job	2,885	3.58	1.08	2,974	3.56	1.06
Independent work	2,879	3.63	1.16	2,970	3.51	1.15
Help others	2,848	3.67	1.11	2,950	3.62	1.07
Useful to society	2,851	4.01	0.88	2,949	3.90	0.91
Exhausted after work	2,910	2.56	0.90	2,984	2.53	0.93
Physical work	2,906	3.45	1.33	2,980	3.45	1.32
Stressful work	2,892	2.99	1.15	2,967	2.93	1.18
Dangerous conditions	2,870	3.61	1.38	2,947	3.72	1.35

Table 4: Descriptive Statistics for Key Variables in the International Social Survey Programme, 1997 and 2005, non-transition countries

Variable	1997			2005		
	Number of obs.	Sample mean	Standard deviation	Number of obs.	Sample mean	Standard deviation
<i>Job satisfaction</i>	3,193	5.31	1.17	3,972	5.31	1.12
Great Britain	528	5.12	1.23	460	5.25	1.27
Denmark	622	5.70	1.07	1,110	5.51	1.11
Portugal	857	5.17	1.28	1,025	5.26	1.07
Spain	395	5.40	1.09	556	5.24	1.10
Sweden	791	5.25	1.03	821	5.18	1.08
<i>Individual characteristics</i>						
Male	3,193	0.54	0.50	3,972	0.52	0.50
Age	3,193	40.45	11.61	3,972	41.66	11.73
Less than high school	2,373	0.55	0.50	3,917	0.46	0.50
High school	2,373	0.28	0.45	3,917	0.36	0.48
University	2,373	0.17	0.37	3,917	0.18	0.39
Married	3,186	0.65	0.48	3,962	0.67	0.47
Single	3,186	0.28	0.45	3,962	0.24	0.43
Div./separated/widowed	3,186	0.07	0.26	3,962	0.10	0.29
Full time	3,193	0.72	0.45	3,972	0.76	0.43
Part time	3,193	0.15	0.36	3,972	0.13	0.33
Self employed	3,193	0.13	0.34	3,972	0.12	0.32
Public sector	3,175	0.33	0.47	3,903	0.32	0.47
White collar	2,202	0.61	0.49	3,746	0.68	0.46
Union	3,193	0.49	0.50	3,925	0.48	0.50
Income quintile	2,495	2.62	1.47	3,337	2.67	1.39
<i>Subjective variables</i>						
Job security	3,152	3.62	1.28	3,920	3.73	1.14
Pay	3,173	2.54	1.14	3,937	2.69	1.12
Promotion	3,120	2.57	1.16	3,887	2.74	1.12
Interesting job	3,179	3.99	1.00	3,941	3.91	1.00
Independent work	3,175	4.00	1.10	3,946	3.90	1.10
Help others	3,163	3.92	1.09	3,940	3.82	1.08
Useful to society	3,129	4.01	1.02	3,927	3.91	1.02
Exhausted after work	3,182	2.64	0.92	3,956	2.66	0.89
Physical work	3,182	3.40	1.27	3,951	3.43	1.26
Stressful work	3,180	2.78	0.99	3,953	2.80	0.98
Dangerous conditions	3,167	3.87	1.21	3,930	3.97	1.17

Table 5: Mean job satisfaction by region and gender, 1990 and 1999

	Eastern Europe (1)	Western Europe (2)	Difference (1)-(2) (3)
<i>All</i>			
1990	6.74 (0.03)	7.52 (0.02)	-0.78** (0.04)
1999	6.53 (0.04)	7.56 (0.02)	-1.02** (0.05)
Difference	-0.21** (0.05)	0.03 (0.03)	-0.24** (0.06)
<i>Women</i>			
1990	6.71 (0.05)	7.48 (0.03)	-0.77** (0.06)
1999	6.47 (0.06)	7.51 (0.03)	-1.03** (0.07)
Difference	-0.24** (0.08)	0.02 (0.05)	-0.27** (0.09)
<i>Men</i>			
1990	6.77 (0.05)	7.55 (0.03)	-0.78** (0.05)
1999	6.59 (0.06)	7.59 (0.03)	-1.00** (0.07)
Difference	-0.18* (0.07)	0.05 (0.04)	-0.23** (0.08)

Significance levels: ** p<0.01, * p<0.05, + p<0.10.

Table 6: Changes in job satisfaction by country, 1990-1999

	(1)	(2)	(3)	(4)
<i>Eastern Europe</i>		<i>Western Europe</i>		
Hungary	(-) **	(-) **	Austria	(-) * (-) **
Estonia	0	0	Belgium	0 0
Latvia	(+)+	(+)+	Denmark	(-)+ (-)*
Lithuania	0	0	Finland	0 0
Poland	(-) **	(-) **	France	(+)** (+)*
Russia	0	(-) *	Great Britain	0 0
			Iceland	0 0
			Ireland	0 0
			Italy	0 0
			The Netherlands	0 0
			Portugal	(+)+ (+)+
			Spain	(+)* (+)*
			Sweden	(-) ** (-) **

The columns are based on the signs of OLS coefficients. Columns (1) and (3) use no controls. Columns (3) and (4) control for gender, age, and education. Significance based on robust standard errors. Significance levels: ** p<0.01, * p<0.05, + p<0.10.

Table 7: Ordinary least squares regressions of job satisfaction in Eastern and Western Europe, 1990-1999

Variable	(1)	(2)	(3)
	Coeff. (t-stat)	Coeff. (t-stat)	Coeff. (t-stat)
Ln GDP per capita	0.469+ (1.86)	0.531 (1.69)	0.493+ (1.89)
Unemployment rate	-0.031** (-3.40)	-0.039** (-4.29)	-0.018+ (-2.02)
Inflation*10 ⁻¹	-0.009** (-5.40)	-0.011** (-7.63)	-0.008** (-5.77)
Male	0.018 (0.54)	0.071+ (1.84)	-0.074+ (-1.74)
Age 30 - 39	-0.041 (-1.20)	-0.018 (-0.44)	-0.095* (-2.24)
Age 40 - 49	0.077 (1.52)	0.052 (0.92)	-0.033 (-0.64)
Age 50 - 65	0.316** (8.03)	0.342** (7.21)	0.179** (4.36)
Age completed education	0.012* (2.12)	-0.004 (-0.87)	-0.018** (-4.01)
Single	-0.267** (-5.21)	-0.216** (-4.81)	-0.163** (-3.38)
Divorced/ separated/ widowed	-0.184** (-3.75)	-0.124* (-2.48)	-0.128* (-2.54)
Part time	-0.219** (-3.51)	-0.176** (-2.91)	-0.147* (-2.41)
Self employed	0.375** (5.52)	0.329** (4.08)	-0.329** (-3.27)
Belong to labor unions	-0.000 (-0.00)	0.024 (0.33)	0.007 (0.11)
White collar		0.232** (5.48)	0.015 (0.38)
Income bracket		0.062** (3.74)	0.026+ (1.88)
Freedom of decision at work			0.326** (28.08)
Constant	2.919 (1.14)	2.117 (0.66)	0.873 (0.32)
Observations	25,470	19,648	19,490
R-squared	0.060	0.070	0.210

All countries and both waves included. The omitted categories are age 18-29, married, and full time. Transition and year dummy variables were also included. T-statistics are adjusted for clustering at country level. Significance levels: ** p<0.01, * p<0.05, + p<0.10.

Table 8: Ordinary least squares regressions of job satisfaction with interactions between the transition country dummy and specified independent variables, 1990-1999

Variable	(1) Coeff. (t-stat)	(2) Coeff. (t-stat)	(3) Coeff. (t-stat)	(4) Coeff. (t-stat)
Transition*unemployment rate	0.088* (2.72)			
Transition*age 30-39		-0.148* (-2.17)		
Transition*age 40-49		-0.263* (-2.16)		
Transition*age 50-65		-0.046 (-0.74)		
Transition*white collar			0.190+ (1.82)	
Transition*income bracket				0.077** (3.28)
Observations	25,470	25,470	19,648	19,648
R-squared	0.062	0.060	0.070	0.072

The regression controls include transition and year dummies, ln GDP per capita, unemployment, inflation, gender, age group, marital status, employment level, union membership. In columns (3) and (4) occupation and income bracket are also controlled for. T-statistics are adjusted for clustering at country level. Significance levels: ** p<0.01, * p<0.05, + p<0.10.

Table 9: Country fixed-effects regressions of job satisfaction with interactions between time and specified independent variables, 1990-1999

Variable	Eastern Europe					Western Europe
	(1) Coeff. (t-stat)	(2) Coeff. (t-stat)	(3) Coeff. (t-stat)	(4) Coeff. (t-stat)	(5) Coeff. (t-stat)	(6) Coeff. (t-stat)
1999*age 30-39	-0.269+ (-1.71)					-0.188* (-2.23)
1999*age 40-49	-0.589** (-3.69)					-0.328** (-3.76)
1999*age 50-65	-0.631** (-3.60)					-0.345** (-3.76)
1999*age completed education		0.133** (6.46)				
1999*white collar			0.607** (4.45)			
1999*income bracket				0.109** (2.99)		
1999*freedom of decision at work					0.035+ (1.69)	
Observations	7,546	7,546	5,651	5,651	7,377	17,924
R-squared	0.030	0.034	0.059	0.058	0.179	0.045

The regression controls include year, ln GDP per capita, unemployment, inflation, gender, age group, marital status, employment level, union membership. In columns (3) and (4) occupation and income bracket are also controlled for. Significance levels: ** p<0.01, * p<0.05, + p<0.10.

Table 10: Ordinary least squares regressions of job satisfaction on region, 1990

Variable	Objective conditions				Subjective perceptions
	(1) Coeff. (t-stat)	(2) Coeff. (t-stat)	(3) Coeff. (t-stat)	(4) Coeff. (t-stat)	(5) Coeff. (t-stat)
Transition country dummy	-0.778** (-3.68)	-0.539 (-1.27)	-0.434 (-1.27)	-0.299 (-0.97)	-0.493** (-3.20)
Observations	15,207	15,207	13,590	9,771	15,036
R-squared	0.029	0.040	0.055	0.060	0.193
Country level controls	no	yes	yes	yes	no
Individual level controls	no	no	yes	yes	no
Occupation and income	no	no	no	yes	no
Freedom of decision	no	no	no	no	yes
Number of countries	19	19	19	19	19

Reference group: Western Europe. Country level controls include ln GDP per capita, unemployment rate, inflation. Individual level controls include gender, age group, age completed education, marital status, employment level union membership. T-statistics are adjusted for clustering at country level. Significance levels: ** p<0.01, * p<0.05, + p<0.10.

Table 11: Ordinary least squares regressions of job satisfaction on region, 1999

Variable	Objective conditions				Subjective perceptions
	(1) Coeff. (t-stat)	(2) Coeff. (t-stat)	(3) Coeff. (t-stat)	(4) Coeff. (t-stat)	(5) Coeff. (t-stat)
Transition country dummy	-1.022** (-6.15)	-0.368* (-2.49)	-0.502** (-2.95)	-0.065 (-0.21)	-0.534** (-3.52)
Observations	12,147	12,147	11,880	9,877	12,040
R-squared	0.050	0.059	0.072	0.088	0.210
Country level controls	no	yes	yes	yes	no
Individual level controls	no	no	yes	yes	no
Occupation and income	no	no	no	yes	no
Freedom of decision	no	no	no	no	yes
Number of countries	19	19	19	19	19

Reference group: Western Europe. Country level controls include ln GDP per capita, unemployment rate, inflation. Individual level controls include gender, age group, age completed education, marital status, employment level union membership.

T-statistics are adjusted for clustering at country level.

Significance levels: ** p<0.01, * p<0.05, + p<0.10.

Table 12: Country fixed-effects regressions of job satisfaction on time, 1990-1999, transition countries

Variable	Objective conditions				Subjective perceptions
	(1) Coeff. (t-stat)	(2) Coeff. (t-stat)	(3) Coeff. (t-stat)	(4) Coeff. (t-stat)	(5) Coeff. (t-stat)
<i>Panel A: Without year of birth controls</i>					
Year 1999	-0.138* (-2.55)	-0.758* (-2.30)	-0.096 (-1.48)	-0.243** (-2.94)	-0.007 (-0.14)
Observations	8,800	8,800	7,546	5,651	8,606
R-squared	0.019	0.021	0.026	0.054	0.166
<i>Panel B: With year of birth controls</i>					
Year 1999	-0.020 (-0.34)	-0.628+ (-1.90)	0.114 (1.15)	-0.061 (-0.51)	0.070 (1.28)
Observations	8,800	8,800	7,546	5,651	8,606
R-squared	0.023	0.025	0.027	0.055	0.168
Country level controls	no	yes	no	no	no
Individual level controls	no	no	yes	yes	no
Occupation and income	no	no	no	yes	no
Freedom of decision	no	no	no	no	yes
Number of countries	6	6	6	6	6

Reference year: 1990. Country level controls include ln GDP per capita, unemployment rate, inflation. Individual level controls include gender, age group, age completed education, marital status, employment level, union membership.

Significance levels: ** p<0.01, * p<0.05, + p<0.10.

Table 13: Job satisfaction means and standard errors by year of birth cohort, 1990 and 1999

Birth year	Eastern Europe		Western Europe	
	1990 Mean (st. error)	1999 Mean (st. error)	1990 Mean (st. error)	1999 Mean (st. error)
1924-1933	7.341 (0.12)		7.897 (0.07)	
1934-1943	7.022 (0.07)	6.690 (0.16)	7.765 (0.05)	7.886 (0.07)
1944-1953	6.674 (0.06)	6.549 (0.08)	7.667 (0.04)	7.665 (0.04)
1954-1963	6.635 (0.06)	6.388 (0.07)	7.363 (0.04)	7.537 (0.04)
1963-1973	6.377 (0.09)	6.733 (0.08)	7.214 (0.05)	7.480 (0.04)
1974-1981		6.369 (0.12)		7.369 (0.06)

Table 14: Mean job satisfaction by region and gender, 1997 and 2005

	Eastern Europe (1)	Western Europe (2)	Difference (1)-(2) (3)
<i>All</i>			
1997	4.92 (0.03)	5.31 (0.02)	-0.39** (0.03)
2005	5.06 (0.03)	5.31 (0.02)	-0.25** (0.03)
Difference	0.13** (0.04)	0.00 (0.03)	0.13** (0.05)
<i>Women</i>			
1997	4.94 (0.04)	5.30 (0.03)	-0.35** (0.05)
2005	5.02 (0.04)	5.28 (0.03)	-0.25** (0.05)
Difference	0.08 (0.05)	-0.02 (0.04)	0.10 (0.07)
<i>Men</i>			
1997	4.91 (0.03)	5.32 (0.03)	-0.42** (0.05)
2005	5.09 (0.03)	5.34 (0.03)	-0.26** (0.04)
Difference	0.18** (0.05)	0.02 (0.04)	0.16** (0.06)

Significance levels: ** p<0.01, * p<0.05, + p<0.10.

Table 15: Changes in job satisfaction by country, 1997-2005

	(1)	(2)		(3)	(4)
<i>Eastern Europe</i>			<i>Western Europe</i>		
Hungary	(+)**	(+)**	Great Britain	0	0
Czech R.	(-)+	0	Sweden	0	0
Slovenia	0	0	Spain	(-)*	(-)*
Bulgaria	(+)**	(+)*	Portugal	0	0
Russia	0	0	Denmark	(-)**	(-)**

The columns are based on the signs of OLS coefficients. Columns (1) and (3) use no controls. Columns (3) and (4) control for gender, age, and education. Significance based on robust standard errors.

Significance levels: ** p<0.01, * p<0.05, + p<0.10.

Table 16: Ordinary least squares regressions of job satisfaction with interactions between the transition country dummy and specified independent variables, 1997-2005

Variable	Objective conditions		Subjective perceptions		
	(1) Coeff. (t-stat)	(2) Coeff. (t-stat)	(3) Coeff. (t-stat)	(4) Coeff. (t-stat)	(5) Coeff. (t-stat)
Transition*high school	0.125 (1.19)				
Transition*university	0.294* (2.60)				
Transition*relative income		0.064+ (1.88)			
Transition*interesting job			-0.091+ (-2.00)		
Transition*independent work				-0.071* (-2.89)	
Transition*dangerous conditions					-0.041* (-2.32)
Observations	12,002	8,627	8,108	8,108	8,108
R-squared	0.038	0.066	0.308	0.307	0.307

The regression controls include year, ln GDP per capita, unemployment, inflation, gender, age group, marital status, employment level, union membership. In columns (2)-(5) sector, occupation, and income quintile are also controlled for. In columns (4) and (5), job security, pay, promotion, help others, useful to society, exhausted after work, physical work, stressful work are also controlled for. Significance levels: ** p<0.01, * p<0.05, + p<0.10.

Table 17: Ordinary least squares regressions of job satisfaction on region, 1997

Variable	Objective conditions				Subjective perceptions
	(1) Coeff. (t-stat)	(2) Coeff. (t-stat)	(3) Coeff. (t-stat)	(4) Coeff. (t-stat)	(5) Coeff. (t-stat)
Transition country dummy	-0.388** (-3.53)	-0.169 (-1.49)	-0.193 (-1.69)	-0.322 (-1.49)	-0.172 (-1.79)
Observations	6,116	6,116	5,284	3,645	5,631
R-squared	0.025	0.029	0.047	0.079	0.287
Country level controls	no	yes	yes	yes	no
Individual level controls	no	no	yes	yes	no
Sector, occupation, and income	no	no	no	yes	no
Job characteristics	no	no	no	no	yes
Number of countries	10	10	10	10	10

Reference group: Western Europe. Country level controls include ln GDP per capita, unemployment rate, inflation. Individual level controls include gender, age group, age completed education, marital status, employment level, union membership. Job characteristics include job security, pay, promotion, interesting job, independent work, help others, useful to society, exhausted after work, physical work, stressful work, dangerous conditions. T-statistics are adjusted for clustering at country level. Significance levels: ** p<0.01, * p<0.05, + p<0.10.

Table 18: Ordinary least squares regressions of job satisfaction on region, 2005

Variable	Objective conditions				Subjective perceptions
	(1) Coeff. (t-stat)	(2) Coeff. (t-stat)	(3) Coeff. (t-stat)	(4) Coeff. (t-stat)	(5) Coeff. (t-stat)
Transition country dummy	-0.255* (-3.09)	-0.308* (-3.24)	-0.298** (-5.80)	-0.389** (-5.59)	-0.071 (-0.93)
Observations	6,970	6,970	6,718	4,982	6,537
R-squared	0.011	0.015	0.032	0.061	0.292
Country level controls	no	yes	yes	yes	no
Individual level controls	no	no	yes	yes	no
Sector, occupation, and income	no	no	no	yes	no
Job characteristics	no	no	no	no	yes
Number of countries	10	10	10	10	10

Reference group: Western Europe. Country level controls include ln GDP per capita, unemployment rate, inflation. Individual level controls include gender, age group, age completed education, marital status, employment level, union membership. Job characteristics include job security, pay, promotion, interesting job, independent work, help others, useful to society, exhausted after work, physical work, stressful work, dangerous conditions. T-statistics are adjusted for clustering at country level. Significance levels: ** p<0.01, * p<0.05, + p<0.10.

Table 19: Country fixed-effects regressions of job satisfaction on time, 1997-2005, transition countries

Variable	Objective conditions				Subjective perceptions
	(1) Coeff. (t-stat)	(2) Coeff. (t-stat)	(3) Coeff. (t-stat)	(4) Coeff. (t-stat)	(5) Coeff. (t-stat)
<i>Panel A: Without year of birth controls</i>					
Year 2005	0.124** (3.45)	-0.324 (-0.85)	-0.423 (-1.10)	-0.530 (-1.09)	0.094** (2.84)
Observations	5,921	5,921	5,766	4,233	5,390
R-squared	0.007	0.008	0.029	0.052	0.257
<i>Panel B: With year of birth controls</i>					
Year 2005	0.160** (4.26)	-0.341 (-0.90)	-0.407 (-1.06)	-0.525 (-1.08)	0.143** (4.15)
Observations	5,921	5,921	5,766	4,233	5,390
R-squared	0.009	0.010	0.029	0.052	0.261
Country level controls	no	yes	yes	yes	no
Individual level controls	no	no	yes	yes	no
Sector, occupation, and income	no	no	no	yes	no
Job characteristics	no	no	no	no	yes
Countries	East	East	East	East	East
Number of countries	5	5	5	5	5

Reference year: 1997. Country level controls include ln GDP per capita, unemployment rate, inflation. Individual level controls include gender, age group, age completed education, marital status, employment level, union membership. Job characteristics include job security, pay, promotion, interesting job, independent work, help others, useful to society, exhausted after work, physical work, stressful work, dangerous conditions. T-statistics are adjusted for clustering at country level.

Significance levels: ** p<0.01, * p<0.05, + p<0.10.

Table 20: Job satisfaction means and standard errors by year of birth cohort, 1997 and 2005

Birth year	Eastern Europe		Western Europe	
	1997 Mean (st. error)	2005 Mean (st. error)	1997 Mean (st. error)	2005 Mean (st. error)
1932-1939	5.070 (0.15)		5.449 (0.07)	
1940-1949	4.995 (0.05)	5.317 (0.07)	5.387 (0.04)	5.498 (0.04)
1950-1959	4.973 (0.04)	5.027 (0.05)	5.299 (0.04)	5.361 (0.04)
1960-1969	4.895 (0.04)	5.066 (0.04)	5.249 (0.04)	5.282 (0.03)
1970-1979	4.771 (0.06)	4.973 (0.04)	5.260 (0.06)	5.249 (0.04)
1980-1987		5.089 (0.07)		5.118 (0.07)

Appendix A

World Values Survey (WVS) and International Social Survey Programme (ISSP) “Work Orientations” module

Job satisfaction:

- *WVS: Overall, how satisfied or dissatisfied are you with your job? “1” means dissatisfied, “10” means satisfied.*
- *ISSP: How satisfied are you in your (main) job?*
 - [1] *Completely satisfied*
 - [2] *Very satisfied*
 - [3] *Fairly satisfied*
 - [4] *Neither satisfied nor dissatisfied*
 - [5] *Fairly dissatisfied*
 - [6] *Very dissatisfied*
 - [7] *Completely dissatisfied*

The answer options were recoded so that [1] Completely dissatisfied and [7] Completely satisfied.

Education:

- *WVS: At what age did you (or will you) complete your full time education, either at school or at an institution of higher education? Please exclude apprenticeships. (ACE)*

The variable was truncated to values between 7 and 23, with a higher value taken to imply a higher level of education.

- *ISSP: Respondent’s education (categories)*
 - [1] *None*
 - [2] *Incomplete primary*
 - [3] *Primary completed*
 - [4] *Incomplete secondary*
 - [5] *Secondary completed*
 - [6] *Incomplete university*
 - [7] *University completed*

The dummy variables for education were created as follows:

- “Less than high school” is equal to one if education level is [1] None [2] Incomplete primary [3] Primary completed or [4] Incomplete secondary
- “High school” is equal to one if education level is [5] Secondary completed or [6] Incomplete university
- “University” is equal to one if education level is [7] University completed.

Marital status:

The dummy variables were created as follows:

- “married” equal to one if married or living together as married
- “single” equal to one if single/ never married
- “divorced/ separated widowed” equal to one if divorced, separated, or widowed.

Employment level:

WVS: Are you employed now or not?

- [1] *Full time*
- [2] *Part time*
- [3] *Self employed*
- [4] *Retired*
- [5] *Housewife*
- [6] *Student*
- [7] *Unemployed*
- [8] *Other*

Only those in categories [1] through [3] were kept in the sample, and the respective employment level dummy variables were created.

ISSP:

Respondent: current employment status – current economic position, main source of living

- [1] *Full-time employed, main job*
- [2] *Part-time employed, main job*
- [3] *Less than part-time*
- [4] *Helping family member*
- [5] *Unemployed*
- [6] *Student, school, education, vocational training*
- [7] *Retired*
- [8] *Housewife/man*
- [9] *Permanently disabled*
- [10] *Other, not in labour force*

In your (main) job are you an employee or self-employed?

- *Self-employed*
- *Work for someone else*

The dummy variables for employment level are: “Self employed” if the respondent is self-employed; “Full time” if the respondent is an employee and [1] Full-time employed, main job; “Part time” if the respondent is an employee and [2] Part-time employed, main job or [3] Less than part-time. All others were excluded from the sample.

Occupation:

WVS: In which profession/occupation do you or did you work? If more than one job, the main job? What is/was your job there?

- *[11] Employer/manager of establishment with 500 or more employed*
- *[12] Employer/manager of establishment with 100 or more employed*
- *[13] Employer/manager of establishment with 10 or more employed*
- *[14] Employer/manager of establishment w. less than 500 employed*
- *[15] Employer/manager of establishment w. less than 100 employed*
- *[16] Employer/manager of establishment with less than 10 employed*
- *[21] Professional worker*
- *[22] Middle level non-manual office worker*
- *[23] Supervisory Non manual -office worker*
- *[24] Junior level non manual*
- *[25] Non manual-office worker*
- *[31] Foreman and supervisor*
- *[32] Skilled manual*
- *[33] Semi-skilled manual worker*
- *[34] Unskilled manual*
- *[41] Farmer: has own farm*
- *[42] Agricultural worker*
- *[51] Member of armed forces*
- *[61] Never had a job*
- *[81] Other*

The dummy variables for occupation are: “white collar” equal to one if [11] Employer/manager of establishment with 500 or more employed through [25] Non manual-office worker, or [51] Member of armed forces; “blue collar” equal to one if [31] Foreman and supervisor through [42] Agricultural worker, or [81] Other; “never had job” equal to one if [61] Never had a job.

ISSP: The occupational categories are based on the ISCO - International Code 1988

The dummy variables for occupation are: “white collar” equal to one if the ISCO - International Code 1988 is between 1000 and 6000; “blue collar” equal to one if the ISCO - International Code 1988 is less than 1000 or greater than 6000.

Scale of incomes:

WVS: Income categories range from [1] Lower step to [10] Tenth step.

ISSP: Income quintiles.

Freedom of decision at work:

WVS: How free are you to make decisions in your job? “1” means None at all, “10” means A great deal

Job characteristics:

ISSP:

For each of these statements about your (main) job, please tick one box to show how much you agree or disagree that it applies to your job:

- *My job is secure*
- *My income is high*
- *My opportunities for advancement are high*
- *My job is interesting*
- *I can work independently*
- *In my job I can help other people*
- *My job is useful to society*

Answer options:

- [1] Strongly agree
- [2] Agree
- [3] Neither agree nor disagree
- [4] Disagree
- [5] Strongly disagree

The answer options were recoded so that [1] Strongly disagree and [5] Strongly agree.

Now some more questions about your working conditions. Please tick one box for each item below to show how often it applies to your work. How often...

- *do you come home from work exhausted?*
- *do you have to do hard physical work?*
- *do you find your work stressful?*
- *do you work in dangerous conditions?*

Answer options:

- [1] Always
- [2] Often
- [3] Sometimes
- [4] Hardly ever
- [5] Never

Country coverage:

WVS: Estonia, Hungary, Latvia, Lithuania, Poland, the Russian Federation, Austria, Belgium, Denmark, Finland, France, Great Britain, Iceland, Ireland, Italy, Netherlands, Portugal, Spain, and Sweden.

ISSP: Bulgaria, Czech Republic, Hungary, the Russian Federation, Slovenia, Great Britain, Denmark, Portugal, Spain, and Sweden.