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Income advantages of communist party members before and During the transformation process

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INCOME ADVANTAGES OF COMMUNIST PARTY MEMBERS BEFORE AND DURING THE TRANSFORMATION PROCESS

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ABSTRACT: In this study contradictory hypotheses are tested about the changing income advantages of Communist Party (CP) members derived from the Elite Circulation Thesis and the Elite Reproduction Thesis, using cross-sectional datasets from before and during the transformation process. CP members are matched with non-CP members on several important income determinants such as human capital, occupational class, market capital, age, gender, and marital status. Independent-samples *t*-tests, on differences in mean personal (ln)income reveal that CP members earn more than non-CP members do before and during the transformation process. An ANOVA shows that the income advantages of CP members are most persistent in the Czech Republic and Russia while they get smaller in Slovakia and Hungary. Comparing the four countries suggests that the remaining income advantages of CP members may partly be explained by transformation specific differences between countries.
Key words: income advantages; CP members; market transformation; Eastern Europe; matching

Die Regeln sind für alle gleich, nur die Ausnahmen sind verschieden.
Literaturnaja gazeta 28.12.1977; cited in Voslensky (1980)

1. Introduction

In the literature on the winners and losers of the transformation away from Communism, the fate of the 'old' political elite and the formation of

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the 'new' elite have been central topics. The Communist Party (CP) in the Central and Eastern European (CEE) countries was the dominant institution during the Communist era. Apart from its influential political and economic role, the CP also served as an important social stratification mechanism. A byproduct of Communism was that precedents were created that favored one's own kind. CP members were able to help each other as well as their close relatives and friends to get better jobs with better salaries, which generated inequalities in favor of CP members; CP membership provided an additional resource, referred to as 'political capital'.

The breakdown of Communism had far-reaching consequences for the stratification order. The new institutional configurations of post-Communist societies changed the value of returns to the various forms of capital (human, social, and political). The collapse of Communism and of the CP had a large impact on CP members. Some authors argue that because of this, the political elite lost their privileged positions and, as a result, their income advantages (Nee 1989, 1991, 1996; Domanski and Heyns 1995; Parish *et al.* 1995). Others have argued that CP members are able to convert their devalued political capital into more valuable market assets (Róna-Tas 1994; Böröcz and Róna-Tas 1995; Bian and Logan 1996; Parish and Michelson 1996; Xie and Hannum 1996; Zhou 2000) or that CP members possess special individual traits that give them advantages in any institutional system (Gerber 2000a, 2001).

Research on China and CEE has produced empirical findings that seem to favor the argument that CP members have been able to maintain their socioeconomic advantages. This has been confirmed by a recent meta-analysis (Verhoeven *et al.* 2005). However, it is not always clear to which other social groups CP members are being compared when their relative income position is investigated, nor what their income advantages were before the transformation process. So, to what extent have the income advantages of CP members over people who have never been members of the CP changed during the market transformation process?

This question can be answered by determining the 'net' income returns for political capital apart from other resources – forms of capital indicated as converting mechanisms – before and after the start of market reforms. To achieve this, we have constructed two groups that are equal on important determinants of income (human capital, market assets, and demographic characteristics) while differing in respect of CP membership. This has been done for Czechoslovakia and Hungary before the transformation process and for the Czech Republic, Slovakia, Hungary, and Russia after market transformations started. Comparing the differences in income before and during the transformation process of CP and non-CP members offers the opportunity to test whether the income

advantages of CP members have decreased, increased, or remained stable during the transformation process, independent of human capital and other important determinants of income.

2. Theory and hypotheses

2.1. Income advantages of CP members

In this study, we treat the advantages that came with membership of the CP as additional resources, referred to as 'political capital'. Most of the literature is not on income returns to political capital, per se, but on the composition of the elite and the role CP membership played in reshuffling elite positions (exceptions are: Dickson and Rublee 2000; Gerber 2000a, 2001). CP membership is not equivalent to belonging to the political elite during Communism. The rank-and-file members of the CP did not belong to the political elite but they still had privileges (political capital) that might have led to income advantages over non-members. However, Zang (2006) showed that CP membership was important for recruitment into the elite; thus, CP membership seems to be closely related to belonging to the elite.

As in all one-party states with a command economy, political capital was the main basis for power under the Communist regime. It provided power and influence to the CP and advantages and privileges to its members (Dahrendorf 1959; Lenski *et al.* 1991). It enabled CP members to accumulate other resources. Because the Communist elite were mainly a political elite, changes in the elite composition during the transformation process will influence the socioeconomic advantages of CP members. So, theories about changes in the elite composition imply predictions about what happens to the income position of CP members – for the high-ranking CP members (political elite) and, to a lesser extent, low-ranking members (the rank-and-file).

There are two competing answers to questions about changes in the composition of the Communist elite: the 'Elite Circulation Thesis' and the 'Elite Reproduction Thesis' (Szelényi and Szelényi 1995). The elite circulation argument claims that the political elite lost their command position and have been replaced by new people, which should lead to diminishing income advantages for CP members. Elite reproduction suggests that the political elite have not been affected by the transformation process. People who occupied top positions during Communism have stayed in top positions during post-Communism, which should result in persisting income advantages of CP members.

Nee's Market Transition Theory (MTT) is one interpretation of the circulation argument and describes the specific changes in the principles by which earnings are allocated. According to Nee, political position – the main basis for economic reward in the redistributive economies of Communism – is being replaced by productivity and entrepreneurial initiative, both important in market economies (Nee 1989, 1991, 1996). As markets become more important in distributing goods, returns to human capital and market capital should increase and returns to political capital should decline. As a result, CP members should lose their monopoly on economic and political resources and their income should subsequently decline, at least relative to the incomes of technocrats, for example.

Based on the circulation argument, it can be predicted that the incomes of CP members will come to resemble more and more the incomes of people who have never been members of the CP but who have equivalent amounts of other valuable resources.

Income convergence: *During the transformation process in post-Communist countries, the incomes of CP members will converge to those of non-CP members who have the same amount of valuable resources.*

The MTT has been challenged with contrary empirical findings and theoretical criticism. Scholars supporting the reproduction argument suggest that the privileges of CP members have not been affected by the revolutionary changes in CEE. Eyal *et al.* (1998: 7) suggested that '... each individual possesses a portfolio of "stocks" of different forms of capital, and when they confront social change they try to reshuffle this portfolio to get rid of forms of capital which are losing value, and convert them into forms of capital which are more valuated'.

There is some debate on how the CP members were able to convert their political capital. A variety of assumptions have been used to explain why they were not, or only were marginally, affected by the transformation process. Some claim that CP members converted their political capital into economic assets (Hankiss 1990; Staniszkis 1991; Róna-Tas 1994), while others argue that investment in and employment of one's education is the capital-conversion mechanism that provided the politically privileged with new advantages (Bian *et al.* 2001). Still others claim that the emphasis on changing institutions overlooks the influence of individual traits. In fact, they claim that the debate about circulation versus reproduction of elite applies to a lesser extent to CEE countries after the decay of Communism than it does to the Chinese market transformation process (Szelényi and Kostello 1996; Gerber and Hout 1998). Apart from changes in the way goods are distributed, there may be individuals who are better able to acquire most of these goods, regardless of the distribution system. Gerber

(2000a, 2001) suggests that the attributes that made people members of the CP – such as ambition, submission to organizational discipline, or even opportunism – also give them an edge in the competition over material advantages within markets.

Based on the reproduction argument, it can be predicted that, compared to individuals having the same amount of other resources, CP members have kept their income advantages.

Income reproduction: *During the transformation process in post-Communist countries, CP members have been able to convert their political capital into valuable assets or use other resources so that their income advantages remain the same over non-CP members who have the same amount of resources.*

2.2. High- and low-ranking CP members[1]

CP members should not be treated as a coherent group. While much of the literature focuses on high-ranking members (the political elite), they were only a small group compared to the rank-and-file (low-ranking) members. It seems plausible to assume that high-ranking CP members had more resources that could be converted into market assets than low-ranking members. When confronted with social change, high-ranking members had more opportunities to ensure their privileged position than low-ranking members, which is in line with the reproduction argument. The circulation argument predicts that if political capital is becoming less valuable, high-ranking CP members will have more to lose than low-ranking members. Therefore, the income advantage of high-ranking members will decrease more than the income advantage of low-ranking members. This brings us to the following conflicting predictions:

Income convergence and rank: *The income advantages of high-ranking CP members over non-CP members who have the same amount of resources will decrease more than the income advantages of low-ranking CP members over non-CP members.*

Income reproduction and rank: *The income advantages of high-ranking CP members over non-CP members who have the same amount of resources will remain the same and the income advantages of low-ranking CP members over non-CP members will decrease.*

1. Another important and interesting issue is the distinction between former and current CP members. These are different groups that might have been affected differently during the transformation process. Unfortunately, there is not enough information available in our data sets for a systematic analysis the income advantage of these groups.

2.3. Path-dependent transformation processes

Critics of the MTT emphasize that a wide range of economic and political institutions were developed because of different path-dependent transformation processes, having different consequences for the magnitude and nature of changing inequalities (Róna-Tas 1994; Bian and Logan 1996; Fligstein 1996; Parish and Michelson 1996; Stark 1996; Szelényi and Kostello 1996; Walder 1996, 2003; Xie and Hannum 1996; Gerber and Hout 1998). It is also known that income inequality increased in al transition economies, albeit to a different extent across transition economies (Milanovic 1998, 1999). Therefore, CP members may be affected differently in the various CEE countries.

Some authors have been working on ways to classify countries according to their transformation process (Stark 1992a; Szelényi and Kostello 1996; Walder 2003).[2] According to Walder (2003: 899), there are two important interrelated dimensions of market transformation from which research on elite (CP members') opportunity should start: (a) the extent of regime change and (b) the disposition of public assets. The extent of regime change refers to the extent to which the CP lost its political monopoly: challengers to the old elite can establish electoral democracies, the Communist governments can continue to rule as national dictatorships, or dictatorships and democracies cannot be established by either challengers or the old regime elite (McFaul 2002). The disposition of public assets relates to the pace and regulation of the privatization process. Both dimensions offer an explanation of how CP members' opportunities can differ between countries. 'Based on a crude binary distinction between "high" and "low" values on these two dimensions' four types of transitional economies can be defined (*source:* Figure 2, Walder 2003: 905). According to Walder (2003), the Czech Republic[3] and Hungary can be classified as Type 1 transitional economies and Russia can be classified as Type 3. This means that the Czech Republic and Hungary score high and Russia scores low on regulatory constraints on asset appropriation. All three countries score high on regime change.[4]

2. The typology based on market penetration, introduced by Szelényi and Kostello (1996), is of less use for our objective. It does not distinguish between CEE countries during the transformation process, making it difficult to classify the four countries we analyze in this study according to this typology.
3. The Czech Republic and Slovakia are treated as having the same origin (Czechoslovakia), and therefore Slovakia is classified the same as the Czech Republic.
4. In practice, Russia has experienced less regime change than the Czech Republic and Hungary. Regime change in Russia followed an oppositional movement that originated from within the Moscow apparatus, while the Communist regimes in Central Europe (Czechoslovakia, Hungary, Poland) were overthrown by strong oppositional challengers who allied with regime defectors (King 2000; McFaul 2002).

Unfortunately, the cross-classification does not allow us to distinguish between the Czech Republic, Slovakia, and Hungary; therefore, we fall back on Walder's (2003: 911) note that causes and outcomes of transformation exist along a continuum and use Stark's (1992a) classification scheme to distinguish the three countries. His classification is based on three dimensions of privatization strategies: (a) methods of asset evaluation, (b) identities of participants, and (c) resources for participating in privatization. Stark describes the Czechoslovakian 'voucher-auction' program as asset evaluation through market mechanisms favoring citizens and using financial resources. Hungary's 'institutional cross-ownership' program is an example of asset evaluation through bargaining favoring corporations using positional resources.[5]

The combination of Walder's and Stark's classifications suggest that CP members have had the fewest opportunities in the Czech Republic and Slovakia, that they have had more opportunities in Hungary, and that they have had the most opportunities in Russia. Walder used mobility outcomes to describe the different sets of opportunities that emerged in the various configurations of political circumstances. We believe that his classification, combined with the one by Stark, can also be used to predict differences between the four countries in the changing income advantages of CP members. Subsequently, persistent income advantages of CP members during the transformation process might – at least partially – be related to institutional circumstances. CP members had fewer opportunities to guarantee their income advantages in the Czech Republic and Slovakia than in Hungary. CP members in Russia had a lot of opportunities to safeguard their income advantages.

Institutional differences: *The convergence of the income of CP members to the income of people who have never been a member of the CP will be strongest in the Czech Republic and Slovakia, less in Hungary and weakest in Russia.*

5. Russia's market reforms were initiated relatively late and were characterized by Yeltsin's massive privatization of public firms. The privatization program consisted of market evaluation of assets favoring corporate actors, and financial resources were utilized. This would place Russia in between Czechoslovakia and Hungary. However, it is known that the massive privatization was too dramatic a change and did not really work. Compared to other CEE countries, Russian entrepreneurs and small firms have been confronted with many obstacles arising from onerous and pervasive bureaucratic interference (Stern 1998). For this reason, we consider Russia as the opposite of Czechoslovakia and locate Hungary in between Czechoslovakia and Russia.

3. Data, measures, and methods

3.1. Data and measures

In this study, cross-sectional survey data on Czechoslovakia (Czechoslovakian Academy of Sciences (CSAS 1984), Hungary (Kolosi 1986), the Czech Republic, Hungary, Russia, and Slovakia (Szelényi and Treiman 1994), Russia (Gerber 1999, 2000b, 2005) were analyzed. These datasets were selected because, taken together, they provide information on the situation before *and* during the transformation period and have at least information on respondent's personal income, political capital, human capital, occupational class, and demographic characteristics.

The dependent variable in this study is the logarithm of personal income, which was used because it has two major advantages: it leads to a less skewed distribution of the income variable, and the influence of inflation is ruled out because all effects are represented as relative increases or decreases of the dependent variable. We used datasets from before and after 1989, which introduces some problems concerning the interpretation of what the income variable exactly entails. It is often argued that CP membership was associated with privileges that went further than only getting the best occupational positions. Non-wage benefits from work – larger and better housing in more desirable neighborhoods, access to better hospitals, use of vacation resorts, etc. (Voslensky 1980; Walder 1992) – will influence actual income differences. Morrison (1984) estimated the advantages high-ranking CP members enjoyed in addition to their basic income and concluded that taking into account these non-wage benefits leads to greater income inequality. So, any differences we find in our datasets, especially before 1989, will most likely underestimate the earnings differences between CP and non-CP members. It is hard to speculate on the magnitude of this bias.

For this study, we have estimated changes in the income advantages of CP members over non-CP members, controlling for other valuable resources such as human capital; we are looking for the net effect of political capital on income and how this effect has changed during the transformation process. To do this, we have to rule out the effects of other determinants of income.

First, human capital is measured by educational degree. Country specific educational categories were used and recoded into the CASMIN (Comparative Analysis of Social Mobility in Industrialized Societies) educational classification (König *et al.* 1988; Müller *et al.* 1989; Müller and Braun 1997).

Second, we have labor market information on the respondents. We know whether the respondent is employed or not and if so we have the

respondent's occupational class (EGP classification (Erikson *et al.* 1979; Erikson and Goldthorpe 1992)). Ganzeboom and Treiman (1996) developed a tool that can be used to recode the 1988 International Standard Classification of Occupations (ISCO88) into the 10 EGP categories. In addition, we also know whether the respondent works in the private or public sector.

Third, we controlled for the effects of age, gender, and marital status on personal income. Age was recoded into categories (<25; 26–31; 32–37; 38–43; 44–49; 50–55; 56+), which was necessary for matching, as described in the Methods section below. Marital status was coded as married or not.

Not all data sets have specific information available to determine the rank of CP members (high or low). However, Nee (1991) says that the brigade cadres held supervisory positions, which the team cadres did not have. Therefore, we have used the EGP classification to create a proxy for this distinction. The first EGP category includes high controllers and the second includes low controllers. These two categories have been used to represent the high-ranking cadres. We are aware of the fact that this is only a rough proxy for high- and low-ranking CP membership.[6]

3.2. Methods

We are interested in a strict comparison of the incomes of CP members with the incomes of people who never were CP members, and how these income differences might have changed during the transformation process. Given this research problem, the effect of CP membership on income can be seen as a (treatment) effect, and matching could be a useful alternative method to estimate this treatment effect while controlling for covariates (Smith 1997), which are the other important determinants of income, such as human capital, market capital, EGP score, and demographic characteristics. Smith also indicates that matching is useful when the treatment condition is relatively rare in the population and controls are numerous,

6. In the 1984 dataset on Czechoslovakia and the 1998, 2000, and 2001 datasets on Russia, information is available on what kind of CP membership people had. The categories were paid position, unpaid position, rank-and-file, and never been a member. Whether there is a relationship between this variable and the EGP scheme was tested via non-parametric tests. In all datasets (except the 2001 Russian dataset), a relationship was found between the two variables, meaning that CP members with paid positions are found more in the first EGP classes and the rank-and-file CP members are found more in the lower EGP classes. This provides some justification for the approximation for high- versus low-ranking CP members based on the EGP scheme.

which is the case for CP membership. There are other arguments favoring matching, and according to Smith (1997), effects can be estimated via matching that are comparable to those obtained with multiple regression analysis but with substantially reduced standard errors. Furthermore, we aim at exact matching, which creates equivalence of treatment and control samples with respect to the multivariate distribution of these covariates (Rosenbaum and Rubin 1983, 1985a; Rubin and Thomas 1996).[7]

There are, however, two problems with matching: (a) statistical inefficiency and (b) difficulties finding matches.[8] These two problems have been variously labeled 'incomplete matching' (Freedman 1950), 'attrition' and 'incomplete or imperfect matching' (Althauser and Rubin 1970), and 'incomplete matching' and 'inexact matching' (Rosenbaum and Rubin 1985b). The first problem is that a lot of information is thrown away in order to create matches for relatively rare treatments, making this method statistically inefficient. This also applies here. The question is whether this is a bad thing. Rubin (1973) claims that throwing away irrelevant controls (in our case non-matchable non-CP members) diminishes the bias associated with the imbalance between treatments and controls in the distribution of covariates. As a result of this imbalance, the analysis-of-covariance estimated standard error for the treatment effect tends to be inflated (Rosenbaum and Rubin 1983: 48; Snedecor and Cochran 1980: 368 and 380). Matching can result in lower standard errors of treatment effects, even with a reduction in the number of controls, by reducing covariate imbalance and inducing a correlation between treatments and controls (Rubin and Thomas 1996; Smith 1997).

The second problem is finding matches – as the number of covariates increases linearly, the data demands increase geometrically (Smith 1997). 'Even in a very large dataset, it is difficult to find controls with identical or near identical values on more than a small number of variables' (Rosenbaum 1996: 184–5). This is a less serious problem in this study; matches were found for almost all CP members. For some CP members,

7. We want to stress that both matching and regression analysis intend to analyze the relationship between two variables while controlling (hold constant) for other variables. Matching aims to do this precisely (using non-members who score the same on control variables as CP members do) while in the case of regression analysis this is done based on average scores on the control variables.
8. Using propensity scores, matching is often being criticized for not taking systematic differences in unmeasured variables into account. So the observed differences between CP and non-CP members would provide biased estimates of the 'treatment effect'. This is, of course, true, but this criticism also applies to OLS regressions or, for that matter, most other techniques used in the social sciences.

the closest match was used.[9] First, concessions were made concerning marital status. If no match was found, a married CP member was matched with an unmarried non-CP member, all other characteristics being equal. Then concessions were made for age, then education, and finally gender. With respect to employment status, EGP class, and private sector employment, no concessions were made; exact matches were found for these variables.

The matching procedure used in this study entailed finding controls (respondents who had never been CP members) with identical values on the seven matching variables described in the data and measures section as the treatments (members of the CP). To give an example: a 35-year-old married male CP member with a college degree who is working in the private sector in a routine non-manual occupation will be matched with a 35-year-old married male non-CP member with a college degree who is working in the private sector in a routine non-manual occupation. Because there are many more non-CP members (controls) than CP members (treatments), we can use more than one match per treatment. This is preferable '... to "dampen out" the variability in estimated effects' (Smith 1997: 348). It is also more statistically efficient – using as much information as possible – and thereby increasing the 'power' of our statistical methods.

After this matching procedure, we are able to test the hypotheses with independent-samples *t*-tests, comparing the mean personal income of CP members with the mean personal income of the non-CP members for each country and year separately.[10] For the Czech Republic, Slovakia, and Hungary, the hypothesis whether the income advantages of CP and non-CP members have changed during the transformation process can be tested via ANOVA using year and membership as factors (dummy variables) and estimating the full model. This model also reports the interaction between year and membership, which should be interpreted as the change in income differences between CP and non-CP members between the period before and after the beginning of market reforms. For Russia, membership is used as the factor, and year and the interaction between membership and year as covariates in an ANOVA. This means that year is used as a continuous variable and the interaction term should

9. In the 1984 dataset on Czechoslovakia, no exact matches were found for 50 CP members in Czech territory and 52 in Slovak territory. For the other datasets, the number of CP members for whom no exact matches were found are 115 (the Czech Republic 1993), 99 (Slovakia 1993), 101 (Hungary 1986), 95 (Hungary 1993), 52 (Russia 1998), 45 (Russia 2000), and 64 (Russia 2001).

10. We assumed that the variances were unequal between the two groups and performed an independent-samples *t*-test with separate variance estimates ($t \neq$ test).

be interpreted as a linear increase or decrease of the income differences between CP and non-CP members during the transformation process.

4. Results

4.1. Descriptive statistics of matching procedure

The Appendix shows the descriptive statistics on the mean of the logarithm of personal income for the treatment (CP members) and control groups (non-CP members) resulting from the matching procedure for the four countries.[11] CP members always have higher incomes than their non-CP matches. The income advantages of high-ranking members over their matched non-members are larger than the income advantages of low-ranking members over their matched non-members, except for Slovakia in 1993. The mean incomes for Russia after 1993 seem to suggest that all people earned less later on in the transformation process, compared to early in the transformation. This is a distortion resulting from the 'Ruble Crisis' in 1998 when Russia revaluated its currency. The year 1998 is also important because the middle class savings were partially destroyed, which may influence our evaluation of relative incomes.[12]

4.2. Income advantages of CP members

Income data are analyzed on CP and non-CP members for Czechoslovakia, the Czech Republic, Slovakia, Hungary, and Russia. First, the incomes of all working CP members were compared with the incomes of matched non-CP members. Figure 1 illustrates the income differences between CP and non-CP members.

Because income was transformed into a logarithmic scale, the differences between CP and non-CP members can be translated into percentage income differences. For example, in 1984, the incomes of CP members were about 23 percent higher than the incomes of non-CP members ($[e^{.206} - 1] \times 100\% = 22.88\%$) in the Czech territory of Czechoslovakia, other relevant characteristics kept the same. This income advantage of CP members decreased to about 17 percent in 1993. Table 1 reports the significance levels of the income differences and the change in these differences. The income differences between CP and non-CP members are significant in the Czech Republic, but the decreasing income

11. From here on, where we use *income*, it should be read as *ln(income)*.
12. We thank an anonymous reviewer of European Societies for pointing this out to us.

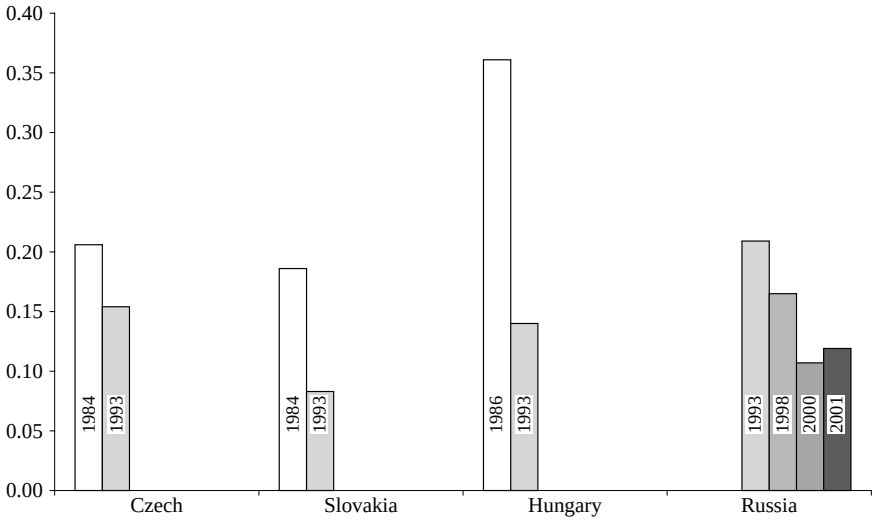

Figure 1. Income advantages of CP members (mean (ln) personal income differences between CP members and non-CP members)

advantages of CP members between 1984 and 1993 are not (F [1, 3578] = 1.51; $P > 0.10$). This indicates that CP members were able to maintain their income advantages.

The analyses for the Slovak territory of Czechoslovakia and, later, Slovakia show comparable results to those reported for the Czech Republic. As can be seen in Figure 1, the income differences between CP and non-CP members in the Slovak territory are about 20 percent. In 1993, the income advantages of CP members decreased to about 9 percent. The results reported in Table 1 show that the income differences between CP and non-CP members are significant in both 1984 and 1993. Furthermore, the decline in these income differences from 1984 to 1993 is also significant (F [1, 2234] = 6.14; $P < 0.05$).

The income differences between CP and non-CP members in Hungary in 1986 are the largest of the four countries examined (about 43 percent), but they declined steeply from 1986 to 1993. In 1993, CP members had about 15 percent more income than non-CP members. Looking at the significance levels reported in Table 1, the income advantages of CP members are significant and the dramatic decrease is also significant (F [1, 3953] = 30.60; $P < 0.01$).

Finally, Figure 1 shows the income differences between CP and non-CP members for Russia early in the transformation (1993) and later in the

TABLE 1. Income advantages (difference in mean (ln)personal income between CP members and matched non-CP) of CP members and for high and low rank separately for the Czech and Slovak territory of Czechoslovakia (1984), the Czech Republic and Slovakia (1993), and Hungary (1986 and 1993)

	Czech Republic			*Slovakia*			*Hungary*		
	1984[a]	*1993*[a]	*Change*[b]	*1984*[a]	*1993*[a]	*Change*[b]	*1986*[a]	*1993*[a]	*Change*[b]
Members	0.206***	0.154***	$F = 1.51$	0.186***	0.083***	$F = 6.14$**	0.361***	0.140***	$F = 30.60$***
	(8.155)	(6.039)		(5.418)	(3.057)		(17.047)	(3.091)	
High	0.205***	0.130***	$F = 1.26$	0.172***	0.021	$F = 4.78$**	0.314***	0.187***	$F = 4.58$**
	(5.829)	(3.134)		(3.198)	(0.425)		(9.923)	(2.928)	
Low	0.163***	0.121***	$F = .51$	0.141***	0.083***	$F = 1.37$	0.273***	0.058	$F = 16.98$***
	(4.652)	(3.981)		(3.116)	(2.618)		(9.635)	(1.009)	

Note: *t*-values in parentheses.
[a]*t*-test.
[b]ANOVA.
*$P < 0.05$; **$P < 0.01$; ***$P < 0.001$, two-tailed.

transformation (1998/2000/2001). In 1993, CP members had about 23 percent more income than non-CP members. The income advantages of CP members were about 18 percent in 1998, about 11 percent in 2000, and about 13 percent in 2001. As reported in Table 2, the significance levels and all income differences between CP and non-CP members are significant; however, there is no significant trend in the income differences over the 4 years (F [1, 1956] = 1.13; $P > 0.10$).

4.3. High- and low-ranking CP members

The results of the analysis of high-ranking CP members are illustrated in Figure 2. Although the income differences vary in level between the Czech Republic, Slovakia, and Hungary, they decrease from 1984 to 1993 for the Czech Republic and Slovakia and from 1986 to 1993 for Hungary. In Slovakia, the decline is the largest, and the Czech Republic having the smallest. The significance levels in Table 1 reveal that all income differences between high-ranking CP and non-CP members are significant (except for Slovakia in 1993, where the high-ranking members seem to have lost their income advantages over non-members during the transformation process). Looking at the changes, the decrease in income advantages of CP members over non-CP members is significant in Slovakia (F [1, 687] = 4.78; $P < 0.05$) and Hungary (F [1, 1215] = 4.58; $P < 0.05$), but not significant in the Czech Republic (F [1, 1100] = 1.26; $P > 0.10$). The income differences between high-ranking members and non-members in Russia seem to decline over time; however, the results reported in Table 2 show that the income advantages of high-ranking

TABLE 2. Income advantages (difference in mean (ln)personal income between CP members and matched non-CP) of CP members and for high and low rank separately for Russia

	1993[a]	*1998*[a]	*2000*[a]	*2001*[a]	*Trend*[b]
Members	0.209***	0.165***	0.107*	0.119**	$F = 1.13$
	(4.854)	(3.021)	(1.757)	(2.344)	
High	0.237***	0.254***	0.154*	0.181***	$F = 0.52$
	(4.719)	(3.706)	(1.752)	(2.675)	
Low	0.111**	0.061	0.052	0.073	$F = 0.00$
	(1.426)	(.715)	(.641)	(1.009)	

Note: t-values in parentheses.
[a]t-test.
[b]ANOVA.
*$P < 0.05$; **$P < 0.01$; ***$P < 0.001$, two-tailed.

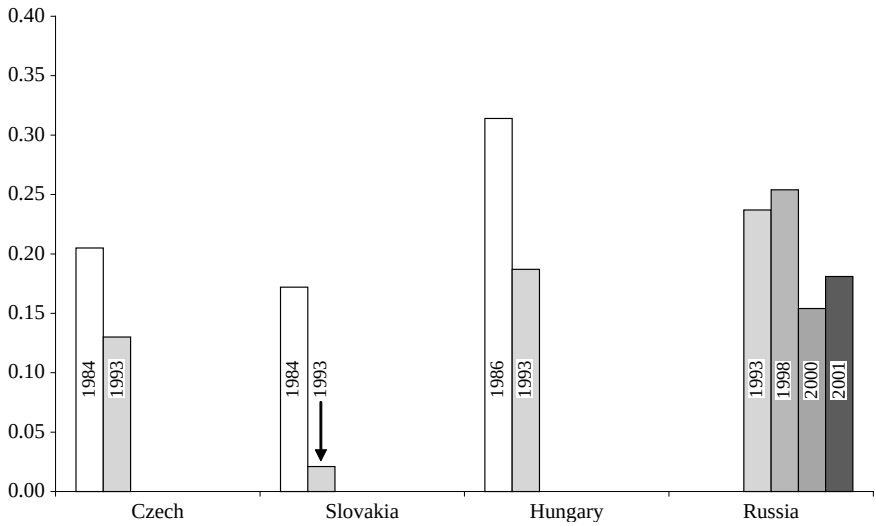

Figure 2. Income advantages of *high rank* CP members (mean (ln) personal income differences between high rank CP members and non-CP members)

members over non-members are significant, while the trend over the 4 years is not (F [1, 2380] = 0.52; $P > 0.10$).

Changes in the differences in income between low-ranking members and non-members are somewhat different from those between high-ranking members and their matches. The income advantages of low-ranking CP members are smaller than those of high-ranking CP members (except for Slovakia in 1993) both before and during the transformation process. Figure 3 shows that the income advantages that low-ranking CP members had during Communism in the Czech territory of Czechoslovakia decreased slightly in 1993, although not significantly (F [1, 2476] = 0.51; $P > 0.10$, Table 2). In Slovakia, the apparently decreasing income advantages of low-ranking CP members between 1984 and 1993 are also not significant (F [1, 1545] = 1.37; $P > 0.10$, Table 2). The change in the income advantages of the low-ranking members in Hungary is the most dramatic and is significant (F [1, 2736] = 16.98; $P < 0.01$, Table 2). The income differences between low-ranking CP and non-CP members in Russia show a somewhat decreasing trend, which is not significant (F [1, 1960] = 0.00; $P > 0.10$, Table 3). After 1998 the income advantages of low-ranking CP members seem to have disappeared in Russia; the income differences are not significant (see Table 2).

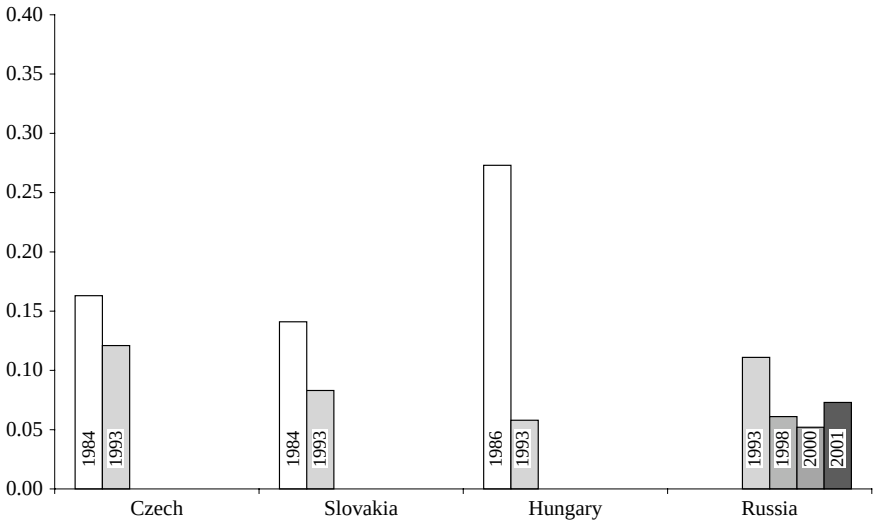

Figure 3. Income advantages of *low rank* CP members (mean (ln) personal income differences between low rank CP members and non-CP members)

4.4. Path-dependent transformation processes

Finally, the results are related to the idea of path-dependent transformation processes. Based on Walder's classification of elite opportunity and Stark's classification of privatization strategies, we hypothesized that the incomes of CP members would converge the most in the Czech Republic and Slovakia, less in Hungary, and the least in Russia.

The results presented in this study partly support this hypothesis: convergence between the incomes of high-ranking members and non-members was the largest in Slovakia, followed by Hungary and Russia. The Czech Republic deviates from the hypothesized pattern. The results from the analysis of low-ranking CP members also partly support the hypothesis on country differences: convergence of incomes was largest in Slovakia, followed by the Czech Republic and Russia. Here, Hungary deviates from the hypothesized pattern.

It seems that it might be fruitful to use the differences in transformation processes between the Czech Republic, Slovakia, Hungary, and Russia to explain the changing income advantages of CP members. To some extent, the observed differences in income advantages of CP members between the four countries are in line with the hypothesis. However, the question of why the results for the Czech Republic on high-ranking CP members and the results for Hungary on low-ranking CP members deviate from the hypothesized pattern needs more investigation.

5. Summary and conclusions

In this study, changes in the income advantages of CP members over people who were never members of the CP were investigated. We tested two competing predictions, derived from the Elite Circulation Thesis (income convergence) and from the Elite Reproduction Thesis (income reproduction). The test results are ambiguous and no clear results were found in favor of either the circulation or the reproduction argument, which may be so because both processes may be at work. The impact of income reproduction factors should naturally diminish over time because the influence of the CP also diminishes the longer a democratic market economy is in place. This should be reflected in the results on Russia, where we have four time points. However, the income advantages of CP members do not decrease significantly over time, rejecting the elite circulation thesis.

Thus, we found persisting income advantages among CP members. One way or another, CP members were able to maintain part of their income advantage during the transformation process. The reproduction argument cannot explain these persisting income advantages. Despite controlling for schooling, as the converting mechanism, and controlling for other important determinants of income (age, gender, marital status, occupational category, and private sector employment), CP members still have higher incomes than people who were never members of the CP during the transformation process.

Note that it was not possible to control for superior individual traits CP members might have – such as ambition, competitiveness, etc. (which are unobservable). CP membership may be correlated with these personal traits, as the CP also recruited able participants to run its economy and administration. Thus, the personal traits that made people members of the CP may also give them an edge in the competition over material advantages within a market economy (Gerber 2000a, 2001). These may explain the persisting income advantages of CP members over non-CP members.

The empirical results presented in this study reveal several anomalies. Why are the income advantages of CP members different between the Czech Republic and Slovakia and why do they change differently? Why is there little change in the income advantages of low-ranking CP members from 1984 to 1993 in the Czech Republic and from 1993 to 2001 in Russia, while they obviously decreased in Hungary? Why do the income advantages of high-ranking CP members persistent in Russia?

We proposed that part of these unexplained income differences might be understood from differences in the transformation processes between the countries. We found some (inconclusive) indication that specifying the

transformation process helps to understand changes in the income advantages of CP members over non-CP members. Maybe the classifications of Walder (2003) and Stark (1992a) used here are not specific enough to catch differences in the transformation processes between these countries. Emphasizing differences in labor market institutions, socioeconomic indicators (European Bank for Reconstruction and Development 1999), and political indicators (attained from Freedom House or Polity IV) will be an important step further. Emphasizing the different paths of institutional change that originated even before the collapse of the Communist regimes (Stark 1992a, b; Stark and Bruszt 1998) along with quantitative testing of predictions derived from this idea seems a fruitful way to gain more insight in the persisting income advantages of CP members.

References

Althauser, R. P. and Rubin, D. B. (1970) 'The computerized construction of a matched sample', *American Journal of Sociology* 76: 325–46.

Bian, Y. and Logan, J. R. (1996) 'Market transition and the persistence of power: The changing stratification system in urban China', *American Sociological Review* 61: 739–58.

Bian, Y., Shu, X. and Logan, J. R. (2001) 'Communist Party membership and regime dynamics in China', *Social Forces* 79: 805–41.

Böröcz, J. and Róna-Tas, Á. (1995) 'Small leap forward: Emergence of new economic elites', *Theory and Society* 24: 751–81.

Czechoslovakian Academy of Sciences (CSAS) (1984) *Social Class and Structure of Czechoslovakia, 1984* [Computer file], Prague: Czechoslovak Academy of Sciences [producer] and [distributor].

Dahrendorf, R. (1959) *Class and Class Conflict in Industrial Societies,* Stanford, CA: Stanford University Press.

Dickson, B. J. and Rublee, M. R. (2000) 'Membership has its privileges. The socioeconomic characteristics of Communist Party members in urban China', *Comparative Political Studies* 33: 87–112.

Domanski, H. and Heyns, B. (1995) 'Toward a theory of the role of the state in market transition: From bargaining to markets in post-communism', *European Journal of Sociology (Archives Européennes de Sociologie)* 36: 317–51.

Erikson, R. and Goldthorpe, J. H. (1992) *The Constant Flux: A Study of Class Mobility Research in Industrial Societies,* Oxford: Clarendon.

Erikson, R., Goldthorpe, J. H. and Portocarero, L. (1979) 'Intergenerational class mobility in three western European societies: England, France, and Sweden', *British Journal of Sociology* 30: 415–51.

European Bank for Reconstruction and Development (1999) *Transition Report Update,* London: EBRD.

Eyal, G., Szelényi, I. and Townsley, E. (1998) *Making Capitalism without Capitalists. The New Ruling Elites in Eastern Europe,* London: Verso.

Fligstein, N. (1996) 'The economic sociology of the transitions from socialism', *American Journal of Sociology* 101: 1074–81.

Freedman, R. (1950) 'Incomplete matching in ex post facto studies', *American Journal of Sociology* 56: 171–7.

Ganzeboom, H. B.G. and Treiman, D. J. (1996) 'Internationally comparable measures of occupational status for the 1988 International Standard Classification of Occupations', *Social Science Research* 25: 201–39.

Gerber, T. P. (1999) *Survey of Employment, Income, and Attitudes in Russia (SEIAR).* [MRDF]. Codebook and Technical Report. Ann Arbor, MI: Inter-university Consortium for Political and Social Research, University of Michigan [distributor]. Moscow: All Russian Center for Public Opinion and Market Research [producer].

Gerber, T. P. (2000a) 'Membership benefits or selection effects? Why former Communist Party members do better in post-Soviet Russia', *Social Science Research* 29: 25–50.

Gerber, T. P. (2000b) *Survey of Education and Stratification in Russia (SESR)* [Computer file], Madison, WI: Department of Sociology, University of Wisconsin-Madison [distributor].

Gerber, T. P. (2001) 'The selection theory of persisting party advantages in Russia: More evidence and implications', *Social Science Research* 30: 653–71.

Gerber, T. P. (2005) *Stratification and Migration Dynamics in Russia,* Machine Readable Data File. Madison, WI: Department of Sociology, University of Wisconsin-Madison.

Gerber, T. P. and Hout, M. (1998) 'More shock than therapy: Market transition, employment, and income in Russia, 1991–1995', *American Journal of Sociology* 104: 1–50.

Hankiss, E. (1990) *East European Alternatives,* Oxford: Clarendon Press.

King, L. P. (2000) 'Making markets: A comparative study of postcommunist managerial strategies in central Europe', *Theory and Society* 30: 493–538.

Kolosi, T. (1986) *General Social Survey (TARKI), Hungary, 1986* [Computer file], Budapest: Social Research Informatics Center (TARKI) [distributor].

König, W., Lüttinger, P. and Müller, W. (1988) 'Comparative analysis of the development and structure of educational systems. Methodological foundations and the construction of a comparative educational scale' (CASMIN Working Paper No. 12) Universität Mannheim, Mannheim.

Lenski, G. E., Lenski, J. and Nolan, P. (1991) *Human Societies. An Introduction to Macrosociology,* New York: McGraw-Hill, Inc.

McFaul, M. (2002) 'The fourth wave of democracy and dictatorship: Noncooperative transitions in the postcommunist world', *World Politics* 54: 212–44.

Milanovic, B. (1998) *Income, Inequality, and Poverty during the Transition from Planned to Market Economy,* Washington, DC: The International Bank for Reconstruction and Development/The World Bank.

Milanovic, B. (1999) 'Explaining the increase in inequality during transition', *Economics of Transition* 7: 299–341.

Morrisson, C. (1984) 'Income distribution in eastern Europe and western Countries', *Journal of Comparative Economics* 8: 121–38.

Müller, W. and Braun, M. (1997) 'Measurement of education in comparative research', *Comparative Social Research* 16: 163–201.

Müller, W., Lüttinger, P., König, W. and Karle, W. (1989) 'Class and education in industrial nations', *International Journal of Sociology* 19: 3–39.

Nee, V. (1989) 'A theory of market transition: From redistribution to markets in state socialism', *American Sociological Review* 54: 663–81.

Nee, V. (1991) 'Social inequality in reforming state socialism: Between redistribution and markets in China', *American Sociological Review* 56: 267–82.

Nee, V. (1996) 'The emergence of a market society: Changing mechanisms of stratification in China', *American Journal of Sociology* 101: 908–49.

Parish, W. L. and Michelson, E. (1996) 'Politics and markets: Dual transformations', *American Journal of Sociology* 101: 1042–59.

Parish, W. L., Zhe, X. and Li, F. (1995) 'Nonfarm work and marketization of Chinese countryside', *The China Quarterly* 143: 697–730.

Róna-Tas, Á. (1994) 'The first shall be last? Entrepreneurship and communist cadres in the transition from socialism', *American Journal of Sociology* 100: 40–69.

Rosenbaum, P. R. (1996) 'Observational studies and nonrandomized experiments', in S. Ghosh and C. R. Rao (eds), *Handbook of Statistics,* Amsterdam: Elsevier Science B.V., pp. 181–97.

Rosenbaum, P. R. and Rubin, D. B. (1983) 'The central role of the propensity score in observerational studies for causal effects', *Biometrika* 70: 41–55.

Rosenbaum, P. R. and Rubin, D. B. (1985a) 'Constructing a control group by multivariate matched sample methods that incorporate the propensity score', *The American Statistician* 39: 33–8.

Rosenbaum, P. R. and Rubin, D. B. (1985b) 'The bias due to incomplete matching', *Biometrics* 41: 103–16.

Rubin, D. B. (1973) 'Matching to remove bias in observational studies', *Biometrics* 29: 159–83.

Rubin, D. B. and Thomas, N. (1996) 'Matching using estimated propensity scores: Relating theory to practice', *Biometrics* 52: 249–64.

Smith, H. L. (1997) 'Matching with multiple controls to estimate treatment effects in observational studies', *Sociological Methodology* 27: 325–53.

Snedecor, G. W. and Cochran, W. G. (1980) *Statistical Methods.* Ames, IA: Iowa State University Press.

Staniszkis, J. (1991) *The Dynamics of Breakthrough in Eastern Europe. The Polish Experience,* Berkeley, CA: University of California Press.

Stark, D. (1992a) 'Path dependence and privatization strategies in east central Europe', *East European Politics and Societies* 6: 17–54.

Stark, D. (1992b) 'From system identity to organizational diversity: Analyzing social change in eastern Europe', *Contemporary Sociology* 21: 299–304.

Stark, D. (1996) 'Recombinant property in east European capitalism', *American Journal of Sociology* 101: 993–1027.

Stark, D. and Bruszt, L. (1998) *Postsocialist Pathways. Transforming Politics and Property in East Central Europe,* Cambridge: Cambridge University Press.

Stern, N. (1998) 'The future of the economic transition' (No. 30) EBRD, London.

Szelényi, I. and Kostello, E. (1996) 'The market transition debate: Towards a synthesis?' *American Journal of Sociology* 101: 1082–96.

Szelényi, I. and Szelényi, S. (1995) 'Circulation or reproduction of elites during the post-communist transformation of eastern Europe', *Theory and Society* 24: 615–38.

Szelényi, I. and Treiman, D. J. (1994) *Social Stratification in Eastern Europe after 1989: General Population Survey* [Computer file], Los Angeles, CA: Institute for Social Science Research, University of California (UCLA) [distributor].

Verhoeven, W.-J., Jansen, W. and Dessens, J. (2005) 'Income attainment during transformation processes: A meta-analysis of the market transition theory', *European Sociological Review* 21: 201–26.

Voslensky, M. (1980) *Nomenklatura, Die Herrschende Klasse der Sovjetunion,* Wien: Molden.

Walder, A. G. (1992) 'Property rights and stratification in socialist redistributive economies', *American Sociological Review* 57: 524–39.

Walder, A. G. (1996) 'Markets and inequality in transitional economies: Towards testable theories', *American Journal of Sociology* 101: 1060–73.

Walder, A. G. (2003) 'Elite opportunity in transitional economies', *American Sociological Review* 68: 899–916.

Xie, Y. and Hannum, E. (1996) 'Regional variation in earnings inequality in reform-era urban China', *American Journal of Sociology* 101: 950–92.
Zang, X. (2006) 'Technical training, sponsored mobility, and functional differentiation: Elite formation in China in the reform era', *Communist and Post-Communist Studies* 39: 39–57.
Zhou, X. (2000) 'Economic transformation and income inequality in urban China: Evidence from panel data', *American Journal of Sociology* 105: 1135–74.

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Appendix. Mean (ln)income and number of CP members and their matched non-CP members separated by rank

	Members	*Non-Members*	*High rank*	*Non-Members*	*Low rank*	*Non-Members*
Czech territory of Czechoslovakia						
1984	5.798	5.592	5.913	5.708	5.715	5.552
	[445]	[1295]	[187]	[329]	[258]	[966]
Czech Republic						
1993	8.514	8.360	8.684	8.554	8.401	8.280
	[534]	[1444]	[213]	[423]	[321]	[1021]
Slovak territory of Czechoslovakia						
1984	5.802	5.617	5.907	5.735	5.721	5.580
	[197]	[509]	[86]	[119]	[111]	[390]
Slovakia						
1993	8.384	8.302	8.509	8.488	8.314	8.232
	[473]	[1345]	[170]	[367]	[303]	[978]
Hungary						
1986	8.897	8.536	9.062	8.748	8.741	8.468
	[713]	[2626]	[347]	[639]	[366]	[1987]
1993	9.872	9.732	10.139	9.953	9.674	9.616
	[268]	[635]	[114]	[219]	[154]	[416]
Russia						
1993	10.169	9.960	10.277	10.039	9.973	9.862
	[445]	[1332]	[287]	[737]	[158]	[595]
1998	6.723	6.558	6.837	6.583	6.587	6.525
	[275]	[741]	[149]	[417]	[126]	[324]
2000	7.404	7.297	7.572	7.418	7.244	7.192
	[223]	[553]	[109]	[258]	[114]	[295]
2001	7.829	7.710	7.972	7.791	7.712	7.677
	[304]	[852]	[137]	[400]	[167]	[452]

Note: Number of respondents in brackets.