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## Who Wants to Revise Privatization and Why? Evidence from 28 Post-Communist Countries

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### **Abstract:**

A 2006 survey of 28,000 individuals in 28 post-communist countries reveals overwhelming public support for the revision of privatization in the region. A majority of respondents, however, favors a revision of privatization that ultimately leaves firms in *private* hands. We identify which factors influence individuals' support for revising privatization and explore whether respondents' views are driven by a preference for state property or a concern for the fairness of privatization. We find that human capital poorly suited for a market economy with private ownership and a lack of privately owned assets increase support for revising privatization with the primary reason being a preference for state over private property. Economic hardships during transition and work in the state sector also increase support for revising privatization, but mainly due to the perceived unfairness of privatization. The effects of human capital and asset ownership on support for revising privatization are independent of a countries' institutional environment. In contrast, good governance institutions amplify the impact of positive and negative transition experiences on attitudes toward revising privatization. In countries with low inequality, individuals with positive and negative transition experiences hold significantly different views about the superiority of private property, but this difference is much smaller in countries with high inequality.

*Keywords: privatization, revision, nationalization, property rights, demand for property rights, legitimacy of property rights, transition*

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## 1. Introduction

Spurred by a strong consensus among economists and international financial institutions, the privatization of state enterprises has been a central element of economic reform over the last 25 years. Governments from Mexico to Indonesia to Georgia have shed considerable portions of their state sector, and by most, but, not all accounts, the beneficial effects of privatization have outweighed the costs (e.g., Guriev and Megginson 2007, Megginson and Netter 2001, Megginson 2005, McKenzie and Mookherjee 2003). Yet, for all its benefits, privatization is widely reviled by the public. Survey results from 17 Latin American countries in 2003 found that almost two-thirds of respondents thought that privatization was “not beneficial” and forty percent disagreed with the statement “the state should leave productive activities to the private sector” (Lora and Panizza 2003). A representative survey of Russia’s population in 2006 found that fifty two percent of respondents agree with the statement “the majority of private assets in the country should be nationalized” (CEFIR 2007). A representative survey of citizens in 28 post-communist countries in 2006 found that over 80 percent of respondents would like to revise current privatization in some way (EBRD 2007 a, b). Given the lack of public support for privatization, it is hardly surprising that recent years have seen significant reversals of privatization in Bolivia, Kazakhstan, Russia, Ukraine, Venezuela, Zimbabwe and elsewhere.<sup>1</sup>

The survey results for the post-communist world are somewhat surprising. Most countries in the region conducted considerable privatization in the early to mid 1990s and, after a steep initial decline, experienced strong economic growth from the end of the 1990s onwards.<sup>2</sup> In the last ten years, the average annual real GDP growth in the 28 post-communist countries was 5.5 percent; moreover, it has been accelerating: in the last five years, countries of the region grew at 6.8 percent on average. Since the private sector has been the major driver of this economic recovery, one would expect a lower demand for re-nationalization in countries with higher growth rates. But, in fact, this is not the case (see Figure 1). So, why is privatization so

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<sup>1</sup> Contrary to a widespread view that re-nationalizations in the Former Soviet Union are confined to the energy and media sectors, a lot of privatization reversals occurred in manufacturing and financial sectors. For example, in Russia, *OMZ* (“United Machine Plants”), *Siloviye Mashini* (“Power machines”), *AvtoVAZ* (the largest automotive plant) and such banks as *PromStroyBank* and *Guta Bank* are among the biggest re-nationalized assets; the largest re-privatization in Ukraine was the giant steelmaker *Kryvorozhstal*.

<sup>2</sup> Cross-national empirical studies from the region find that privatization is generally positively associated with or unrelated to economic growth (Zinnes et al. 2001; Estrin et al. 2007; Bennett et al. 2007). Firm-level analyses also generally find that privatization has either positive or no effect on performance (cf., Frydman et al. 1999; Djankov and Murrell 2002; Brown et al. 2006; Brown et al. 2007); yet these studies understate the effect of privatization on economic growth as they fail to take into account the positive externalities from privatization on de-novo private sector development.

unpopular? Is it because people prefer state to private ownership? If so, do they believe in the superiority of state ownership for ideological reasons or because they expect personal economic gains from re-nationalization? Alternatively, do they favor revising privatization to achieve a more equitable redistribution of property based on the notion that current owners obtained privatized assets unfairly? We address these questions in the paper.

Generally, the extent of public support for revising privatization is a critical issue for efficiency. The mere threat of revising the privatization bargain weakens the incentives of private owners. In order to make formerly state-owned assets more productive, the new owners often must make irreversible investments *ex ante*. If the public favors revising privatization, owners of privatized property anticipate the possibility of being expropriated by populist politicians *ex post* and refrain from making productive investments. This, in turn, further increases the support for expropriation. Moreover, in the more corrupt countries of the region (such as Russia and Ukraine), political elites use public sentiment in favor of privatization revision to redistribute assets to themselves or their supporters. As these property redistributions do not increase the legitimacy of new owners, the specter of “permanent re-distribution” from one owner to another dramatically weakens private property rights (e.g., Hellman 2002 or Sonin 2003).

The reasons behind the support for revision of privatization also have important policy implications. If support for revising privatization is due to relative losses from returns to human capital, then retraining programs that improve skills can be effective. Whereas, if support for revising privatization is driven by concerns for fairness, then inefficient redistribution may be unavoidable (Alesina and Rodrik 1994).

We analyze the results of the “Life in Transition” survey of 28,000 individuals from 28 transition countries conducted by the World Bank and EBRD (EBRD 2007 a, b). The survey asked respondents whether they would like to revise privatization results; and if so, whether they prefer privatized assets be re-nationalized and left in state hands, re-nationalized and then re-privatized to new owners using a more transparent procedure, or be left with the current owners provided they pay additional compensation for their privatized assets. Respondents express strong support for revising privatization in all post-communist countries: more than one half of the population in each of the 28 countries supports some form of revision of privatization. Less than one-third of respondents, however, favored a re-nationalization that leaves firms in state hands. Thus, support for revising privatization should not be equated with support for re-nationalization.

We develop a simple framework for analyzing responses to this question in light of two possible reasons for supporting the revision of privatization: a concern for the fairness of privatization or a preference for state over private property. We examine how the respondents' endowments of human capital, assets, ideology, employment history and experience during transition affect support for revising privatization. We also examine why individuals hold these views.<sup>3</sup>

Controlling for country-level variation with fixed effects, we examine how individual characteristics shape attitudes towards privatization within countries. We find that respondents with less human capital and human capital specific to an economy dominated by state ownership favor revising privatization. More specifically, older respondents, those in less skilled jobs, in poorer health, and with only vocational educations are significantly more likely to support revising privatization. Respondents hold this view primarily due to expectations of greater relative returns to their specific human capital in an economy with extensive state ownership because re-nationalization is expected to reverse wage decompression partly associated with privatization (Milanovic 1999). Asset ownership is also related to attitudes towards revising privatization. Respondents who own a house or apartment are far less likely to favor revising privatization. Again, this view is rooted in calculations of personal gains (or expectations of losses). In addition, individuals use their personal experience during the transition to evaluate privatization. Most clearly, significant and sustained economic hardships during transition (e.g., food cuts, forced asset sales, and wage cuts) are associated with greater support for revising privatization. Respondents who hold this position are generally motivated by a belief in the unfairness of privatization outcomes. Similarly, career trajectories during transition affect evaluations of privatization: the more years that a respondent worked in the state sector during transition, the more likely she favors revising privatization due to concerns over fairness, presumably because she believes that she missed out on gains from the initial round of

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<sup>3</sup> Scholars have studied extensively the consequences of privatization, but have paid far less attention to support for revising privatization. Our study is the first one to examine the motivations that underpin support for revising privatization. Studies from the post-communist world have examined attitudes towards market economies or the private sector more generally, but only few focus directly on the privatization of state-owned enterprises (cf., Duch 1993; 1995). Hoff and Stiglitz (2004) present a formal model that incorporates the legitimacy of privatization as a parameter, but offer only illustrative evidence from the post-communist region. Frye (2006; 2007) uses an experiment embedded in surveys of business elites and the mass public in Russia to determine how the severity of violations of the law on privatization, investments by rightholders, and the provision of public goods by rightholders influence support for revising privatization, but his findings are limited to a single country and focus on only a few variables of interest. Most closely related to our paper are cross-national studies from Latin America that probe the determinants of support for privatization; these studies, however, do not examine the reasons behind popular support for re-nationalization (Boix 2005, Graham and Sukhtankar 2004, Lora and Panizza 2003, Panizza and Yanez 2006).

privatization. Other aspects of career trajectories during the transition, such as moving from wage work to self-employment, or working for longer periods in the private sector, strengthen the preference for private over state property, but do not affect attitudes towards revising privatization.

In the second part of our analysis, we examine how a country's governance institutions, privatization policies, and income inequality influence the differences in individual attitudes towards the revision of privatization. Most interesting, country-level factors do not change the way in which human capital and asset ownership influence attitudes toward revising privatization. In contrast, institutions do affect the link between transition-related experiences and support for the revision of privatization. In particular, in countries with better governance, stronger democracy, and more extensive private ownership respondents moving from work for wages to self-employment are significantly more likely to oppose revising privatization than their counterparts in countries with weaker institutions. Good governance and extensive private ownership also magnify differences in preferences over property type between those who experienced severe economic hardships during transition and the rest of the population. Inequality does not directly affect the link between individual transition histories and attitudes towards revising privatization, but it does decrease the differences in the belief of the superiority of state over private property between those with relatively successful and unsuccessful transition histories. Finally, the method of privatization does not significantly affect individual attitudes towards the revision of privatization, but the extent of privatization in the respective country does: opposition to the revision of privatization by the newly-created class of self-employed is larger in countries with more extensive privatization.

We proceed by presenting data on support for revising privatization in Section 2. We then present our hypotheses and empirical methodology in Section 3 and discuss our results in Sections 4 and 5. Section 6 describes robustness checks. Conclusions are presented in Section 7.

## **2. Public Support for Revising Privatization: Data Summary**

To study public support for revising privatization, we rely on the “Life in Transition Survey” (LiTS). Face-to-face interviews were conducted for a representative sample of 1,000 individuals in each of 28 post-communist countries in Europe and Central Asia.<sup>4</sup>

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<sup>4</sup> For technical details of the survey, see the Appendix and EBRD 2007a. The exact list of countries is as follows: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, FYR

We focus on responses to the following question from LiTS:

“In your opinion, what should be done with most privatized companies? They should be...

- (1) Renationalized and kept in state hands;
- (2) Renationalized and then re-privatized again using a more transparent process;
- (3) Left in the hands of current owners provided they pay privatized assets' worth;
- (4) Left in the hands of current owners with no change.”

**Table 1 here.**

Table 1 summarizes responses to this question. In sum, twenty nine percent of respondents preferred re-nationalization and leaving property in state hands. Seventeen percent of respondents supported re-nationalization followed by privatization to new owners using a more transparent process. Thirty-five percent of respondents favored leaving property in the hands of the current owners provided they pay what the privatized assets are worth. And a little over nineteen percent of respondents favored the status quo of leaving privatized assets in the hands of current owners with no additional payments. The support for revising privatized property varies considerably across countries. Re-nationalization and keeping companies in state hands is strongly preferred in Central Asia and the South Caucasus (between 40% in Armenia and about 52% in Uzbekistan). The highest support for re-nationalization followed by re-privatization using a more transparent process is observed in the South Caucasus and in Croatia. In contrast, respondents in Albania, Bulgaria, the Czech Republic, Hungary, Montenegro, Romania, and Serbia have a strong preference for leaving property with current owners, provided that they pay what the privatized assets are worth (between 48% in Bulgaria and 53% in Romania). The least support for revising privatization is found in Belarus, Estonia, and Mongolia; where 47, 44, and 37% of respondents, respectively, support leaving most privatized companies in the hands of current owners without any change.

The four alternative answers to this question shed light on why respondents support or oppose privatization. We can distinguish between two possible arguments for the revision of privatization: a preference for state over private property and a concern about the fairness of privatization. In particular, one could support revising privatization because the policy was implemented unfairly even though one prefers private to state property; then, one would opt for a revision of privatization that leaves property in private hands, i.e., choose alternatives (2) or (3).

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Macedonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Mongolia, Montenegro, Poland, Romania, Russia, Serbia, Slovak Republic, Slovenia, Tajikistan, Ukraine, and Uzbekistan.

One could also favor the revision of privatization purely due to a preference for state property, and, therefore, choose alternative (1). Moreover, a preference for state property could arise for ideological reasons as one could believe that state property is superior to private property in general or because one could personally benefit from moving property to state hands. The question on revision of privatization does not allow us to differentiate between the two underlying reasons for a preference for state property. We distinguish between them in regression analysis by controlling for respondents' ideological views toward state property.<sup>5</sup>

Table 2 summarizes our interpretation of the four alternative answers. We consider individuals who want any type of change in privatization (those choosing alternative (1), (2), and (3) over (4)) as favoring the revision of privatization, while individuals who favor leaving property in private hands with no change (alternative (4) over (1), (2), and (3)) as opposing the revision of privatization. Further, we consider individuals who favor leaving privatized assets in the hands of the current owners provided that they pay what the assets are worth (alternative (3)) and individuals who chose re-nationalization followed by re-privatization to new owners (alternative (2)) as favoring private property, but being concerned about the fairness of privatization. Finally, we treat individuals who support re-nationalization and leaving property in the hands of the state (alternative (1) over (2), (3), and (4)) as preferring state property to private property. It is difficult to know what individuals, who support re-nationalization and leaving property in state hands, think about the fairness of privatization. It could be that they have concerns about the fairness of privatization and do not think that re-privatization could help, and therefore, favor nationalization. However, it is also plausible that they view the process of privatization as fair, but favor leaving assets in state hands for ideological reasons or because they expect private gains from doing so. We assume that both reasons are equally likely when alternative (1) is chosen.

**Table 2 here.**

The construction of this LiTS question permits us to go beyond previous studies which have tended only to focus on support for and opposition to privatization. By examining a broader range of possible responses, we gain greater insight into the sources of the revision of privatization.

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<sup>5</sup> It is important to note that different motivations for revising privatization are not mutually exclusive: one could favor revising privatization based on fairness concerns and also due to a preference for state property. The survey, however, allowed only one answer to the question on revision of privatization. Therefore, we cannot observe multiple motivations for each individual. We can observe multiple motivations for a group of individuals, however, as we observe the shares of people from a particular group choosing alternatives (1), (2), and (3).



### 3. Methodology

#### 3.1. Hypothesis Testing

We seek to identify the determinants of attitudes towards privatization by running multinomial cross-section regressions of the type:

$$Prob(Y_i = k) = \frac{e^{(\beta'_k X_i + \epsilon_{ik})}}{\sum_{j=1}^4 e^{(\beta'_j X_i)}}, \quad (1)$$

where  $i$  indexes the 28,000 individuals.  $Y_i$  is a four-category response to the revision of privatization question. The outcomes, denoted by  $k$ , are the alternative answers: (1) re-nationalize and keep in state hands; (2) re-nationalize and then re-privatize; (3) leave in the hands of current owners and pay what the assets are worth; (4) leave in the hands of current owners without any change.  $Y_i$  is treated as a multinomial variable.  $X_i$  denotes a vector of explanatory variables discussed below, and  $\epsilon_{ik}$  is an error term. We estimate equation (1) using the Huber-White sandwich estimator of variance to take individual-specific heteroskedasticity into account. In addition, we cluster error terms by primary sampling units (PSUs) – fifty in each country – to adjust the standard errors for intra-PSU correlations.<sup>6</sup>

Denote  $B_k$  to be the estimated marginal effect of the influence of variable  $X_i$  on the probability of choosing outcome  $k$  from the multinomial dependent variable  $Y_i$ ,  $k=1,2,3,4$ :

$$B_k \equiv \frac{\partial Prob(Y_i = k)}{\partial X_i}$$

Based on the results of the estimation, we compute marginal effects on probabilities ( $B_k$ ) and conduct the following three types of hypothesis tests for each of the explanatory variables of the vector  $X_i$ .

#### ***Test 1: Preference towards the Revision of Privatization.***

We say that a particular characteristic  $X_i$  increases the preference towards revising privatization if we observe the following relationship between the estimated marginal effects:

$$B_1 + B_2 + B_3 > B_4. \quad (2)$$

Conversely, if  $B_1 + B_2 + B_3 < B_4$ , then the variable  $X_i$  is said to decrease support for revising privatization.

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<sup>6</sup> There are 50 PSUs for each of the 28 transition countries and 20 individuals are chosen randomly from each PSU.

***Test 2: Preference for State Property.***

We say that a characteristic  $X_i$  is associated with stronger preference for state over private property if:

$$B_1 > B_2 + B_3 + B_4. \quad (3)$$

Conversely, if  $B_1 < B_2 + B_3 + B_4$ , then  $X_i$  strengthens the preference for private over state property.

***Test 3: The Unfairness of Privatization.***

We say that  $X_i$  is associated with the perception that privatization was unfair if:

$$B_2 + B_3 > B_4. \quad (4)$$

Conversely, if  $B_2 + B_3 < B_4$ , then  $X_i$  strengthens the view that privatization was fair.

Table 2 summarizes the three types of tests described in this section. For all the tests, we apply standard  $\chi^2$  tests for the equality of coefficients.

***3.2. Explanatory Variables***

To begin, we assess the impact of individual characteristics on attitudes toward revising privatization taking the institutional environment and all other country characteristics as given by including country-level fixed effects. Conceptually, we distinguish between the following groups of explanatory variables (i) human capital, such as skills, education, age, and health; (ii) wealth endowments, such as ownership of property and wealth; (iii) transition experiences, including labor market history and the extent of economic hardships during transition; (iv) ideological factors, such as support for market economies, state ownership, and democracy; and (v) subjective perceptions about government and its role, such as trust in public institutions, corruption, and importance of law and order. In the next section, we discuss the theoretical predictions about the effect of these groups of variables and present the results.

In all specifications, we control for the respondent's gender, location of residence (rural vs. urban vs. metropolitan area), religion, whether the respondent belongs to an ethnic minority, and current labor market status (employed vs. unemployed). As mentioned above, we also control for the country of residence with country dummies.

To sum up, we use the following vector of covariates  $X_i$  from equation (1) in our baseline specification:

$$X_i = [HC_i, W_i, T_i, I_i, S_i, FC_i, C_i]. \quad (5)$$

$HC_i$  denotes a set of human capital individual-level variables,  $W_i$  denotes the assets endowments,  $T_i$  represents transition experiences,  $I_i$  stands for ideological factors,  $S_i$  denotes the set of subjective perception variables,  $FC_i$  stands for country-specific dummies, and  $C_i$  represents other individual controls. All variables are described and summarized in Tables A1 and A2 in the Appendix.<sup>7</sup> As a refinement of the baseline estimation, we also include interactions of selected individual-level characteristics with the vector of covariates.

In a final step, we examine how country-level characteristics (such as governance institutions, democracy, inequality, or method and extent of privatization) affect individual attitudes towards support for revising privatization. To measure the quality of governance institutions, we use the corruption perception index from Transparency International; the democracy index from POLITY IV; and the World Bank indices of voice and accountability, political stability, government effectiveness, rule of law, control over corruption, and regulatory quality (Kaufmann, Kraay, and Mastruzzi, 2006). To examine whether the degree of country-specific income inequality has an impact on the revision of privatization, we use the most recent Gini coefficients, as provided by the World Bank (2005) and additional sources. We use the following indicators of privatization at the country level: the extent of privatization by 2006, the number of years from the start of privatization, and whether privatization transferred property primarily to enterprise insiders or outsiders. Detailed definitions and summary statistics for the national-level variables are presented in Tables A1 and A3 in the Appendix.

We analyze the impact of national-level variables by exploring the possibility that the effects of individual-level factors vary across countries. Thus, we include interaction terms between individual-level variables and national-level variables of interest into our vector of covariates  $X_i$ . Note that we continue to control for the institutional environment in each country with country-fixed effects. Thus, the augmented vector of covariates takes the following form:

$$X_i' = [Institution_i \times Individual_i, X_i],$$

where  $Institution_i$  is the country characteristic of interest,  $Individual_i$  is the individual characteristic of interest and  $X_i$  is defined in equation (5).<sup>8</sup>

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<sup>7</sup> As we discuss in the robustness section, the exclusion of subjective perceptions measures from the set of covariates (due to their possible endogeneity) does not affect coefficients and significance of other variables.

<sup>8</sup> Note that we subtract the sample mean from the variables in the interaction term before taking the interaction in order to have the direct effect being estimated at the mean of all explanatory variables.

Tables 3 and 4 present the results of our empirical estimation. Both tables have the same structure. Columns 2 to 5 report the estimated marginal effects for the four outcomes of the dependent variable, with  $z$ -statistics in brackets. The next three columns report  $p$ -values of the tests described in Section 3.1. The last three columns present the implications of these tests. In particular, the ninth column reports the estimated effect of a particular characteristic in  $X_i$  on the preference for or against revising privatization. The next column reports the results of the tests of whether this component of  $X_i$  makes respondents more likely to favor revising privatization based on their preference for state versus private property. Similarly, the last column presents results of testing whether or not  $X_i$  affects respondents' considerations of the fairness of privatization. If there are no statistically significant results, the cells are left blank in these three "conclusion" columns.

#### **4. Who Supports Revising Privatization?**

In this section, we present our hypotheses and empirical results about the individual-level determinants of support for revising privatization. We organize our presentation by discussing predictions and results for each group of factors separately.

##### *4.1. Individual Endowments of Human Capital*

Privatization may affect the career prospects of different groups of people differently. Individuals with higher skills and better opportunities to take advantage of transition are expected to express greater support for privatization and oppose its revision. Groups with skills and networks specifically developed for an economy dominated by state-owned firms may have strong incentives to oppose privatization fearing diminished career opportunities. For instance, older people are expected to have a vested interest against privatization since the private sector is known to provide relatively lower, if any, return to the experience obtained during the pre-reform period, while the state sector is known to provide positive returns to experience (e.g., Brainerd 1998).<sup>9</sup> In sum, older, less healthy, less educated, and less skilled individuals are expected to be especially strong supporters of revising privatization based primarily on how it shapes their economic prospects; and, therefore, their views are motivated by their relative gains from state

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<sup>9</sup> In labor market studies, age – being a proxy for experience – is often considered to be positively associated with human capital (e.g., Willis 1986). As workers gain experience, they accumulate human capital. This relationship is less pronounced in the post-communist countries because the older workers were trained in skills that are far less applicable to current market conditions compared to their younger counterparts.

versus private property. There is no clear-cut predication about how human capital is related to the likelihood that a respondent evaluates privatization based on concerns for fairness. One might expect respondents with higher education to have greater capacity to judge information related to the process of privatization. In that case, the effect of human capital on views about revision of privatization would depend on the actual privatization process in the country.

We measure human capital by the highest educational degree obtained by the respondent (ranking from no degree to post graduate degree), age, self-reported health status, and by the skill-type of the respondent's occupation in 2006. LiTS provides data on occupation for those who worked for wages in any of the years following 1989. We distinguish between occupations requiring high skills and occupations requiring low or medium skills.

Panel A of Table 3 presents the results for an estimation of the baseline equation which focuses on individual-level variables and takes the institutional environment as given. We find that the human capital variables are generally good predictors of attitudes toward revising privatization. Age is positively associated with support for revising privatization. Older respondents express this preference due to their support for state property. A 10-year increase in the age of a respondent increases the probability of support for revising privatization by 0.7 percentage points, and for re-nationalization as a means of revising privatization by 1.5 percentage points. The result is consistent with the vested interest argument as older respondents have accumulated skills more relevant for the state sector than for the private sector. Interestingly, age is not related to a belief that privatization should be revised based on concerns for fairness.

Skills have a similar effect. Workers with low skills are more likely to favor revising privatization, and the reason respondents hold this view is their support for state property. Holding a low-skilled occupation increases the probability of supporting the revision of privatization by 2 percentage points, and of supporting a re-nationalization that leaves assets in state hands by 5 percentage points compared to the reference group.<sup>10</sup> Again, the low skilled hold this belief because they support state property. Skills are unrelated to concerns for fairness of privatization. In addition, individuals in poor health are more likely to favor revising

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<sup>10</sup> The reference group here is those working for wages in high-skilled occupations, the self-employed and those not working.

privatization. They hold this view for both reasons: they favor state property and view privatization as unfair.<sup>11</sup>

The relationship between education and attitudes toward revising privatization is somewhat more complex because the level of education in transition economies does not reflect the possession of skills specific to a market economy. The most clear-cut pattern in the effects of education is that the educational level monotonically increases concerns over the fairness of privatization. Presumably, this is because more educated individuals are more aware of the actual process of privatization. As far as the preference for state vs. private property is concerned, respondents with higher education (i.e. university, college, or postgraduate degree) have a strong preference for private property compared to the rest of the population.<sup>12</sup> For example, the probability that a respondent with a higher degree supports a re-nationalization that leaves assets in state hands is 2.9 percentage points lower than for a secondary school graduate. As a result of the interplay of the two motivations, respondents with a high school (i.e. secondary) degree are significantly more likely to oppose revising privatization than respondents with less than secondary education (due to unfairness considerations). In contrast, they are less likely to oppose revision of privatization than respondents with professional and vocational training (due to both reasons). And they are equally likely to support privatization revision as respondents with higher education (but for a different reason: high school graduates are less in favor of private property, but also consider privatization as more fair compared to college graduates).

In sum, individuals with human capital suited for an economy with extensive state ownership (i.e., old and low-skilled individuals) are especially likely to favor revising privatization and are likely to hold this view due to a preference for state property rather than due to fairness considerations. Because we control for the respondent's preferred extent of state ownership directly (as we discuss below in Section 4.4), the preference for state property is likely to be rooted in expectations of personal gains from reversing privatization.<sup>13</sup>

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<sup>11</sup> Privatization may influence the quality and costs of public services. As Boix (2005: 7) notes: "given high fixed costs in the investments they need to undertake, privatized companies first target high-income clients and tailor their services in way that discriminates against areas with a high concentration of low-income individuals." This may lead the individuals with poor health – as they have a particularly strong need to have an access to healthcare – to oppose privatization.

<sup>12</sup> There is no difference in preferences for state vs. private property among respondents with different educational levels below higher education.

<sup>13</sup> It is interesting to put these findings in comparative perspective. Studies from Latin America have mixed results about the effect of human capital on attitudes towards privatization. In the study of 17 Latin American countries, Panizza and Yanez (2006) find that those with a professional degree were strong supporters of privatization, but also report that respondents with a moderate level of education were significantly more likely to oppose privatization. Graham and Sukhtankar (2004) use a similar data set and find that education was associated with higher levels of

#### 4.2. *Assets and Wealth*

Wealth and property ownership may also shape attitudes toward the revision of privatization. Richer individuals with accumulated private assets are more likely to favor private property over state property because of fears that re-nationalization and expropriation may not stop at large private businesses, but may potentially affect their personal holdings. Personal assets could also be related to the likelihood that respondents evaluate privatization on fairness grounds if respondents obtained their assets through privatization. We identify property owners as respondents living in a household in which any household member (including the respondent) is the majority owner of a house or an apartment. We measure individual wealth using data from LiTS on the annual consumption expenditures for each household (for more details see Table A1).

We find that ownership of a home or apartment is strongly associated with opposition to revising privatization and this view is driven solely by a preference for private property. The probability that an individual who owns a home or apartment opposes the revision of privatization is 2 percentage points higher than for an individual who does not own a home or apartment. Property ownership is also associated with a 3.5 percentage point increase in opposition to a re-nationalization that leaves assets in state hands. Similarly, respondents reporting a movement up the income ladder relative to 1989 strongly oppose the revision of privatization and the main reason behind this view is a preference for private property. In none of these cases do respondents evaluate privatization based on fairness considerations.

In contrast, wealth has a less straightforward relationship towards the revision of privatization. Individuals from the upper part of the wealth distribution (compared to individuals from the lower part of the distribution) are more likely to view privatization as unfair and support redistribution through taxation (i.e., alternative (3)); but, at the same time, they oppose expropriation of current owners through re-nationalization where property is kept in state hands. As a result, the overall effect of wealth on revising privatization is ambiguous.<sup>14</sup>

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support for privatization in 2001, but the relationship was reversed in 2002. Boix (2005) uses data from Mexico in 1998 and 2003 and Peru in 2003 and finds no relationship between education and support for privatization in either country.

<sup>14</sup> The fact that members of the upper income deciles express concern with the fairness of privatization may be less surprising than it appears at first glance. In LiTS these individuals are likely to belong to the middle class rather than to the upper class because of relatively high income inequality in transition countries and the inherent under-representation of the upper class in individual and household surveys (Deaton 2005). Therefore, the effect of wealth

### *4.3. Individual Transition Experience*

Identifying the consequences of privatization is difficult even for knowledgeable citizens. Privatization is often conducted as a part of a package of reforms, which may make it hard for individuals to identify its consequences. Furthermore, privatization is a technically complex policy whose effects may take years to appear. Given the difficulty of evaluating privatization, individuals may use their personal experience during transition as a metric for evaluating privatization. Individuals who adjusted poorly to the new economic conditions, i.e., those who experienced sustained periods of wage cuts or food cuts, may attribute their hardships to privatization and are likely to favor revising it. Similarly, respondents whose career trajectories were negatively affected by the transition – those who held many jobs, or failed to move from working in the state sector to entrepreneurship – are also likely to blame privatization for their woes and support revision. In sum, individuals experiencing significant economic losses or negative career trajectories during the transition may support revising privatization and may hold this view for two reasons. If they expected re-nationalization to put an end to their losses, they would have a preference for state ownership; and if they attributed their losses to inequities in the process of privatization, they would support revising privatization out of fairness concerns.

LiTS data enable us to reconstruct each individual job trajectory since 1989. We observe whether the respondent worked for wages (in the state or private sector, in a high- or low-skill occupation), was a self-employed or an entrepreneur, or was not employed in each year between 1989 and 2006.<sup>15</sup> To identify the impact of individual job trajectories for each respondent, we calculate the number of jobs held since 1989, the number of years working in the state sector, the number of years working in the private sector, and a large number of variables reflecting the direction of job changes, e.g., moves from state to private sector, from low-skill to high-skill occupation, or from work for wages to self-employment and entrepreneurship.

Remarkably, with one notable exception – i.e., the number of years worked in the state sector – employment trajectories are not significantly related to support for revising privatization. They do, however, shape whether respondents evaluate privatization based on a preference for property type or concerns for fairness. For example, the longer an individual worked for wages in either the state or private sector, the more likely she is to view privatization

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on the perception of fairness of privatization may actually be U-shaped with the middle class being the most concerned with fairness.

<sup>15</sup> We cannot distinguish between self-employed and entrepreneurs, however.



as unfair. While work in the private sector is related to a belief in the unfairness of privatization, it does not diminish support for private property: the longer a respondent worked for wages in the private sector, the more likely she is to favor private property. As a result, the two motivations cancel each other out: private sector veterans do not express significant support for or against revising privatization. The probability of opposing state property increases by 3.3 percentage points for each ten year increase in work experience in the private sector. The result is not symmetric for those working in the state sector: the length of work in the state sector is not associated with stronger preferences towards state property, but it is the only career trajectory variable that directly predicts support for revising privatization. A ten-year increase in state sector employment decreases the probability of recognizing the status quo privatization outcome by 2.3 percentage points. The main reason behind this stance is the perceived unfairness of privatization.

Job turnover, the direction of career trajectory, and changes in the type of ownership of enterprises where the respondents worked for wages, do not have a significant effect on attitudes towards the revision of privatization, private vs. state property, or the fairness of privatization once we control for the level of skills and the years of experience in the state and private sectors.<sup>16</sup> In contrast, the move from work for wages to self-employment has an important and robust effect: those who moved from work for wages to self-employment are strongly in favor of private property. The probability that they oppose re-nationalization is 6 percentage points higher compared to all other respondents. There is no evidence that this group has a different attitude about the fairness of privatization than the rest of the population and their support for private property does not lead them to hold significantly different views on revising privatization compared to the rest of the population.

In addition, we examine the impact of important economic hardships during transition, such as the number of years that the respondent experienced wage cuts, food cuts, or needed to sell household assets. We find that individuals who experience extensive economic losses related to transition are significantly more likely to favor revising privatization. Individuals who experienced relatively small losses (such as wage cuts and asset sales) tend to hold this view due to concerns about the fairness of privatization. More extreme forms of deprivation (such as cuts in basic food consumption) undermine confidence in private ownership: respondents who

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<sup>16</sup> We omit variables that reflect moves between private and state sector employment and high- and low-skilled jobs from the list of regressors because they have no significant impact themselves and have no effect on coefficients of other explanatory variables.

endured long periods of cuts in basic food consumption prefer state ownership. An additional year of wage cuts or wage arrears decreases the probability of recognizing the status quo privatization outcome by 0.6 percentage points, and an additional year of having to sell household assets decreases this probability by 0.7 percentage points. An additional year of having to cut down on basic food consumption increases support for revising privatization by 0.2 percentage points.

#### *4.4. Ideology and Perceptions of Government*

The respondent's perceptions of government institutions affect support for revising privatization. Perceptions of government quality, especially the perception of the current level of corruption, are strong predictors of support for revising privatization. Respondents who view the government as more corrupt in 2006 than in 1989 and those who view law and order as very important support the revision of privatization on fairness grounds. Finally, ideological factors are also strongly associated with attitudes toward privatization. In particular, respondents who express a normative preference for autocracy over democracy, for central planning over the market, and for state ownership over private ownership of large assets are significantly more likely to support revising privatization than respondents who hold the opposite views.

#### *4.5. Individual-Level Interactions*

Panel B of Table 3 presents two interesting interaction effects: (1) between wealth and education and (2) between age and skills. An increase in the respondent's level of education leads to an increase in the effect of wealth on the likelihood of support for the status quo. This view is driven by a greater increase in the perception that privatization was fair among educated wealthy individuals compared to uneducated wealthy individuals. In addition, an increase in respondents' skills reduces the effect of age on support for the revision of privatization: older respondents have a less negative view of the status quo privatization outcome than younger respondents when their skills are high. This result suggests that the opportunities gained by possessing higher skills offset the negative effect of age. More broadly, these results underscore the importance of human capital suitable for a market economy for the legitimacy of privatization.<sup>17</sup>

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<sup>17</sup> The controls for gender, household size, location, current labor market status and religion reveal that males are more likely to support private property, and rural households are more likely to be state property proponents as compared to metropolitan households. At the same time these factors are not significantly related to support for or

## **5. Do Institutions and Policies Shape Individual Attitudes towards Revising Privatization?**

In this section, we test whether the effects of individual-level factors vary across institutional and economic environments. On the one hand, good governance institutions may increase the opportunities available to potential and actual economic winners relative to the rest of the population and thereby magnify the impact of positive transition experiences on attitudes towards revising privatization. The same reasoning can be applied to the extent of privatization. This logic suggests that good institutions and broad-based privatization should amplify the effects of positive and negative transition experiences on attitudes toward revising privatization. If this view were correct, economic winners should be even stronger opponents (and losers – stronger proponents) of revising privatization. On the other hand, if associated with an elaborate social safety net, good governance institutions may reduce differences in attitudes towards revising privatization between transition winners and losers, both by leveling the playing field and by promoting procedural fairness in the making of privatization policy. In this case, good institutions should minimize differences between economic winners and losers from transition.

The way in which privatization was conducted also may affect the link between individual work trajectories and attitudes towards privatization. An insider-dominated privatization may give workers in privatized companies more shares and therefore a higher stake in protecting privatization compared to workers under outsider-dominated privatization. Thus, the mode of privatization is expected to affect the difference in attitudes toward revising privatization between workers who remained in the state sector and those who did not.

We find that the effects of human capital, assets, and income on views about the revision of privatization do not depend on the governance institutions, inequality, or the method and scale of a country's privatization. This is an important finding that suggests the broader relevance of our individual-level results because they turn out to be robust across a range of institutional and economic environments.<sup>18</sup>

In contrast, the effects of individual transition trajectories on attitudes toward the revision of privatization do depend on the institutional setting. In Table 4, we present estimates of interactions of country-level indicators of governance, privatization, and inequality with two variables: (1) a dummy variable indicating respondents who moved from work for wages to self-

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opposition to the revision of privatization. The only exception is that members of an ethnic minority are significantly more likely to oppose the revision of privatization on the grounds that privatization was fair.

<sup>18</sup> To save space, we do not report results for these interaction terms.

employment or entrepreneurship (an indication of a successful adjustment to transition) and (2) the number of years in which respondents experienced cuts in basic food consumption (an indication of severe hardship during transition).

We find that higher scores on indices of democracy and voice and accountability tend to reinforce both the effect of moving from work for wages to self-employment and the effect of having to reduce basic food consumption. In more democratic countries and countries with better voice and accountability, those who moved from work for wages to self-employment are even more likely to oppose the revision of privatization than their counterparts in a less democratic and less transparent environment. One standard deviation increases in the democracy and voice and accountability indices lead to 4.8 and 3.7 percentage point higher support for the status quo privatization outcome by those who moved from wage work to self employment or entrepreneurship. Thus, individuals who managed to adjust well to the new economic conditions express greater support for privatization where governance institutions are stronger.

In contrast, governance institutions do not affect the difference in attitude towards the revision of privatization between individuals who had to cut down on food and the rest of the population. Yet, stronger democracy and accountability do reinforce the difference in preferences of these two groups concerning the superior property type. Those who experienced economic hardships express stronger support for state property (relative to the rest of the population) in countries with good governance institutions.

We also explored how various aspects of privatization interact with individual transition histories (and other individual-level variables). The method of privatization does not affect the link between individual characteristics and attitudes towards privatization revision. But the scale of privatization and the time since the start of privatization do have significant effects: more extensive and earlier privatizations reinforce the differences in supporting the status quo between those who moved to self-employment and entrepreneurship and the rest of the population. This suggests that more extensive privatization increases opportunities for those moving from wage work to entrepreneurship. In addition, individuals, who experienced many years of food cuts express even more distrust for private property in countries with more extensive privatization programs.

Finally, we examine whether the level of economic inequality conditions the impact of transition experiences on evaluations of privatization. On the one hand, inequality may exacerbate differences in the attitudes toward revising privatization between winners and losers

from transition as only the narrow group of winners gains from privatization. On the other hand, inequality may reduce differences between groups with positive and negative transition experiences by generating political and social instability with negative consequences for all of them (except for the small group of very rich who are typically underrepresented in a household survey). The same logic applies to the effect of inequality on people's views about private versus state property.

We find that income inequality has a significant effect on the link between individual transition histories and preferences toward state versus private property but not on preferences over privatization revision. The difference between the effects of “positive” and “negative” transition histories on the preference over property type is significantly reduced in high-inequality countries. In countries with a Gini coefficient which is one standard deviation below the mean, those who moved to self-employment have – compared to the rest of the population – a 10 percentage point greater opposition to re-nationalization that leaves assets in state hands. In contrast, in countries with a Gini coefficient one standard deviation above the mean, those who moved to self-employment have only a 1 percentage point greater opposition to re-nationalization. Similarly, respondents who reduced basic food consumption have a 0.5 percentage point higher support for re-nationalization in countries with a Gini coefficient one standard deviation below the mean; while this difference is only 0.2 percentage points in countries with a Gini coefficient one standard deviation above the mean. Thus, we find that economic inequality reduces differences in the attitudes of transition winners and losers towards state versus private property.

## **6. Robustness Checks**

Our results are robust to several refinements and alternative specifications, including different estimation techniques, different specifications, and different sets of covariates.<sup>19</sup>

As alternatives to the multinomial logit estimation, we employ multinomial probit estimation. The results remain unaffected. We also experimented with other specifications (such as combining the four responses into two categories and running simple probit, logit, and OLS regressions) and the results did not change significantly.

In the baseline specification, we adjust the standard errors to allow for clusters in error terms within PSUs to account for intra-PSU correlation. Alternatively, we have also added PSU

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<sup>19</sup> The results of all robustness checks are available from the authors upon request.

fixed effects (i.e., dummies for each PSU) dropping the location variables and the country dummies. The effects of interest remain robust to this specification with one notable exception: after controlling for PSU fixed effects, correlation between the perception of unfairness of privatization and transition-related hardships disappears. This, however, is explained by the fact that many transition-related hardships are PSU-specific rather than individual-specific.

We apply a weighting scheme for the summary statistics to account for the fact that the LiTS data turned out to be biased towards elderly and female respondents due to non-responses even though the sample was originally constructed to be representative. In the baseline regressions we do not apply this weighting scheme, but instead, introduce controls for age and gender. When we use the weights in the regression analysis, the results do not change.

In the baseline specification, we include respondents' attitudes toward a market economy, democracy, the preferred extent of state ownership of large companies, as well as perceptions of government as regressors. Yet, these variables may be endogenous to respondents' views about revising privatization. If we exclude variables related to ideology and other perception variables from the list of regressors, the results for education, wealth, and ownership of property become more pronounced (as one would expect because of omitted ideology in these regressions), while the results for transition-related variables are unaffected.

We repeated our empirical exercise for each country individually to examine country-specific patterns. As for the human capital and assets variables, the significance of the results varies somewhat across countries, but, qualitatively, the results are broadly consistent across countries. In contrast, we do find some differences across countries for the effects of career trajectories and transition hardships. These differences, however, are consistent with our analysis of Section 5.

In addition, the results are robust to dropping the two most authoritarian countries – Uzbekistan and Belarus – from the sample and to using the most recent values instead of the over-time averages for the institutional indicators.

## **7. Conclusion**

Despite the strong support for privatization among economists and international financial organizations, public support for privatization is surprisingly low. Using a survey of 28,000 respondents, we report an extremely high level of support for revising privatization in 28 post-communist countries. More than 50 percent of the population in *each* of the 28 countries and 80

percent of all respondents support some form of revision of privatization from levying additional taxes on current owners of privatized assets to the full expropriation and re-nationalization of assets. Less than a third of respondents, however, favor a re-nationalization that leaves firms in the hands of the state.

We identify factors that influence respondents' preferences over revising privatization and explore their underlying motives for holding these views. Human capital poorly suited for a market economy with private ownership, lack of privately owned assets, economic hardships experienced during transition, and exposure to work in the state sector significantly increase support for revising privatization. The lack of human capital and private assets influence support for revising privatization primarily via a preference for state property over private property; whereas transition-related hardships and work in the state sector mainly influence support for revising privatization due to the perceived unfairness of privatization.

The relationship between attitudes towards privatization and human capital and wealth is unaffected by a country's institutional environment, the level of privatization, or the extent of inequality, which suggests the general relevance of these results. In contrast, the relationship between attitudes towards privatization and transition experiences is affected by these country characteristics. In countries with better governance, stronger democracy, and more pervasive private ownership, respondents moving from work for wages to self-employment (and entrepreneurship) are more likely to oppose revising privatization than their counterparts in countries with weaker institutions. Better governance institutions and low inequality reinforce the preference for state over private property for individuals who experienced significant economic losses during transition. Low inequality also reinforces differences between the effects of "positive" transition experiences on the preference over property type.

Our results suggest broader implications. First, respondents express fairly diverse views over how privatization should be revised. Indeed, almost one half of those who favor revising privatization want assets to ultimately end up in private hands. Therefore, one should not equate support for revising privatization with a preference for state property. Second, people differ in their motivation for revising privatization. Discriminating between these motivations is important as they suggest very different policies to increase the legitimacy of privatization. Some oppose privatization because they prefer state ownership, which in turn could be rooted in ideology or personal interest. Others favor private property in principle, but oppose privatization because it resulted in an unfair distribution of wealth. If public support for the revision of

privatization is rooted in relative losses from declining returns to human capital (as is the case for less skilled and long-time state sector workers), then retraining programs designed to match skills with demand from the new market sectors may prove to be an effective tool. If, however, public support for the revision of privatization is driven by concerns of fairness, governments may have to turn to redistributive policies which necessarily generate distortions in the investment decisions of current owners. An optimistic lesson from our results is that most of the support for the revision of privatization due to unfairness comes from negative personal experiences during the transition, and these transition experiences are likely to play a smaller role in shaping attitudes over time.



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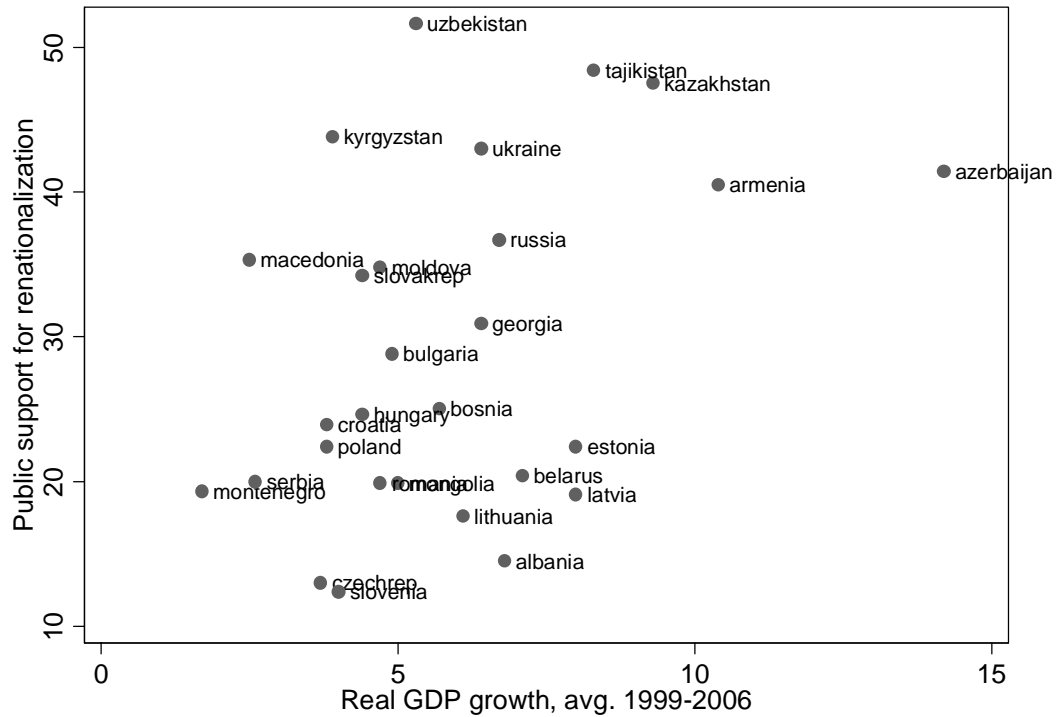


Figure 1. Vertical axis: Percent of countries' populations who agree that most privatized companies should be renationalized and kept in state hands (Source: "Life in Transition" Survey by the EBRD and the World Bank, EBRD 2007b). Horizontal axis: Average annual growth rate of real GDP between 1999 and 2006 (Source: EBRD, selected economic indicators as of May 2007).

**Table 1.**

“In your opinion, what should be done with most privatized companies? They should be...”

|                | Renationalized<br>and kept in<br>state hands | Renationalized and<br>then re-privatized<br>again using a more<br>transparent process | Left in the hands of<br>current owners<br>provided that they pay<br>privatized assets’<br>worth | Left in the hands of<br>current owners with<br>no change |
|----------------|--|---|---|--|
| Albania        | 14.5   | 18.7  | 51.7  | 15.2   |
| Armenia        | 40.5   | 22.6  | 26.8  | 10.1   |
| Azerbaijan     | 41.4   | 26.4  | 8.6   | 23.7   |
| Belarus        | 20.4   | 7.1   | 25.8  | 46.7   |
| Bosnia         | 25.0   | 17.9  | 43.4  | 13.7   |
| Bulgaria       | 28.8   | 15.8  | 48.3  | 7.2  |
| Croatia        | 23.9   | 29.1  | 41.0  | 6.0  |
| Czech Republic | 13.0   | 11.8  | 50.6  | 24.6   |
| Estonia        | 22.4   | 10.7  | 22.6  | 44.4   |
| FYR Macedonia  | 35.3   | 20.7  | 38.0  | 6.0  |
| Georgia        | 30.9   | 31.9  | 14.0  | 23.2   |
| Hungary        | 24.6   | 10.2  | 51.9  | 13.3   |
| Kazakhstan     | 47.5   | 13.4  | 26.7  | 12.5   |
| Kyrgyzstan     | 43.8   | 11.2  | 17.7  | 27.4   |
| Latvia         | 19.1   | 14.2  | 40.4  | 26.4   |
| Lithuania      | 17.6   | 17.3  | 38.3  | 26.8   |
| Moldova        | 34.8   | 14.6  | 32.7  | 17.9   |
| Mongolia       | 19.9   | 22.6  | 21.0  | 36.5   |
| Montenegro     | 19.3   | 20.6  | 51.3  | 8.8  |
| Poland         | 22.4   | 20.4  | 37.2  | 20.0   |
| Romania        | 19.9   | 14.4  | 53.0  | 12.8   |
| Russia         | 36.7   | 13.3  | 31.5  | 18.5   |
| Serbia         | 20.0   | 18.3  | 50.7  | 11.0   |
| Slovakia       | 34.2   | 8.7   | 39.9  | 17.1   |
| Slovenia       | 12.4   | 19.6  | 36.6  | 31.4   |
| Tajikistan     | 48.4   | 13.7  | 21.9  | 16.0   |
| Ukraine        | 43.0   | 12.5  | 31.9  | 12.6   |
| Uzbekistan     | 51.6   | 10.6  | 22.6  | 15.3   |
| Total, %       | 29.0   | 16.7  | 34.8  | 19.4   |
| Cumulative, %  | 29.0   | 45.7  | 80.6  | 100.0  |
| Observations   | 8 077  | 4 654   | 9 697   | 5 412  |

**Notes:**

We are applying a weighting scheme for these summary statistics to ensure that the population as a whole is represented, taking into account the age and gender distribution of the population in each country (see EBRD 2007a: 6). The reported percentages have Bernoulli distribution. Their standard errors depend on the actual percentage and the number of observations (1000 per

country); thus, they are equal to  $SE = 100\sqrt{\frac{p_i(1-p_i)}{1000}}$ , where  $p_i$  denotes the percentage points as reported in the table. The magnitudes of the SE indicate that if a difference between any two countries exceeds 3 percentage points, it is statistically significant. The result holds for each of the four alternatives.

**Table 2. Interpretation of outcomes and types of hypothesis tests for marginal effects**

|   | Outcomes:                                      |  |  |   | Test:         |
|---|--|--|--|---|---------------|
|   | Re-nationalized and kept in state hands<br>(1) | Re-nationalized and then re-privatized using a more transparent process<br>(2) | Left in the hands of current owners provided that they pay privatized assets' worth<br>(3) | Left in the hands of current owners with no change<br>(4) |               |
| <b>Preference for or against privatization revision:</b><br>For vs. Against | For  | For  | For  | Against   | $B1+B2+B3>B4$ |
| <b>Reason:</b><br>State vs. Private   | State  | Private  | Private  | Private   | $B1>B2+B3+B4$ |
| <b>Reason:</b><br>Unfair vs. Fair   | Both equally                                   | Unfair   | Unfair   | Fair  | $B2+B3>B4$    |

Table 3. Multinomial logit. Marginal effects reported.  
Panel A. Direct effects

|   | Outcomes:                               |   |   |  | Chi-squared tests: "No view on.." |                             |                     | Conclusion:  |                                |                                   |
|---|---|---|---|--|-----------------------------------|-----------------------------|---------------------|--|--------------------------------|-----------------------------------|
|   | Re-nationalized and kept in state hands | Re-nationalized and then re-privatized again using a more transparent process | Left in the hands of current owners provided that they pay privatized assets' worth | Left in the hands of current owners with no change | Revision (B1+B2+B3=B4)            | Property type (B1=B2+B3+B4) | Fairness (B2+B3=B4) | Preference for or against revision of privatization: | Reason: Superior property type | Reason: Fairness of privatization |
|   | B1                                      | B2  | B3  | B4   | p-value                           | p-value                     | p-value             |  |                                |                                   |
| <b>Human capital:</b>                                       |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| Age   | 0.0015<br>[4.82]***                     | 0.0002<br>[0.58]  | -0.0009<br>[2.87]***  | -0.0007<br>[3.12]***                               | 0.00                              | 0.00                        | 0.90                | For ***  | State ***                      |                                   |
| Low-skills occupation                                       | 0.0481<br>[3.21]***                     | -0.0134<br>[1.22]   | -0.0154<br>[1.06]   | -0.0193<br>[1.75]*                                 | 0.08                              | 0.00                        | 0.66                | For *  | State ***                      |                                   |
| Education="Secondary" - comparison group                    |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| ="Below secondary"  | 0.0061<br>[0.50]                        | -0.0171<br>[1.55]   | -0.0109<br>[0.80]   | 0.0218<br>[2.22]**                                 | 0.03                              | 0.62                        | 0.01                | Against **   |                                | Fair **                           |
| ="Professional, vocational training"                        | 0.0079<br>[0.75]                        | 0.0014<br>[0.16]  | 0.0042<br>[0.36]  | -0.0136<br>[1.70]*                                 | 0.09                              | 0.46                        | 0.25                | For *  |                                |                                   |
| ="Higher"   | -0.0287<br>[2.35]**                     | 0.0123<br>[1.26]  | 0.0201<br>[1.54]  | -0.0037<br>[0.40]                                  | 0.69                              | 0.02                        | 0.05                |  | Private **                     | Unfair *                          |
| Self-reported poor health status [1-excellent, ..., 5-poor] | 0.0126<br>[2.60]***                     | 0.0016<br>[0.41]  | 0.0006<br>[0.11]  | -0.0149<br>[3.69]***                               | 0.00                              | 0.01                        | 0.03                | For ***  | State ***                      | Unfair **                         |
| <b>Assets:</b>  |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| Ownership of a house or apartment                           | -0.0350<br>[2.72]***                    | 0.0002<br>[0.02]  | 0.0140<br>[1.05]  | 0.0208<br>[2.21]**                                 | 0.03                              | 0.01                        | 0.72                | Against **   | Private ***                    |                                   |
| Wealth (Decile of per capita household consumption)         | -0.0057<br>[3.24]***                    | 0.0039<br>[2.76]***   | 0.0040<br>[2.09]**  | -0.0021<br>[1.64]                                  | 0.10                              | 0.00                        | 0.00                |  | Private ***                    | Unfair ***                        |
| Self-accessed difference wealth ranking b/w 1989 and 2006   | -0.0071<br>[3.67]***                    | -0.0025<br>[1.56]   | 0.0044<br>[2.15]**  | 0.0052<br>[3.45]***                                | 0.00                              | 0.00                        | 0.29                | Against ***  | Private ***                    |                                   |
| <b>Transition-related employment history:</b>               |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| Number of jobs, 1989-2006                                   | 0.0046<br>[0.87]                        | 0.0078<br>[1.87]*   | -0.0106<br>[1.93]*  | -0.0018<br>[0.45]                                  | 0.65                              | 0.38                        | 0.91                |  |                                |                                   |
| Years worked for wages in state sector, 1989-2006           | 0.0007<br>[0.87]                        | -0.0003<br>[0.49]   | 0.0020<br>[2.58]***   | -0.0023<br>[3.75]***                               | 0.00                              | 0.38                        | 0.00                | For ***  |                                | Unfair ***                        |
| Years worked for wages in private sector, 1989-2006         | -0.0033<br>[3.26]***                    | 0.0005<br>[0.69]  | 0.0026<br>[2.65]***   | 0.0001<br>[0.19]                                   | 0.85                              | 0.00                        | 0.04                |  | Private ***                    | Unfair **                         |
| Moved from work for wages to self-employment, 1989-2006     | -0.0618<br>[3.13]***                    | -0.0137<br>[0.82]   | 0.0512<br>[2.36]**  | 0.0243<br>[1.35]                                   | 0.18                              | 0.00                        | 0.71                |  | Private ***                    |                                   |

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|   | Outcomes:                               |   |   |  | Chi-squared tests: "No view on.." |                             |                     | Conclusion:  |                                |                                   |
|---|---|---|---|--|-----------------------------------|-----------------------------|---------------------|--|--------------------------------|-----------------------------------|
|   | Re-nationalized and kept in state hands | Re-nationalized and then re-privatized again using a more transparent process | Left in the hands of current owners provided that they pay privatized assets' worth | Left in the hands of current owners with no change | Revision (B1+B2+B3=B4)            | Property type (B1=B2+B3+B4) | Fairness (B2+B3=B4) | Preference for or against revision of privatization: | Reason: Superior property type | Reason: Fairness of privatization |
| <b>Transition-related hardships:</b>                                |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| Years had to accept wage cuts or wage arrears, 1989-2006            | 0.0022<br>[0.99]                        | 0.0045<br>[2.54]**  | -0.0005<br>[0.19]   | -0.0062<br>[3.04]***                               | 0.00                              | 0.32                        | 0.01                | For ***  |                                | Unfair **                         |
| Years had to sell household assets, 1989-2006                       | 0.0029<br>[0.95]                        | 0.0034<br>[1.24]  | 0.0008<br>[0.21]  | -0.0071<br>[2.20]**                                | 0.03                              | 0.34                        | 0.09                | For **   |                                | Unfair *                          |
| Years had to cut down on basic food consumption, 1989-2006          | 0.0034<br>[2.97]***                     | 0.0008<br>[0.89]  | -0.0018<br>[1.35]   | -0.0024<br>[2.49]**                                | 0.01                              | 0.00                        | 0.49                | For **   | State ***                      |                                   |
| <b>Ideology:</b>  |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| Communist party members in the family ever                          | 0.0123<br>[1.37]                        | 0.0128<br>[1.79]*   | -0.0254<br>[2.68]***  | 0.0003<br>[0.04]                                   | 0.97                              | 0.17                        | 0.39                |  |                                |                                   |
| Agree with "State should own large companies"                       | 0.1294<br>[13.40]***                    | -0.0009<br>[0.11]   | -0.0650<br>[6.56]***  | -0.0636<br>[8.47]***                               | 0.00                              | 0.00                        | 0.88                | For ***  | State ***                      |                                   |
| Democracy="Agree with 'Democracy is preferable'" - comparison group |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| ="Agree with 'Autocracy is preferable'"                             | 0.0741<br>[5.83]***                     | -0.0211<br>[2.05]**   | -0.0143<br>[1.04]   | -0.0386<br>[3.78]***                               | 0.00                              | 0.00                        | 0.88                | For ***  | State ***                      |                                   |
| ="Agree with 'Indifferent b/w autocracy and democracy'"             | 0.0589<br>[5.09]***                     | 0.0029<br>[0.29]  | -0.0600<br>[4.54]***  | -0.0018<br>[0.20]                                  | 0.84                              | 0.00                        | 0.00                |  | State ***                      | Fair ***                          |
| Market="Agree with 'Market is preferable'" - comparison group       |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| ="Agree with 'Central planning is preferable'"                      | 0.1353<br>[11.99]***                    | -0.0087<br>[0.92]   | -0.0068<br>[0.58]   | -0.1197<br>[12.73]***                              | 0.00                              | 0.00                        | 0.00                | For ***  | State ***                      | Unfair ***                        |
| ="Agree with 'Indifferent b/w central planning and market'"         | 0.1013<br>[8.44]***                     | 0.0188<br>[2.04]**  | -0.0579<br>[4.77]***  | -0.0622<br>[6.99]***                               | 0.00                              | 0.00                        | 0.19                | For ***  | State ***                      |                                   |
| <b>Perceptions of government:</b>                                   |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| Agree with "Government can be trusted"                              | -0.0079<br>[2.23]**                     | -0.0034<br>[1.12]   | 0.0071<br>[1.86]*   | 0.0042<br>[1.50]                                   | 0.13                              | 0.03                        | 0.93                |  | Private **                     |                                   |
| Agree with "There is less corruption in 2006 than in 1989"          | -0.0116<br>[2.60]***                    | -0.0059<br>[1.70]*  | 0.0037<br>[0.82]  | 0.0138<br>[4.32]***                                | 0.00                              | 0.01                        | 0.01                | Against ***  | Private ***                    | Fair **                           |
| Agree with "Law and order are very important"                       | 0.0044<br>[0.67]                        | 0.0102<br>[1.73]*   | -0.0035<br>[0.48]   | -0.0111<br>[2.29]**                                | 0.02                              | 0.50                        | 0.08                | For **   |                                | Unfair *                          |

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|   | Outcomes:                               |   |   |  | Chi-squared tests: "No view on.." |                             |                     | Conclusion:  |                                |                                   |
|---|---|---|---|--|-----------------------------------|-----------------------------|---------------------|--|--------------------------------|-----------------------------------|
|   | Re-nationalized and kept in state hands | Re-nationalized and then re-privatized again using a more transparent process | Left in the hands of current owners provided that they pay privatized assets' worth | Left in the hands of current owners with no change | Revision (B1+B2+B3=B4)            | Property type (B1=B2+B3+B4) | Fairness (B2+B3=B4) | Preference for or against revision of privatization: | Reason: Superior property type | Reason: Fairness of privatization |
| <b>Basic controls:</b>  |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| Gender [Male compared to Female]                              | -0.0159<br>[2.13]**                     | 0.0209<br>[3.49]***   | -0.0145<br>[1.83]*  | 0.0095<br>[1.64]                                   | 0.10                              | 0.03                        | 0.79                |  | Private **                     |                                   |
| Household size  | 0.0039<br>[1.46]                        | 0.0017<br>[0.80]  | -0.0032<br>[1.10]   | -0.0025<br>[1.16]                                  | 0.25                              | 0.14                        | 0.81                |  |                                |                                   |
| Location="Metropolitan area" - comparison group               |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| ="Rural"  | 0.0429<br>[2.68]***                     | -0.0104<br>[0.79]   | -0.0134<br>[0.78]   | -0.0191<br>[1.57]                                  | 0.12                              | 0.01                        | 0.85                |  | State ***                      |                                   |
| ="Urban, excluding metropolitan area"                         | 0.0052<br>[0.31]                        | 0.0123<br>[0.97]  | -0.0001<br>[0.00]   | -0.0174<br>[1.46]                                  | 0.15                              | 0.75                        | 0.22                |  |                                |                                   |
| Religion="Christian" - comparison group                       |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| ="Buddhist"   | 0.0013<br>[0.03]                        | 0.0165<br>[0.46]  | -0.0482<br>[0.97]   | 0.0305<br>[1.12]                                   | 0.26                              | 0.97                        | 0.31                |  |                                |                                   |
| ="Atheistic / agnostic / none"                                | -0.0259<br>[1.55]                       | 0.0320<br>[2.49]**  | -0.0205<br>[1.32]   | 0.0144<br>[1.25]                                   | 0.21                              | 0.12                        | 0.90                |  |                                |                                   |
| ="Muslim"   | 0.0272<br>[1.28]                        | 0.0611<br>[3.01]***   | -0.0764<br>[3.22]***  | -0.0119<br>[0.61]                                  | 0.54                              | 0.20                        | 0.92                |  |                                |                                   |
| ="Other"  | 0.0028<br>[0.09]                        | -0.0122<br>[0.48]   | -0.0056<br>[0.17]   | 0.0151<br>[0.74]                                   | 0.46                              | 0.92                        | 0.45                |  |                                |                                   |
| Member of an ethnic minority                                  | 0.0210<br>[1.25]                        | -0.0139<br>[1.10]   | -0.0358<br>[2.15]**   | 0.0287<br>[2.20]**                                 | 0.03                              | 0.21                        | 0.00                | Against **   |                                | Fair ***                          |
| Unemployed, 2006  | 0.0068<br>[0.51]                        | 0.0275<br>[2.33]**  | -0.0230<br>[1.51]   | -0.0113<br>[1.03]                                  | 0.30                              | 0.61                        | 0.49                |  |                                |                                   |
| Country dummies   | Yes***                                  | Yes***  | Yes***  | Yes***   |                                   |                             |                     |  |                                |                                   |
| Observations  |   | 19738   |   |  |                                   |                             |                     |  |                                |                                   |
| Pseudo R-squared  |   | 0.1   |   |  |                                   |                             |                     |  |                                |                                   |
| Log Likelihood  |   | -23597  |   |  |                                   |                             |                     |  |                                |                                   |
| Chi-squared   |   | 2728.84   |   |  |                                   |                             |                     |  |                                |                                   |
| <b>Panel B. Interactions</b>                                  |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| Interaction: Wealth X Education [1-Below secondary; 4-Higher] | -0.0004<br>[0.33]                       | -0.0018<br>[2.25]**   | -0.0001<br>[0.05]   | 0.0022<br>[3.07]***                                | 0.00                              | 0.74                        | 0.01                | Against ***  |                                | Fair ***                          |
| Interaction: Age X High-skills occupation                     | -0.0022<br>[1.61]                       | -0.0016<br>[1.38]   | 0.0015<br>[1.02]  | 0.0022<br>[2.10]**                                 | 0.04                              | 0.11                        | 0.30                | Against **   |                                |                                   |
| All baseline covariates and country dummies                   | Yes***                                  | Yes***  | Yes***  | Yes***   |                                   |                             |                     |  |                                |                                   |
| Observations  | 19733                                   | 19733   | 19733   | 19733  |                                   |                             |                     |  |                                |                                   |
| Pseudo R-squared  |   | 0.11  |   |  |                                   |                             |                     |  |                                |                                   |

Table 4. Interactions with country-level variables. Marginal effects reported.

|   | Outcomes:                               |   |   |  | Chi-squared tests: "No view on.." |                             |                     | Conclusion:  |                                |                                   |
|---|---|---|---|--|-----------------------------------|-----------------------------|---------------------|--|--------------------------------|-----------------------------------|
|   | Re-nationalized and kept in state hands | Re-nationalized and then re-privatized again using a more transparent process | Left in the hands of current owners provided that they pay privatized assets' worth | Left in the hands of current owners with no change | Revision (B1+B2+B3=B4)            | Property type (B1=B2+B3+B4) | Fairness (B2+B3=B4) | Preference for or against revision of privatization: | Reason: Superior property type | Reason: Fairness of privatization |
|   | B1                                      | B2  | B3  | B4   | p-value                           | p-value                     | p-value             |  |                                |                                   |
| <b>Governance and democracy:</b>                                    |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| <i>Interactions with "Moved from wage work to self-employment":</i> |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| Moved from wage work to self-employment X Democracy index           | -0.0130<br>[1.91]*                      | -0.0091<br>[1.65]*  | 0.0070<br>[0.92]  | 0.0151<br>[2.30]**                                 | 0.02                              | 0.38                        | 0.37                | Against **   |                                |                                   |
| Moved from wage work to self-employment X Government Effectiveness  | -0.0461<br>[1.11]                       | -0.0429<br>[1.42]   | 0.0469<br>[1.21]  | 0.0420<br>[1.29]                                   | 0.20                              | 0.52                        | 0.91                |  |                                |                                   |
| Moved from wage work to self-employment X Regulatory quality        | -0.0416<br>[1.42]                       | -0.0311<br>[1.35]   | 0.0434<br>[1.48]  | 0.0293<br>[1.26]                                   | 0.21                              | 0.60                        | 0.82                |  |                                |                                   |
| Moved from wage work to self-employment X Voice & accountability    | -0.0513<br>[1.84]*                      | -0.0297<br>[1.35]   | 0.0368<br>[1.28]  | 0.0442<br>[1.96]*                                  | 0.05                              | 0.46                        | 0.50                | Against **   |                                |                                   |
| Moved from wage work to self-employment X Political stability       | -0.0454<br>[1.51]                       | -0.0415<br>[1.94]*  | 0.0419<br>[1.36]  | 0.0449<br>[1.82]*                                  | 0.07                              | 0.85                        | 0.77                | Against *  |                                |                                   |
| Moved from wage work to self-employment X Rule of law               | -0.0380<br>[0.97]                       | -0.0617<br>[2.11]**   | 0.0477<br>[1.28]  | 0.0520<br>[1.73]*                                  | 0.08                              | 0.85                        | 0.54                | Against *  |                                |                                   |
| Moved from wage work to self-employment X Corruption perception     | -0.0154<br>[0.58]                       | -0.0318<br>[1.54]   | 0.0255<br>[1.06]  | 0.0217<br>[1.31]                                   | 0.19                              | 0.56                        | 0.44                |  |                                |                                   |
| Moved from wage work to self-employment X Control of corruption     | -0.0402<br>[0.88]                       | -0.0518<br>[1.56]   | 0.0419<br>[0.99]  | 0.0501<br>[1.52]                                   | 0.13                              | 0.11                        | 0.17                |  |                                |                                   |
| <i>Interactions with "Yrs cut down on basic food consumption":</i>  |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| Yrs cut down on basic food consumption X Democracy index            | 0.0009<br>[2.48]**                      | 0.0002<br>[0.51]  | -0.0011<br>[2.41]**   | 0.0000<br>[0.06]                                   | 0.95                              | 0.01                        | 0.91                | State **   |                                |                                   |
| Yrs cut down on basic food consumption X Government Effectiveness   | 0.0030<br>[1.51]                        | 0.0001<br>[0.09]  | -0.0033<br>[1.43]   | 0.0001<br>[0.08]                                   | 0.94                              | 0.61                        | 0.35                |  |                                |                                   |
| Yrs cut down on basic food consumption X Regulatory quality         | 0.0028<br>[1.85]*                       | 0.0000<br>[0.01]  | -0.0029<br>[1.71]*  | 0.0002<br>[0.13]                                   | 0.90                              | 0.49                        | 0.45                |  |                                |                                   |
| Yrs cut down on basic food consumption X Voice & accountability     | 0.0033<br>[2.25]**                      | 0.0004<br>[0.30]  | -0.0037<br>[2.13]**   | 0.0001<br>[0.04]                                   | 0.97                              | 0.05                        | 0.50                | State *  |                                |                                   |
| Yrs cut down on basic food consumption X Political stability        | 0.0025<br>[1.65]*                       | -0.0014<br>[1.14]   | -0.0005<br>[0.28]   | -0.0006<br>[0.50]                                  | 0.62                              | 0.72                        | 0.96                |  |                                |                                   |
| Yrs cut down on basic food consumption X Rule of law                | 0.0038<br>[1.94]*                       | -0.0010<br>[0.64]   | -0.0022<br>[0.97]   | -0.0006<br>[0.39]                                  | 0.70                              | 0.79                        | 0.63                |  |                                |                                   |
| Yrs cut down on basic food consumption X Corruption perception      | 0.0021<br>[1.74]*                       | -0.0006<br>[0.58]   | -0.0019<br>[1.32]   | 0.0004<br>[0.42]                                   | 0.67                              | 0.13                        | 0.36                |  |                                |                                   |
| Yrs cut down on basic food consumption X Control of corruption      | 0.0042<br>[1.92]*                       | -0.0006<br>[0.35]   | -0.0036<br>[1.41]   | 0.0001<br>[0.05]                                   | 0.96                              | 0.06                        | 0.63                | State *  |                                |                                   |

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| “In your opinion, what should be done with most privatized companies? They should be...” | Outcomes:                               |   |   |  | Chi-squared tests: "No view on.." |                             |                     | Conclusion:  |                                |                                   |
|--|---|---|---|--|-----------------------------------|-----------------------------|---------------------|--|--------------------------------|-----------------------------------|
|  | Re-nationalized and kept in state hands | Re-nationalized and then re-privatized again using a more transparent process | Left in the hands of current owners provided that they pay privatized assets' worth | Left in the hands of current owners with no change | Revision (B1+B2+B3=B4)            | Property type (B1=B2+B3+B4) | Fairness (B2+B3=B4) | Preference for or against revision of privatization: | Reason: Superior property type | Reason: Fairness of privatization |
| <b>Privatization:</b>  |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| <i>Interactions with "Moved from wage work to self-employment":</i>                      |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| Moved from wage work to self-employment X Privatization scale in 2006                    | -0.0018<br>[0.09]                       | -0.0379<br>[2.20]**   | 0.0358<br>[1.52]  | 0.0039<br>[0.25]                                   | 0.00                              | 0.53                        | 0.00                | Against ***  |                                | Fair ***                          |
| Moved from wage work to self-employment X Yrs since start of privatization               | -0.0177<br>[1.19]                       | -0.0183<br>[1.71]*  | 0.0157<br>[1.19]  | 0.0203<br>[1.77]*                                  | 0.08                              | 0.32                        | 0.38                | Against *  |                                |                                   |
| Moved from wage work to self-employment X Insider privatization                          | 0.0838<br>[1.95]*                       | 0.0054<br>[0.15]  | -0.0739<br>[1.63]   | -0.0153<br>[0.38]                                  | 0.70                              | 0.52                        | 0.75                |  |                                |                                   |
| Moved from wage work to self-employment X Outsider privatization                         | -0.0574<br>[1.31]                       | -0.0461<br>[1.16]   | 0.0922<br>[2.01]**  | 0.0112<br>[0.27]                                   | 0.79                              | 0.77                        | 0.73                |  |                                |                                   |
| <i>Interactions with "Yrs cut down on basic food consumption":</i>                       |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| Yrs cut down on basic food consumption X Privatization scale in 2006                     | 0.0009<br>[0.72]                        | 0.0012<br>[1.20]  | -0.0031<br>[2.28]**   | 0.0011<br>[1.21]                                   | 0.23                              | 0.08                        | 0.14                |  | State *                        |                                   |
| Yrs cut down on basic food consumption X Yrs since start of privatization                | 0.0013<br>[1.76]*                       | -0.0001<br>[0.24]   | -0.0010<br>[1.14]   | -0.0002<br>[0.34]                                  | 0.73                              | 0.89                        | 0.54                |  |                                |                                   |
| Yrs cut down on basic food consumption X Insider privatization                           | -0.0024<br>[0.99]                       | 0.0002<br>[0.13]  | -0.0008<br>[0.29]   | 0.0029<br>[1.53]                                   | 0.13                              | 0.36                        | 0.43                |  |                                |                                   |
| Yrs cut down on basic food consumption X Outsider privatization                          | 0.0011<br>[0.45]                        | 0.0014<br>[0.78]  | 0.0001<br>[0.04]  | -0.0026<br>[1.28]                                  | 0.20                              | 0.21                        | 0.20                |  |                                |                                   |
| <b>Gini:</b>   |   |   |   |  |                                   |                             |                     |  |                                |                                   |
| Moved from wage work to self-employment X Gini coefficient                               | 1.1663<br>[2.47]**                      | -0.4905<br>[1.36]   | -0.1373<br>[0.23]   | -0.5385<br>[1.33]                                  | 0.18                              | 0.10                        | 0.62                |  | State *                        |                                   |
| Yrs cut down on basic food consumption X Gini coefficient                                | -0.0305<br>[1.18]                       | 0.0354<br>[1.99]**  | -0.0255<br>[0.71]   | 0.0206<br>[1.20]                                   | 0.23                              | 0.05                        | 0.24                |  | Private *                      |                                   |

## **Appendix**

### **The Life in Transition Survey: Technical Details**

The “Life in Transition Survey” (LiTS) was jointly conducted by the EBRD and the World Bank in 2006 (see EBRD 2007a,b). LiTS consists of 28,000 interviews in 28 post-communist transition countries in Europe and Central Asia, with the exception of Turkmenistan. In each country a sample of 1,000 individuals was selected randomly for face-to-face interviews.

#### *Coverage*

LiTS covers four broad themes. First, it collects personal information on aspects of material well-being, including household income, possession of consumer goods, access to local public services and utilities. Secondly, the survey generates measures of satisfaction and attitudes towards economic and political reforms as well as public expectations and appetite for further reforms. Thirdly, it captures individual “histories” through transition, as the individual’s family background; employment situations before the start of economic reforms, throughout the transition period and now; events that punctuated their lives during transition; and strategies to cope with such a transformation. Finally, the questionnaire attempts to capture the extent to which crime and corruption are affecting people’s lives, and the degree to which trust, both among ordinary citizens and in state institutions, has changed over time.

#### *Sample selection*

The sample selection consisted of two stages. First, 50 primary sampling units (PSUs) were randomly selected, based on information from the most recent census in the country. Secondly, 20 households were selected at random from each PSU. Within each household, the head of the household (or another knowledgeable household member) responded to the questions on aspects of material well-being, while for the other questions one household member (aged 18 or over) was randomly selected to respond.

**Table A1: Description of the variables**

| Variable  | Description  |
|---|--|
| <b>(1) Individual-level variables</b>                     | <i>Source: Life in Transition Survey (LiTS), EBRD and World Bank, 2006.</i>  |
| <i>Dependent variable:</i><br>Revision of privatization   | Four-category response indicating whether the respondent <sup>21</sup> prefers to (1) renationalize most privatized companies and keep them in state hands; (2) renationalize most privatized companies and then re-privatize them, using a more transparent process; (3) leave most privatized companies in the hands of current owners provided that they pay what the assets are worth; and (4) leave most privatized companies in the hands of current owners without any change. This variable is treated as a multinomial one. |
| <b>(1.1) Human capital</b>                                |  |
| Age   | Age of the respondent.   |
| High-skills occupation                                    | Dummy indicating that in 2006 the respondent worked for wages in an occupation that requires high skills (i.e., legislators, senior government officials, enterprise managers, director/chief executives, owners of business, physicists, engineers, mathematicians, architects, computing professionals, medical doctors, dentists, pharmacists, teachers (university, secondary, primary), lawyers, accountants, authors, professionals and similar occupations).  |
| Low-skills occupation                                     | Dummy indicating that in 2006 the respondent worked for wages in an occupation that requires only low skills.  |
| Educational degrees                                       | Highest educational degree obtained by the respondent: (1) no degree / no education, (2) compulsory school education, (3) secondary education, (4) professional, vocational school/training, (5) higher professional degree (university, college), (6) post graduate degree.   |
| Self-reported poor health status                          | Subjective assessment of the respondent's health conditions: (1) very good, (2) good, (3) medium, (4) bad, (5) very bad.   |
| <b>(1.2) Assets</b>                                       |  |
| Ownership of a house or apartment                         | Dummy indicating that any household member (including the respondent) is the majority owner of a house (detached, semi-detached, townhouse, terrace house), apartment, or flat. This information is given by the head of household (or another knowledgeable household member).  |
| Wealth  | Approximated by the within-country deciles of total household's annualized consumption expenditures per (equalized) household member. Children younger than 14 years enter with a weight of 0.3. The information for consumption expenditures is given by the head of household (or another knowledgeable household member). Our measure of wealth ranges from 1 to 10 based on the expenditure decile in which a respondent is located.   |
| Self-accessed difference wealth ranking b/w 1989 and 2006 | Subjective household's wealth ranking on an imaginary ten-step ladder (from the poorest to the richest), difference today with respect to 1989 (retrospective). This information is given by the head of household (or another knowledgeable household member).  |

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<sup>21</sup> Unless stated otherwise, we are referring to the respondent who was randomly selected to answer the questions concerning attitudes and values, current activities, education and labor, and life history (i.e. themes 2 to 4 as stated above when describing the coverage of LiTS).

**Table A1: Continued**

| <b>Variable</b>  | <b>Description</b>  |
|--|---|
| <b>(1.3) Transition-related employment history</b>         |   |
| Number of jobs, 1989-2006                                  | Number of jobs for respondents worked for wages (for an employer) in any of the years from 1989 to 2006. A different job is defined by a different occupational position working for the same employer, by a change in the ownership type of the enterprise, and by a change of employer.   |
| Years worked for wages in the state sector, 1989-2006      | Number of years (1989-2006) when the respondent worked for wages in the state sector (i.e. the state was the owner of the company).   |
| Years worked for wages in the private sector, 1989-2006    | Number of years (1989-2006) when the respondent worked for wages in the private sector (i.e. the owner of the company was a private one).   |
| Moved from work for wages to self-employment, 1989-2006    | Dummy indicating that the respondent started with working for wages for an employer (typically a state sector employer) and ended up with working as a self-employed (eventually going through an intermediate state of no employment). We are only referring to within-working-age respondents, i.e. respondents with an age between 18 and 60 years for any year. |
| <b>(1.4) Transition-related hardships</b>                  |   |
| Years had to accept wage cuts or wage arrears, 1989-2006   | Number of years (1989-2006) when the respondent had to accept wage cuts or wage arrears.  |
| Years had to sell household assets, 1989-2006              | Number of years (1989-2006) when the respondent had to sell some of the household assets.   |
| Years had to cut down on basic food consumption, 1989-2006 | Number of years (1989-2006) when the respondent had to cut down on basic food consumption.  |
| <b>(1.5) Ideology</b>                                      |   |
| Communist party members in the family ever                 | Dummy indicating that anybody of the family ever was a member of the Communist Party (including the respondent). This variable is completely missing for Belarus; we assumed membership for all the respondents of this country.  |
| Agree with "State should own large companies"              | Dummy getting a value of 1 if the respondent thinks that the state should be strongly involved in the ownership of large companies in this country, and getting a value of 0 if the respondent thinks that the state should not be involved at all or only moderately involved.   |
| Democracy  | Agreement with the statement that (1) democracy is preferable to any other form of political system, (2) under some circumstances an authoritarian government may be preferable to a democratic one, and (3) indifference b/w autocracy and democracy.  |
| Market   | Agreement with the statement that (1) a market economy is preferable to any other form of economic system, (2) under some circumstances a planned economy may be preferable to a market economy, and (3) indifference b/w planned and market economy.   |

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**Table A1: Continued**

| <b>Variable</b>  | <b>Description</b>   |
|--|--|
| <b>(1.6) Perceptions of government</b>                         |  |
| Agree with “Government can be trusted”                         | Extent to which the respondent has trust in the government or the cabinet of ministers: (1) complete distrust, (2) some distrust, (3) neither trust nor distrust (4) some trust, (5) complete trust.   |
| Agree with “There is less corruption in 2006 than around 1989” | Agreement with the statement that there is less corruption in 2006 than around 1989: (1) strongly disagree, (2) disagree, (3) neither disagree nor agree, (4) agree, (5) strongly agree.   |
| Agree with “Law & order are very important”                    | Agreement with the statement that law and order is important for the country: (1) strongly disagree, (2) disagree, (3) neither disagree nor agree, (4) agree, (5) strongly agree.  |
| <b>(1.7) Basic controls</b>                                    |  |
| Gender   | Gender of the respondent (0=female, 1=male).   |
| Household size   | Number of household members.   |
| Location   | Location of the interviewed household in a (1) metropolitan, (2) rural, or (3) urban (excluding metropolitan) area.  |
| Religion   | Religion of the respondent: (1) Christian, (2) Buddhist, (3) atheistic / agnostic / none, (4) Muslim, (5) other.   |
| Member of an ethnic minority                                   | Dummy indicating that the respondent belongs to an ethnic minority in this country.  |
| Unemployment, 2006   | Dummy getting a value of 1 if the respondent is actively looking for a job at the moment.  |
| <b>(2) National-level variables</b>                            |  |
| <b>(2.1) Institutional quality indicators</b>                  |  |
| Corruption perception index                                    | Corruption perception index, avg. 1999-2006. Scale from 0 to 10, with higher values corresponding to better governance outcomes. <i>Source: Transparency International</i>   |
| Democracy index  | Average index of democracy for 1991-2004. Scale from 0 to 10 with higher values corresponding to more democratic outcomes. <i>Source: Polity IV Dataset.</i>   |
| Voice & accountability   | Voice & accountability represents the extent to which a country’s citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and free media. Higher values correspond to better governance outcomes. Avg. for 1996, 1998, 2000, 2002-2005. <i>Source: Kaufmann, Kraay, and Mastruzzi (2006).</i>  |
| Political stability  | Political stability represents perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including political violence and terrorism. Higher values correspond to better governance outcomes. Avg. for 1996, 1998, 2000, 2002-2005. <i>Source: Kaufmann, Kraay, and Mastruzzi (2006).</i>  |
| Government effectiveness                                       | Government effectiveness represents the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government’s commitment to such policies. Higher values correspond to better governance outcomes. Avg. for 1996, 1998, 2000, 2002-2005. <i>Source: Kaufmann, Kraay, and Mastruzzi (2006).</i> |

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**Table A1: Continued**

| Variable   | Description  |
|--|--|
| <b>(2.1) Institutional quality indicators, continued</b> |  |
| Rule of law  | Rule of law represents the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence. Higher values correspond to better governance outcomes. Avg. for 1996, 1998, 2000, 2002-2005. <i>Source: Kaufmann, Kraay, and Mastruzzi (2006).</i>  |
| Control of corruption                                    | Control of corruption represents the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as “capture” of the state by elites and private interests. Higher values correspond to better governance outcomes. Avg. for 1996, 1998, 2000, 2002-2005. <i>Source: Kaufmann, Kraay, and Mastruzzi (2006).</i>  |
| Regulatory quality                                       | Regulatory quality represents the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Higher values correspond to better governance outcomes. Avg. for 1996, 1998, 2000, 2002-2005. <i>Source: Kaufmann, Kraay, and Mastruzzi (2006).</i>  |
| <b>(2.2) Privatization and inequality</b>                |  |
| Privatization scale in 2006                              | Degree of current privatization progress: large-scale plus small-scale privatization in 2006. Large-scale privatization is ranked from 1 (little private ownership) to 4+ (more than 75 per cent of enterprise assets in private ownership with effective corporate governance). Small-scale privatization is ranked from 1 (little private ownership) to 4+ (no state ownership of small enterprises; effective tradability of land). <i>Source: EBRD (2006), transition indicators<sup>22</sup>.</i> |
| Years since start of privatization                       | Number of years since the primary type of privatization was initiated. <i>Source: Bennett, Estrin, and Urga (2007).</i>  |
| Insider privatization                                    | <i>Insider</i> type of primary privatization: management-employee buy-outs (MEBO) plus vouchers with insider preferences. Importance of each different method from the beginning of transition until 1999 (or, resp., 1997). <i>Sources: EBRD (1997, p. 90) and EBRD (1999, p. 32).</i>  |
| Outsider privatization                                   | <i>Outsider</i> type of primary privatization: direct sales plus vouchers with equal access. Importance of each different method from the beginning of transition until 1999 (or, resp., 1997). <i>Sources: EBRD (1997, p. 90) and EBRD (1999, p. 32).</i>   |
| Gini   | Gini coefficient, most recent values. <i>Sources: World Bank (2005), CIA World Factbook 2006, Human Development Report 2006.</i>   |

<sup>22</sup> The transition indicator scores reflect the judgment of the EBRD’s Office of the Chief Economist about country-specific progress in transition. The scores are based on a classification system, which was originally developed in the 1994 Transition Report, but has been refined and amended in subsequent reports. The highest value of these scores corresponds to standards and performance typical of advanced industrial economies. The data and methodology concepts can be downloaded at <http://www.ebrd.com/country/sector/econo/stats/index.htm>.



**Table A2: Summary statistics for individual-level variables**

| Variable  | # of obs | Mean  | SD    | Min | Max |
|---|----------|-------|-------|-----|-----|
| Renationalize most privatized companies and keep them in state hands                                      | 27 840   | 0.29  | 0.45  | 0   | 1   |
| Renationalize most privatized companies and then re-privatize them again using a more transparent process | 27 840   | 0.17  | 0.37  | 0   | 1   |
| Leave most privatized companies in the hands of current owners provided they pay privatized assets' worth | 27 840   | 0.35  | 0.48  | 0   | 1   |
| Leave most privatized companies in the hands of current owners w/o change                                 | 27 840   | 0.19  | 0.40  | 0   | 1   |
| Age   | 28 000   | 45.97 | 16.87 | 17  | 97  |
| The occupation in 2006 requires high skills   | 27 590   | 0.10  | 0.31  | 0   | 1   |
| Attained educational degree   | 27 993   | 3.50  | 1.13  | 1   | 6   |
| No degree / no education  | 27 993   | 0.04  | 0.20  | 0   | 1   |
| Compulsory school education   | 27 993   | 0.16  | 0.37  | 0   | 1   |
| Secondary education   | 27 993   | 0.27  | 0.44  | 0   | 1   |
| Professional, vocational school/training  | 27 993   | 0.32  | 0.47  | 0   | 1   |
| Higher professional degree (university, college)  | 27 993   | 0.20  | 0.40  | 0   | 1   |
| Post graduate degree  | 27 993   | 0.01  | 0.09  | 0   | 1   |
| Self-reported poor health status  | 27 996   | 2.71  | 0.99  | 1   | 5   |
| Ownership of a house or apartment   | 28 000   | 0.85  | 0.35  | 0   | 1   |
| Wealth (deciles of per capita household consumption)  | 28 000   | 5.68  | 2.93  | 1   | 10  |
| Self-accessed difference wealth ranking b/w 1989 and 2006   | 25 179   | -1.37 | 2.47  | -9  | 9   |
| Number of jobs, 1989-2006   | 27 611   | 1.09  | 0.99  | 0   | 5   |
| Years worked for wages in the state sector, 1989-2006   | 27 611   | 4.48  | 6.11  | 0   | 18  |
| Years worked for wages in the private sector, 1989-2006   | 27 611   | 2.54  | 4.92  | 0   | 18  |
| Moved from work for wages to self-employment, 1989-2006   | 27 640   | 0.03  | 0.18  | 0   | 1   |
| Years had to accept wage cuts or arrears, 1989-2006   | 27 450   | 0.57  | 1.87  | 0   | 18  |
| Years had to sell household assets, 1989-2006   | 27 450   | 0.27  | 1.19  | 0   | 18  |
| Years had to cut down on basic food consumption, 1989-2006  | 27 450   | 1.86  | 4.10  | 0   | 18  |
| Communist party members in the family ever  | 27 946   | 0.29  | 0.45  | 0   | 1   |
| Agree with "State should own large companies"   | 27 965   | 0.55  | 0.50  | 0   | 1   |
| Autocracy is preferable   | 27 965   | 0.16  | 0.37  | 0   | 1   |
| Indifference b/w autocracy and democracy  | 27 965   | 0.27  | 0.44  | 0   | 1   |
| Democracy is preferable   | 27 965   | 0.57  | 0.50  | 0   | 1   |
| Planned economy is preferable   | 27 964   | 0.26  | 0.44  | 0   | 1   |
| Indifference b/w planned and market economy   | 27 964   | 0.31  | 0.46  | 0   | 1   |
| Market economy is preferable  | 27 964   | 0.43  | 0.50  | 0   | 1   |
| Trust in the government/cabinet of ministers  | 26 569   | 2.67  | 1.36  | 1   | 5   |
| There is less corruption in 2006 than around 1989   | 23 022   | 2.18  | 1.12  | 1   | 5   |
| Importance of law & order   | 27 622   | 4.42  | 0.87  | 1   | 5   |
| Gender  | 28 000   | 0.47  | 0.50  | 0   | 1   |
| Household size  | 28 000   | 2.81  | 1.66  | 1   | 12  |
| Location==metropolitan  | 28 000   | 0.22  | 0.41  | 0   | 1   |
| Location==rural   | 28 000   | 0.40  | 0.49  | 0   | 1   |
| Location==urban (excluding metropolitan)  | 28 000   | 0.37  | 0.48  | 0   | 1   |
| Religion==Christian   | 28 000   | 0.65  | 0.48  | 0   | 1   |
| Religion==Buddhist  | 28 000   | 0.02  | 0.15  | 0   | 1   |
| Religion==atheistic/agnostic/none   | 28 000   | 0.11  | 0.31  | 0   | 1   |
| Religion==Muslim  | 28 000   | 0.19  | 0.39  | 0   | 1   |
| Religion==other   | 28 000   | 0.02  | 0.14  | 0   | 1   |
| Member of an ethnic minority  | 27 974   | 0.10  | 0.30  | 0   | 1   |
| Unemployment (actively looking for a job at the moment)   | 28 000   | 0.09  | 0.28  | 0   | 1   |

**Notes:** We are applying a *weighting scheme* for these summary statistics to ensure that the population as a whole is represented, taking into account the age and gender distribution of the population in each country (see EBRD 2007a: 6).

**Table A3: Summary statistics for national-level variables**

| <b>Variable</b>   | <b># of</b> | <b>Mean</b> | <b>SD</b> | <b>Min</b> | <b>Max</b> |
|---|-------------|-------------|-----------|------------|------------|
|   | <b>obs</b>  |             |           |            |            |
| Corruption perception index   | 27          | 3.30        | 1.10      | 1.94       | 5.89       |
| Democracy index   | 26          | 5.82        | 3.22      | 0.00       | 10.00      |
| Voice & accountability  | 27          | -0.06       | 0.84      | -1.63      | 1.09       |
| Political stability   | 27          | -0.14       | 0.78      | -1.66      | 0.99       |
| Government effectiveness  | 27          | -0.24       | 0.66      | -1.24      | 0.84       |
| Rule of law   | 27          | -0.34       | 0.66      | -1.28      | 0.81       |
| Control of corruption   | 27          | -0.37       | 0.61      | -1.21      | 0.96       |
| Regulatory quality  | 27          | -0.16       | 0.83      | -1.77      | 1.31       |
| Privatization scale in 2006   | 28          | 7.12        | 1.10      | 3.33       | 8.33       |
| Years since start of privatization                                      | 23          | 12.35       | 2.08      | 8.00       | 16.00      |
| Insider privatization was the primary type of privatization in the 90s  | 25          | 0.44        | 0.51      | 0.00       | 1.00       |
| Outsider privatization was the primary type of privatization in the 90s | 25          | 0.48        | 0.51      | 0.00       | 1.00       |
| Gini coefficient  | 27          | 0.30        | 0.04      | 0.18       | 0.39       |

**Notes:**

This table refers for most of the variables to over-time country averages. For the concrete time frame for each variable see Table A1.