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# A Spoonful of Sugar: Privatization and Popular Support for Reform in the Czech Republic

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*A Spoonful of Sugar:  
Privatization and Popular Support for Reform in the Czech Republic\**

Upjohn Institute Staff Working Paper No. 02-79

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## **ABSTRACT**

We analyze the role of privatization in creating a constituency for economic reform, markets, and democratic institutions, focusing on the Czech Republic. Drawing on a 1996 survey, we examine the 1459 respondents' opinions on reforms, economic policies and systems, the legitimacy of transition, and democratic values. Using ordered probit estimation, we find that receiving property through restitution is strongly associated with support for reform and markets. Concerning voucher privatization, we find positive effects for participants retaining shares, but little impact of participation alone. Our simulations suggest that policy designs have substantial consequences for citizens' support of reforms, markets, and democracy.

## 1. INTRODUCTION

The principal problem faced by a politician embarking upon a course of economic reform is how to ensure popular support through the long, uncertain, and frequently painful process of policy enactment and implementation. Serious economic reforms may impose large short-term costs — in production, unemployment, and living standards — even if they improve the common lot in the longer run. Thus, standard analyses of the political economy of reform hypothesize that public opinion will follow aggregate economic performance along a “J-curve” trajectory, so that popular support declines rapidly as reforms take hold, recovering only as the economy rebounds (e.g., Przeworski 1991).

This situation appears to pose an enormous dilemma for the reform-minded policymaker. If forced to pay too much attention to public sentiment, he/she might be deterred from the painful actions necessary to put the national economy on sound footing. However, “insulating” economic policymaking from popular reaction may inhibit the development of democratic institutions, hence the dilemma of the “dual transition” in countries facing simultaneous imperatives for economic and political reform.<sup>1</sup> Frequent recommendations are heard that the reformer must act quickly, taking advantage of a “window of opportunity” (Lipton and Sachs 1990) or “period of extraordinary politics” (Balcerowicz 1994) before public opinion begins to sour, but policies require time to enact, implement, and bear fruit. Moreover they are not always irreversible. Thus, even quick action and willingness to sacrifice one’s career will not necessarily save the policymaker’s reform program.

In this paper, we argue that finding a solution to this conundrum demands a recognition that reform packages have multiple dimensions and that popular support for reform is sensitive to

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<sup>1</sup> See, e.g., Encarnacion (1996), Haggard and Kaufman (1995), Offe (1991), Terry (1993), or Pereira, Maravall, and Przeworski (1993).

the micropolitical-economic details of policy design. Holding constant any aggregate economic effects (which, at least in the short run, are probably not much under the influence of the policymaker), we claim that the distributive impact of reforms, the process through which they are implemented, and the political rhetoric by which they are explained affect the way individual citizens experience them. Our hypothesis is that those experiences influence attitudes towards reform, economic policies and systems, perceptions of legitimacy of the economic transition, and democratic values. In particular, by “sweetening” the bitter medicine of structural reforms with policies that draw in popular participation and create immediate, widespread benefits, the policymaker may be able to increase the sustainability and irreversibility of reforms even during a period of economic dislocation.

The paper develops this argument by investigating the role of privatization policy design in the Czech Republic, the country to adopt the earliest and most extensive version of “mass privatization,” involving a large share of both state-owned assets and the population. Unlike unemployment and growth, the focus of much of the literature on the political economy of transition, privatization is more clearly a policy instrument of the government: within some limits, policymakers have been able to determine many aspects of the process. Privatization was also a central linchpin in the transition policy of the Czech (and earlier, the Czechoslovak) government. Whatever the economic benefits or shortcomings of the policy design, which have been the subject of much debate that is not our purpose here to join, we draw attention in this paper to the program’s political impact through its effects on popular support for the reform process.<sup>2</sup>

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<sup>2</sup> Several economic aspects of the Czech privatization strategy and its impact on the corporate governance of firms have come under criticism, as we discuss below. A complete economic evaluation of the program awaits the passage of time and the collection of extensive data on the privatized firms. For

The political and economic attitudes of citizens in post-Communist countries have been the subject of considerable prior research,<sup>3</sup> and there is a voluminous literature on the design of privatization policies. Discussions of the potential political effects of alternative privatization strategies also abound, both in the popular press and in some analyses of postsocialist countries.<sup>4</sup> It is striking, however, that there appears to be a relative paucity of research that directly relates the attitudes held by an individual to his or her experience of privatization policies, *ex post*.<sup>5</sup>

Our study contributes to filling this gap by identifying the politically relevant details of Czech privatization and the possible channels through which they may affect popular support for reform, by developing an estimable analytical framework within which hypotheses about the privatization/popular support relationship may be tested, by designing a questionnaire to collect the relevant information from a large sample of Czech individuals, and by presenting empirical estimates of the size and statistical significance of the hypothesized relationships using the survey data. The results represent explicit tests of the potential political feedback from economic policy design, a subject much discussed in the literature on the political economy of reform but for which there is little evidence at the level of individual attitudes.

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preliminary studies, see Claessens and Djankov (1999), Coffee (1996), Earle et al. (1994), or Harper (2002).

<sup>3</sup> See, e.g., Duch (1993, 1995), Earle and Rose (1996), Earle et al. (1997), Evans and Whitefield (1995), Finifter and Mickiewicz (1992), Hough (1994), Miller, Hesli, and Reisinger (1994), Mishler and Rose (1996), Przeworski (1996), Reisinger et al. (1994), Shiller et al. (1992), Stokes (1996), Vecernik (1996), and Whitefield and Evans (1994).

<sup>4</sup> See, e.g., Boycko, Shleifer, and Vishny (1995) for Russia, Earle et al. (1994) for Central Europe, or Frydman and Rapaczynski (1994) for a wide-ranging discussion.

<sup>5</sup> Voting studies, including Fidrmuc (1996), Grigoriev, Nagaev, and Woergoetter (1994), and Mateju (1995), have examined some economic experiences as determinants of political preferences, but the focus is usually on unemployment or the data is aggregate. Colton (1996, 2000) examines the impact of enrollment in the housing privatization program, unemployment, and some characteristics of one's employer on voting and attitudes in Russia. Outside of the postcommunist world, scholars have studied the impact of privatization experiences on political attitudes and voting in Great Britain [see, e.g., Saunders (1995), Garrett (1994), Studlar, McAllister, and Ascui (1990)].

Finally, the paper contributes more generally to methodologies for evaluating the impact of a determinant of interest on a limited dependent variable, such as the public opinion indexes used in this paper. When the dependent variable is categorical, coefficients from appropriate estimation techniques, such as ordered probit, are difficult to interpret directly. Our method of policy simulations provides a measure in terms of the elasticity of movement of individuals across the original categories of the dependent variable, and may be generalized to analogous problems with any limited dependent variable.

The paper proceeds as follows. Section 2 discusses some relevant aspects of the political economy of economic reform, and Section 3 analyzes political aspects of the Czech restitution and voucher privatization programs. Section 4 elaborates our argument about the responsiveness of attitudes to experiences with privatization, while Section 5 presents a statistical model of attitude determination and of the policy simulations we use to estimate responsiveness of attitudes to privatization experiences. Section 6 describes our data, and Section 7 presents the results of our estimations and simulations, including a discussion of possible problems of endogeneity and robustness. Section 8 draws some conclusions and wider implications of our analysis.

## **2. THE DEBATE ON THE POLITICAL ECONOMY OF ECONOMIC REFORM**

Economic policymakers have long wrestled with the challenge of implementing economic reforms with an uncertain potential for long-term gains in the face of public opposition to their short-term costs. The dilemma has been particularly acute in the countries of post-Communist Central and Eastern Europe, where democratization (if not full democracy) preceded the implementation of policies to marketize and privatize the economy.

Although the debates among policymakers, their advisors, and scholars as to the best way to manage the dual transition have had a number of dimensions, it is useful to divide the



participants into two groups depending on the choice variable on which they focus. One group of observers has focused on political institutions, with some arguing that more insulation, and others that more democratization, is necessary to push through necessary economic reforms. A second group has taken the pace of economic reform as the choice variable, with some advocating radical “shock therapy” and others favoring gradual reform.

Within the first group, focused on political institutions, the argument for protection of the reform process from political forces has originated from two related fears. First, the absence of an established constituency for reform might produce a backlash when the inevitable short-term costs come to pass. Thus, the reform process could falter and already-implemented reforms might be reversed prematurely. To counter that risk, a “liberal authoritarianism” (Jowitt 1992) or other “insulation” (Nelson 1993) of the polity from the public may be necessary. Second, the presence of already organized vested interests tied to the *ancien regime* endangers reform. Logically, then, a “strong state” able to act independently of those interests might be the only force able to enact the necessary measures (McFaul 1995).

In contrast, some observers see greater democratization as the only way to sustain progress on economic reform. Technocratic and elitist decision-making alienate the public from the reform process; hence, consultation with and participation by the public (“concertation”) should be pursued (Pereira, Maravall, and Przeworski 1993). Further, disproportionate political influence by early winners who capture rents from incomplete reforms threatens to establish a “partial reform equilibrium.” Only countervailing pressure from the broader public can push policymakers beyond that stage (Hellman 1998).

In contrast to those who debate the pace of political opening, those who focus on the speed of reform tend to take economic reform itself as endogenous and political constraints as

exogenous. Within this latter group, the typical argument for rapid reform is that there exists a “period of extraordinary politics” (Balcerowicz 1994) or “breakthrough period” (Aslund 1995) immediately after the downfall of the old regime when the public is generally accepting of reform and vested interests are disorganized. As this period will not last for long, the reformist politician should take maximum advantage of the moment to drive through as many reforms as possible (see e.g., Lipton and Sachs 1990, and Sachs 1994).<sup>6</sup> Proponents of this approach generally argue that rapid reform along all fronts results in a quick turnaround (World Bank 1996; Aslund, Boone, and Johnson 1996), perhaps because of complementarities among the different elements of reform (Friedman and Johnson 1995).

Others see risks in moving quickly. Individuals react slowly to new incentives, and institutions evolve gradually over time. A rapid change in economic policy might therefore result in economic collapse and concomitant loss of public support (Murrell 1993). Further, the networks of firms and markets necessary for a functioning capitalist economy do not exist in post-Communist countries and will take time to develop (e.g., Cohen and Schwartz 1992, and Kornai 1990). When compounded with heterogeneity in agents’ discount rates, the politically optimal reform speed can be lower than that in an economy with a benevolent dictator (Lian and Wei 1998). Alternatively, economic actors respond quickly to new incentives, but negative externalities and imperfect markets increase social adjustment costs (see e.g., Dewatripont and Roland 1992, and Aghion and Blanchard 1994).

Most of these models share a view of economic reform as inevitably causing short-term pain to the general population, though specific sectors or individuals might benefit immediately. The key political question of economic reform is then how to manage the backlash from that

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<sup>6</sup> See also Martinelli and Tommasi (1997) for a theoretical model (with discussion of Latin American reform) arguing that only radical reform can overcome vested interests when governments are unable to precommit.

pain. In contrast (and cognizant that we are not doing full justice to the subtleties of many of the arguments presented above), we believe it important to emphasize that economic reform is inherently multidimensional and that micropolitical-economic details matter. While some economic policies impose political costs, others can increase support for reform. In particular, policymakers in formerly Communist countries have the opportunity to distribute state-owned property in a way that builds constituencies for reform, rather than merely relying on patience and the “thin reed of ideological commitment.”<sup>7</sup> In contrast to Latin America and Asia, where such opportunities may be more limited and growth must be relied upon to ensure political support (Haggard and Kaufman 1995), politicians in post-Communist countries literally have the wealth of the nation at their disposal.

How that wealth is used may determine whether the political gains from privatization are “tactical,” conferring short-term political advantage, or “systemic,” causing enduring change in attitudes, incentives, and the constellation of political interest groups (Feigenbaum and Henig 1994).<sup>8</sup> In this paper, we focus on changes in attitudes towards economic reform, economic policies and systems, democratic institutions, and questions of political legitimacy. Many of these attitudes are of the sort that would need to change for privatization to have a systemic impact. Whether such attitudes endure, however, is a topic we leave for further research. Our immediate focus is on the design of privatization policies to provide “the spoonful of sugar that

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<sup>7</sup> This is Fish’s (1998) characterization of others’ arguments. Fish argues in contrast that the outcome of early elections determined the success of economic reform in post-Communist countries, with those countries that elected reformers pursuing economic reforms that outlasted the reformers’ later electoral defeats. In this paper we emphasize a particular mechanism through which such constituency-building might be accomplished.

<sup>8</sup> Feigenbaum and Henig’s (1994) typology of privatization strategies, which also includes “pragmatic” privatizations with little connection to the political process, refers to privatization movements in Western Europe and the U.S., but is nevertheless useful in analyzing privatization in Eastern Europe and the former Soviet Union.

helps the medicine go down”: to blunt the backlash from initial reforms and to increase support for nascent market and democratic institutions.

### **3. PRIVATIZATION DESIGN AND POLITICAL IMPACT IN THE CZECH REPUBLIC**

The public justification for the design of a privatization policy is usually couched in terms of economic efficiency, but this article focuses instead on its potential political impact.<sup>9</sup> The most obvious impact on an individual concerns whether she wins or loses from the redistribution, and the choice of the set of winners and losers must be reckoned as the first-order political consequence of the policy. As elaborated below in Section 4, however, the effect of privatization on an individual’s political attitudes may not be determined exclusively by the value of the property he/she receives through the program (that is, by simple self-interest), but may also be a function of the details of the program’s design and the rhetoric through which national leaders attempt to “sell” it to the citizenry. We argue that important elements of the program’s design and the discourse surrounding it include factors such as transparency, appeals to and perceptions of fairness (in process as well as outcome), the nature of citizen participation, and the way in which the program is linked to other parts of a package of reforms. This section analyzes the two main Czech privatization programs – restitution and voucher privatization – in this light, in order to motivate our hypothesis that these programs may have affected the perceptions and attitudes of Czech individuals.<sup>10</sup>

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<sup>9</sup> See Vickers and Yarrow (1991) for an overview of the economics of privatization.

<sup>10</sup> See Frydman, Rapaczynski, and Earle (1993), Mladek (1993), or Earle et al. (1994) for more details on Czech privatization policies.

## Restitution

The Czech Republic had one of the largest programs of real property restitution of any formerly communist country. The ability of the reform government that was newly elected in 1990 to enact such a program may have been related to the particular history of the Czech Republic under socialism. Given that the Czechoslovak state was the owner of almost all assets in 1989, unlike countries such as Hungary and Poland where there had already been significant decentralization of property rights, there were relatively few logistical and political obstacles to returning property to its previous owners.<sup>11</sup>

Even if the current property rights were relatively clear (because they were held by the state), the idea of returning specific assets was controversial when first discussed in 1990–1991. Many objected that doing so would lead to administrative gridlock and slow down the overall privatization process, as citizens battled over assets whose pre-nationalization titles were unclear. Proponents, on the other hand, asserted that the program would spark the development of a new entrepreneurial class, contributing to capital formation and economic growth. Although it was not so clearly enunciated, the government may have also hoped that restitution of tangible assets would create a grateful, loyal constituency that would support the mass privatization and other policies.<sup>12</sup>

At the same time, a significant program of restitution (or compensation) obviously carried significant political risk, in that the majority of the population, receiving no direct benefits, could become resentful of what might be perceived as special treatment for a privileged

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<sup>11</sup> The program was enacted in 1990 and 1991, before the split-up of the Czechoslovak Federation. After December 1992, it was continued in each republic separately. See Stark (1992), Earle, Frydman, and Rapaczynski (1993) for a discussion of the differing initial conditions and resulting path dependence for the design of privatization policies in Czechoslovakia, Hungary, and Poland.

<sup>12</sup> Returning specific assets rather than providing monetary compensation also aided transparency of the process, in that it avoided disputes over the valuation of assets that had been expropriated.

minority. The government ultimately made the case for the program by arguing that the return of confiscated property was the only *fair* thing to do. The property had been unjustly expropriated; now it had to be returned. Moreover, the government played on the widespread sense of guilt and shame over four decades of socialism, implying that restitution would offer some form of expiation. By framing the issue in this way, the government likely hoped that they could avoid alienating the majority of citizens who would receive no property through restitution, even while they enlisted the support of the minority who would.

The program's political impact was further increased by restricting eligibility for restitution to resident citizens (or their heirs) from whom nonfinancial assets had been nationalized after February 25, 1948. Restriction to residents deflected the possible backlash that might have resulted if foreigners were the primary beneficiaries, while the requirement that restituted be citizens meant that only voters would benefit. The cut-off date was rationalized as the beginning of Communist Party control of Czechoslovakia, but it served to exclude two large groups dispossessed during the war and immediate postwar periods: Jews and Sudeten Germans. Sorting out the claims from these groups would no doubt have been complicated, but the consequence of excluding these groups was to increase the government's internal political benefits from the program.

### **Voucher Privatization**

The voucher program was the centerpiece of privatization policies and, arguably, the principal impetus for transition in the Czech Republic. While subsequently imitated in various forms by governments in a number of other East European countries, the design of the program was untested and considered radical when championed in 1991 by Vaclav Klaus, then Finance Minister and later Prime Minister. Under the plan, the Czech government distributed the bulk of

the shares in corporatized enterprises to the Czech citizenry in exchange for vouchers. In each of two “waves” (the first in 1992, the second in 1993), any resident citizen over the age of 18 was eligible to acquire state property by first purchasing a voucher booklet, and then using the 1000 voucher “points” either to bid directly for company shares or to invest indirectly by becoming a shareholder in a privatization intermediary, one of the so-called “investment privatization funds” (IPFs). Thus were transferred the bulk of the shares in 1,664 large state enterprises, including much of Czech manufacturing industry.<sup>13</sup>

In approaching the design of the program, policymakers had to make a number of decisions that had potentially large political implications. One choice concerned whether to give special advantages to certain categories of individuals. Most privatization programs in Eastern Europe have provided shares free or at preferential prices to managers and employees of the companies being privatized. Although this approach is sometimes argued to reduce opposition to privatization within these companies (e.g., Boycko, Shleifer, and Vishny 1995), it risks angering the disfavored members of the population who work in less valuable or nonprivatizing companies. The Czech program gave no group such preferences, instead providing equal opportunity for each adult citizen (i.e., voter) to participate.

Another design decision with implications for both the economic and political consequences of the program concerned the price charged to citizens for participation. Setting the price involved a tradeoff. A high price, and thus low participation, would increase the likelihood of sound corporate governance through greater concentration of ownership and could raise the value of the transfer in the eyes of participants. A low price and high participation, on the other hand, offered the possibility of creating a constituency of citizen shareholders that

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<sup>13</sup> These figures are for the Czech Republic only. The design of the program and bidding for first-wave companies took place before the breakup of Czechoslovakia in January 1993. There was no second wave in Slovakia following the split.

would oppose any attempt at renationalization and that would support the government's further proposals for market development. The Czech program balanced these considerations by setting the cost of a voucher booklet at 1,030 CSK (35 USD or about 1.5 times an average weekly wage), so that the decision to participate was not trivial, yet virtually every adult citizen could afford to participate.

The principle of requiring active decision making was extended more generally in the Czech design: those who chose to participate were then faced with a subsequent series of real decisions, for which they themselves would earn the reward or bear the responsibility. The choices included a) investing in companies directly by participating in several rounds of bidding the voucher points; b) placing points with a fund, in which case a particular IPF had to be chosen from among over 400 that were established, many of which offered different types of put options or other features meant to attract investors; or c) some combination of the two. Such experiences may have enhanced the participants' understanding of reform policies and of the workings of the market economy, and they may have increased their psychological stake in the success of the reform process.<sup>14</sup>

A final aspect of the voucher privatization design that is important for our political analysis concerns the trading regime after shares have been distributed. From the outset of the voucher privatization process in the Czech Republic and elsewhere, one of the critical uncertainties was whether or how quickly citizens would try to cash in their shares after they were distributed. While exchange of shares can lead to desirable concentration and improved matching of ownership and assets, and more generally increase the perceived value of share

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<sup>14</sup> The procedure for allocating shares may also have been designed with political impact in mind: in cases of excess demand for a company's shares (up to 120 percent), priority was given to individual over institutional investors. See Frydman, Rapaczynski, and Earle (1993) or Coffee (1996) for more extensive discussion.



ownership, the illiquidity of markets raised the possibility of financial crisis, exacerbated by the excessive put options offered by some PFs to lure investors. An additional consideration, especially important from the perspective of this paper, is that the sale of shares might remove the incentives of the citizenry to oppose renationalization and support further reform.<sup>15</sup> In the end, the Czech government delayed trading only for a few months.<sup>16</sup>

#### 4. PRIVATIZATION AND ATTITUDES

The design of the Czech privatization program gave Czech citizens direct personal contact with a major element of the economic reform program and left most participants somewhat better off than they were before. How might these experiences have affected the way individuals thought about reform, markets, and democracy? In this section we discuss several possible channels or mechanisms through which such attitudes might have been positively affected. Although each channel is conceptually distinct, empirically they are difficult to separate. Thus our model of attitudinal formation presented in the following section does not attempt to distinguish among them.<sup>17</sup>

A first possible channel for privatization to impact attitudes is narrowly defined material self-interest: the privatization program may have developed a set of stakeholders who would see

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<sup>15</sup> Schmidt (2000) considers this effect in a theoretical model. Although our evidence, discussed below, provides substantial support for the hypothesis that those who have retained shares tend to be more pro-reform, we are not prepared to accept his recommendation that share trading be limited or taxed in transitional economies for this reason, since it ignores the benefits to be derived from financial market development.

<sup>16</sup> There was a six-month delay in the distribution of shares after the end of the first wave in December 1992, connected to disputes over assets (including gold reserves) in the Czech-Slovak divorce. Shares from the second wave were distributed shortly after it concluded.

<sup>17</sup> The mechanisms discussed in this section pertain to the conceptual effects of privatization experiences on individual attitudes, but it is possible that privatization was not purely exogenous or that it was correlated with some other variables that also affect attitudes. These econometric identification issues are discussed in Section 7, together with the estimation results.

their own interests as tied to further reform. Restitution greatly expanded the set of owners of real property in the Czech Republic, as voucher privatization did the number of owners of financial assets (we provide precise estimates in the next section). The incentives of these groups may have been changed by privatization in favor of an increased role for markets and a diminished economic role for the state. While Citrin and Greene (1990), in a review of the literature, conclude that most studies in the American context show that self-interest plays a very minor role in the determination of political attitudes, the significant exceptions they note involve cases where the costs and benefits of policies are clear, i.e., where information is available on which policy preferences can be based.

Such an enhancement of information is a second possible channel through which political attitudes might have been affected by experiences with privatization. Uncertainty is a fundamental problem for individuals involved in any reform process: even if it is known that the outcome will ultimately be beneficial to most individuals, uncertainty concerning the distribution of the costs and benefits of the process may serve as an “*ex ante* political constraint” (Roland 1994).<sup>18</sup> The Czech privatization programs may have helped to reduce uncertainty over the outcomes of the reform process by requiring active participation from the citizenry; mass privatization increased the incentives of all citizens to compete in acquiring information on the different enterprises and investment funds in which they could invest, and restitution did the same for restitutees with respect to the uses of their returned property. To the extent that the information thus acquired increased optimism about the overall course of reform, mass privatization may have also built support for further reform due to “sociotropic” (Kinder and Kiewiet 1979) preferences of individuals over the broader economic environment, regardless of

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<sup>18</sup> For the role of uncertainty in determining support for economic reforms, see Fernandez and Rodrik (1991), Roland (1994), Rodrik (1995), Dewatripont and Roland (1995), and Roland (2000, Ch. 2).

their inability to forecast the outcome of reform for their own pocketbooks, as well as provided a basis for positive “retrospective” evaluations (Fiorina 1981) of the government.<sup>19</sup>

Third, and closely related to the previous channel, is the role of the privatization program in helping to legitimate the early phase of the transition.<sup>20</sup> By opening the process to all citizens and providing relatively equal opportunities for them to participate, the Czech government may have increased the perceptions of fairness and transparency of the program. The absence of preferences given to managers and employees of enterprises and the relative lack of opportunities for *nomenklatura* or “spontaneous” privatization in the Czech program (as we discussed above) stand in stark contrast to the practice in most other East European countries. Although it would obviously be an exaggeration to say that the Czech restitution and voucher programs contained no possibilities for favoritism, self-dealing, or corruption, the immediate outcome was determined to a substantial extent by the choices of the citizens themselves, an impact which they could sense and for which they had to take a measure of responsibility. By so doing, the program may also have increased what Lane (1986) calls the “sense of deservedness,” that “the self is to credited or blamed for one’s own fate,” which would have served both to legitimate the outcome of the massive property transfers and to instill one of the important values of the market economy. Furthermore, such participatory factors may have enhanced support not only for market economic reforms but also for democratization, by increasing trust in both processes.

Fourth, it is possible that the beneficiaries of privatization may have felt gratitude for the system or the set of policies to which they give credit for having proposed and implemented the

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<sup>19</sup> For recent evidence that economic retrospective voting plays a role in congressional elections in the U.S.A., see Kiewiet and Udell (1998).

<sup>20</sup> Our usage of legitimacy draws upon Dye’s (1990) discussion of the role of process in legitimating outcomes.

policy. The Czech privatization program, as in other transition countries, involved the redistribution of a large fraction of the nation's wealth, so there would be ample scope for feelings of appreciation.<sup>21</sup>

Finally, it is important to emphasize that our motivation for hypothesizing that these mechanisms worked to increase support for reforms, markets, and democracy rests on our focus on the initial phase of the transition in the Czech Republic. Our survey data were collected in January 1996, well prior to the allegations of corruption associated with the privatization of some companies that helped to ultimately bring down the Klaus government. These allegations were primarily concerned with privatization deals involving tenders or direct sales and not the voucher or restitution programs, but it is nonetheless quite possible that the privatization-attitudes relationship explored in this paper may have changed in more recent years. Public opinion concerning privatization may also have been negatively influenced by perceptions of poor corporate governance, fostered by weak financial market regulation and the "tunneling" activities of some investment privatization funds. However, during the initial phase of allocation of ownership and trading in shares, the time period of our study, these problems had not yet surfaced.

## **5. AN EMPIRICAL MODEL OF ATTITUDINAL FORMATION**

Privatization experiences may influence attitudes through any combination of the mechanisms discussed in the previous section. For a number of practical reasons, we do not attempt to distinguish among them. First, our dependent variables generally consist of abstract preferences over economic and political issues, while our independent variables of interest simply measure participation in the privatization program, as discussed in detail in the following section. Thus (with the exception of one question), we do not observe the impact of privatization

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<sup>21</sup> Gratitude may be stronger in generating support for the particular politicians or political parties whose actions created benefits, rather than for the overall policy strategy or ideology as a whole, but it is possible that the two types of attitudes are correlated.

experiences on incentives, information, legitimacy, or gratitude, and so we perform a reduced-form analysis relating indicators of those experiences directly to abstract preferences. Second, while our dependent variables may appear to provide some power for distinguishing among the alternative mechanisms, in fact the measures are so highly correlated that this procedure would not be persuasive. Our focus in this paper is on the broad question of the impact of privatization on reform attitudes, and we leave the question of the relative importance of particular mechanisms to future research.

To test our hypotheses on the relationships between attitudes and experiences of privatization, we employ as dependent variables attitudinal indicators consisting of ordered categories of responses to questions on economic and political issues. The key right-hand side variables on which we focus are the measures of experience of the privatization process, but we control for a variety of other characteristics of the individual and his/her family.

Formally, we assume that each individual, indexed by subscript “ $i$ ,” possesses well-defined attitudes (subsuming preferences, values, beliefs, expectations, and evaluations) on issues such as the course and expected future consequences of economic reforms, the proper role of the state and markets in the economy, the legitimacy of reform, and democratic values. In our notation,  $Y_i^*$  alternatively denotes these different attitudes of individual  $i$ . We further assume that each attitude may be expressed as a linear function, common across individuals, of the individual’s privatization experiences,  $Z_i$ , and of other characteristics,  $X_i$ :

$$Y_i^* = Z_i g + X_i b + e_i, \quad (1)$$

where

$Y_i^*$  = attitude (alternatively, views towards various aspects of reform, markets, democracy),

$Z_i$  = vector of privatization experiences (restitution, voucher privatization),

$X_i$  = vector of personal characteristics (income, gender, age, education, and Prague residency),

$b, g$  = vectors of parameters to be estimated, and

$e_i$  = unobserved residual.<sup>22</sup>

We are interested in estimating  $g$ , the impact of  $Z$  on  $Y^*$ , and testing the hypothesis that  $g$  is significantly different from zero. The privatization variables in  $Z$  are qualitative variables, equal to 1 if the individual had the particular experience (received property in restitution, participated in voucher privatization, or retained shares from voucher privatization) and 0 otherwise, so that  $g$  reflects the difference between individuals who had the experience and those who did not. If we scale  $Y^*$  such that larger values imply greater support for reform, markets, and democracy, then we are interested in the possibility that  $g$  is positive for variables reflecting experiences such as receipt of property in restitution, participation in voucher privatization, and retention of shares.

The estimation problem here and in most studies of attitudes, of course, is that we cannot observe  $Y^*$  directly. As we describe below, the attitudinal indicators in our data set consist of the responses of individuals to statements reflecting positions on the course of reforms, on the roles of markets and the state in the economy, on the legitimacy of the transition, and on democracy. Respondents were requested to indicate their agreement or disagreement, “strongly” or “somewhat,” with the statement. We assign values from 0 to 3 to these four categories. Therefore, the data can be treated as though we observe a qualitative variable  $Y$ , with four categories as follows:

$$Y_i = 0 \text{ if } Y_i^* \leq 0 \quad (\text{“not at all” or “strongly disagree”})$$

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<sup>22</sup> The assumption that  $e_i$  is uncorrelated with  $Z_i$  is discussed in Section 7 below.

$$\begin{aligned}
&= 1 \text{ if } 0 < Y_i^* \leq \mu_1 && \text{("a little" or "rather disagree")} \\
&= 2 \text{ if } \mu_1 < Y_i^* \leq \mu_2 && \text{("somewhat" or "rather agree")} \\
&= 3 \text{ if } \mu_2 < Y_i^* && \text{("very much" or "strongly agree")}
\end{aligned} \tag{2}$$

where  $\mu_1$  and  $\mu_2$  represent the common “thresholds” across which individuals switch categories, with  $0 < \mu_1 < \mu_2$ . Together with the  $\mathbf{b}$  and  $\mathbf{g}$  vectors, the category thresholds are parameters to be estimated by the model.<sup>23</sup> Under the conventional assumption that  $\mathbf{e}$  is distributed as a standard normal [ $\mathbf{e} \sim N(0, 1)$ ], we can compute the probabilities of an observation falling within each category as a function of the  $\mathbf{X}_i$  and  $\mathbf{Z}_i$ :

$$\begin{aligned}
\Pr(Y_i = 0) &= \Pr(\mathbf{X}_i \mathbf{b} + \mathbf{Z}_i \mathbf{g} + \mathbf{e}_i \leq 0) = \Phi(-\mathbf{X}_i \mathbf{b} - \mathbf{Z}_i \mathbf{g}) \\
\Pr(Y_i = 1) &= \Pr(0 < \mathbf{X}_i \mathbf{b} + \mathbf{Z}_i \mathbf{g} + \mathbf{e}_i \leq \mu_1) = \Phi(\mu_1 - \mathbf{X}_i \mathbf{b} - \mathbf{Z}_i \mathbf{g}) - \Phi(-\mathbf{X}_i \mathbf{b} - \mathbf{Z}_i \mathbf{g}) \\
\Pr(Y_i = 2) &= \Pr(\mu_1 < \mathbf{X}_i \mathbf{b} + \mathbf{Z}_i \mathbf{g} + \mathbf{e}_i \leq \mu_2) = \Phi(\mu_2 - \mathbf{X}_i \mathbf{b} - \mathbf{Z}_i \mathbf{g}) - \Phi(\mu_1 - \mathbf{X}_i \mathbf{b} - \mathbf{Z}_i \mathbf{g}) \\
\Pr(Y_i = 3) &= \Pr(\mu_2 < \mathbf{X}_i \mathbf{b} + \mathbf{Z}_i \mathbf{g} + \mathbf{e}_i) = 1 - \Phi(\mu_2 - \mathbf{X}_i \mathbf{b} - \mathbf{Z}_i \mathbf{g}),
\end{aligned} \tag{3}$$

where  $\Pr$  stands for probability, and  $\Phi(\omega)$  for the cumulative standard normal distribution from  $-\infty$  to  $\omega$ . The parameters of the  $Y^*$  function as well as the category thresholds can then be estimated using maximum likelihood, where the contribution of any single individual to the likelihood function is simply given by the formula for the probability of observing him/her in the observed category, conditional upon his/her characteristics.

Besides estimating the  $\mathbf{b}$  and  $\mathbf{g}$  parameters, and drawing inferences about the statistical significance of the estimates, we are interested in calculating the implied magnitude of the impact of  $\mathbf{Z}$  on  $\mathbf{Y}$ . Our primary method for doing so is policy simulations, using the predicted probabilities of observing an individual choosing each of the categories under different

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<sup>23</sup> The ordered specification assumes that  $Y_i^*$  is a monotonic function of the variables of interest; we examine the conformity of the data with this assumption in Section 7 below.

conditioning assumptions. For instance, take the case where  $\mathbf{Z}$  is a single dichotomous variable (in practice, all our measures of  $\mathbf{Z}$  are qualitative indicators). We may compute the probability that an individual  $i$  chooses category  $j$  conditional on her/his other characteristics ( $\mathbf{X}_i$ ), separately for  $\mathbf{Z}_i = 0$  and  $\mathbf{Z}_i = 1$ :  $\Pr(\mathbf{Y}_i = j \mid \mathbf{X}_i; \mathbf{Z}_i = 0)$  and  $\Pr(\mathbf{Y}_i = j \mid \mathbf{X}_i; \mathbf{Z}_i = 1)$  for each category  $j$  ( $j = 0, 1, 2, 3$ ). Defining these two estimated probabilities as  $P_{ij0}$  and  $P_{ij1}$ , respectively, a prediction of the conditional incidence of category  $j$  can be derived in each case:<sup>24</sup>

$$P_{j|z=0} = \left(\frac{1}{n}\right) \sum_i P_{ij0} \quad \text{and} \quad (4)$$

$$P_{j|z=1} = \left(\frac{1}{n}\right) \sum_i P_{ij1} \quad (5)$$

The impact of  $\mathbf{Z}$  on  $\mathbf{Y}$  can then be summarized as the difference in the distribution of the four mean probabilities (associated with the four categories of  $\mathbf{Y}$ ) across states  $\mathbf{Z} = 0$  and  $\mathbf{Z} = 1$ . As partial measures of this impact, we examine the following two indicators:

$$\text{Elasticity of "strong support" with respect to } \mathbf{Z} = \frac{P_{3|z=1} - P_{3|z=0}}{P_{3|z=0}} \quad (6)$$

$$\text{Elasticity of "support" with respect to } \mathbf{Z} = \frac{P_{3|z=1} + P_{2|z=1} - P_{3|z=0} - P_{2|z=0}}{P_{3|z=0} + P_{2|z=0}} \quad (7)$$

The elasticity of "strong support" measures the predicted proportionate increase in the incidence of category 3 associated with the change from  $\mathbf{Z} = 0$  to  $\mathbf{Z} = 1$  for the whole sample, and the elasticity of "support" shows the analogous response in categories 2 and 3. We call them elasticities because they are scaled by the predicted incidence under the baseline of  $\mathbf{Z} = 0$ ; thus

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<sup>24</sup> If we estimate the  $\Pr(\mathbf{Y}_i \mid \mathbf{X}_i, \mathbf{Z}_i)$  function by maximum likelihood, then these are also the maximum likelihood predictors, and as such are consistent and asymptotically efficient. See Cramer (1991, p. 86).



they are discrete counterparts to the conventional formulation of the “marginal effects” relating continuous variables.

Our method thus permits us to quantify the magnitude of an attitudinal shift associated with a change in a variable of interest. There are three main advantages over conventional calculations of marginal effects. First, as just noted, our procedure is appropriate when variables—both dependent and independent—are qualitative, as they frequently are in analyses of attitudes. The procedure is easily extended to handle the case of unordered multiple categories of the dependent variable. Second, our method permits the control variables,  $X_i$ , to assume their true values. Unlike many packaged procedures, which set other characteristics at their sample mean values, our procedure is to simulate the estimated equation for each individual separately. The simulation results thus quantify the impact of changing the variable of interest on the sample as a whole, rather than merely for an individual with either average or some pre-specified set of characteristics. Finally, our method provides an easy-to-interpret measure of the marginal effect of any determinant of interest: results are presented in terms of the proportions of individuals in each category of the original dependent variable. The method is general and may be applied in a wide variety of other circumstances.

## **6. DATA**

Our data are drawn from a nationwide survey that is part of an ongoing series called the “Surveys of Economic Expectations and Attitudes” (EEA), organized by the Institute of Sociology of the Czech Academy of Sciences in January 1996. The sampling methodology involved two steps: 1) stratification by settlement size and region, and 2) quota sampling by age, gender, and education. The procedure assured that the sample is quite representative of the

Czech population (as we demonstrate below).<sup>25</sup> Of the 1,800 individuals aged 18 and over who were approached, 1,459 respondents were ultimately interviewed by STEM, the Center for Empirical Surveys. In addition to the usual set of questions in the EEA series on political and economic attitudes and on individual and household characteristics, the January 1996 questionnaire contained several special sections, which we designed, requesting detailed information on the experience of the respondent with restitution and voucher privatization.

Table 1 shows our selected indicator variables for economic and political attitudes. Variables are grouped in three broad categories in which we examine them in subsequent sections: evaluation of economic reform and its consequences, attitudes towards economic policies and systems, and perceptions of legitimacy and democratic values. Except for the “preferred economic system” variable, there are four admissible responses, which take on values from 0 to 3.<sup>26</sup> In order to facilitate the reading of results throughout the paper, we have inverted some answers so that the indicator is consistently larger if it reflects agreement with a more “pro-reform” statement (or disagreement with an anti-reform statement); in those cases, a “not” is inserted in the questions marked with an “\*” in the table.<sup>27</sup>

Although they are inherently and inevitably subjective in nature, the indicators should be taken as proxies for the underlying preferences of individuals. We hope that by examining a range of measures, including groups of alternative measures of similar concepts, we may be able to obtain consistent, robust evidence concerning the hypothesized relationships, although each

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<sup>25</sup> Unfortunately, no census or residence registration lists were available from which a fully random sample could have been drawn.

<sup>26</sup> Although the structure of the preferred economic system question is different from the others, the responses do have a natural ordering (from much to little state intervention); thus, we also use ordered probit techniques for analyzing this variable’s determinants.

<sup>27</sup> The original questions, therefore, do not contain the awkward wording of the asterisked questions in table 1. We have inserted “not” merely to facilitate interpretation of results.

question on its own may be somewhat problematic.<sup>28</sup> Furthermore, as long as the questions are not systematically misinterpreted by respondents in a manner which is correlated also with the independent variables on which we focus, any noise can be treated as pure measurement error.<sup>29</sup>

Table 2 provides a summary of survey respondents' experiences with the restitution program, our first independent variable of interest: 18.1 percent of respondents reported that their family received some asset through restitution, with the primary asset returned a farmstead, farmland, or forestland.<sup>30</sup> In contrast, participation in the voucher privatization program was quite high, as can be seen in table 3. In each of the two waves of voucher privatization, approximately 85 percent of those eligible to participate did so, though only 78.6 percent participated in both waves.<sup>31</sup> Among first-wave participants, 69.2 percent of individuals invested at least half their points in IPFs, while 56.9 percent of second-wave participants did so. Approximately half of all participants surveyed had not sold any of their shares as of January 1996, and fully four-fifths of participants retained some of the shares they received from voucher privatization.

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<sup>28</sup> The survey contained a number of other attitudinal indicators that we also investigated. Here we present results for those variables we judge to be most clearly formulated and easiest to interpret, but the qualitative conclusions are consistent with other indicators as well.

<sup>29</sup> This is not strictly accurate, as we employ nonlinear estimation techniques: bias from omitting a relevant variable (such as a measure of the tendency towards certain interpretations or responses) can arise even if it is uncorrelated with the right-hand side variables of interest. We attempt to correct for any systematic interpretational differences by controlling for observable individual characteristics.

<sup>30</sup> Our analysis of data from an earlier survey suggests that this is substantially less than the percentage of the population that had had property confiscated by the communists. Of the respondents to that survey, 27.6 percent reported that the communist government had nationalized property that had been owned by their parents, and 34 percent said that property owned by themselves, their parents, or their grandparents had been confiscated.

<sup>31</sup> This is slightly higher than the participation rate—77 percent and 79 percent in the first and second waves, respectively—that may be calculated using figures from the Ministry of Privatization on the number of participants taken as a ratio to the adult population [Czech Statistical Office (1993)]. The citizenship requirement for eligibility (discussed in Section 2, above) might be a possible source of this discrepancy.

Finally, table 4 shows sample summary statistics for the income and demographic variables used as covariates, together with roughly comparable statistics (where available) for the population of all residents of the Czech Republic. We control for the log of per capita family income (which seems less likely to suffer from endogeneity than individual income), age, gender, education, and Prague residency, all of which may be correlated both with attitudes towards reform and the probability of various privatization experiences.<sup>32</sup> As can be seen from table 4, sample statistics generally mirror population averages: differences largely reflect the fact that only individuals aged 18 and over were surveyed, as well as the standard tendency for well-educated individuals to be overrepresented in surveys.

## 7. MODEL SPECIFICATION, ESTIMATION, AND SIMULATION RESULTS

This section presents the results from our ordered probit estimations, where we test the hypothesis that restituent and voucher program participants are more likely to harbor attitudes sympathetic to economic reform, free markets, and democratic institutions.<sup>33</sup> Our independent variables of interest are dummy variables for various privatization experiences, based on the data discussed in the previous section.

Because we do not have any clear hypotheses as to differences in behavior among restituent groups who received one type of property over another, and because some of the restituent groups are quite small, we aggregate the various types and use only a single dummy variable

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<sup>32</sup> Like many capital cities in postcommunist Europe, Prague has benefited from market reforms considerably more than has the rest of the country. On generational differences, see Rose and Carnaghan (1994) for a comparative analysis of a number of East European countries.

<sup>33</sup> To assess the degree to which the data conform to the ordered probit assumption of monotonicity in the response of the latent dependent variable to the independent variables of interest, we also estimated “parallel regressions” [Long (1997, pp. 140–45)] in which the dependent variable responses were regrouped into three alternative sets of bivariate categories. For a first simple probit regression, “strongly disagree” is coded as 0 and “rather disagree,” “rather agree,” and “strongly agree” are grouped together and coded as 1; for a second, “strongly disagree” and “rather disagree” are coded as 0 and “rather agree” and “strongly agree” as 1; for a third, “strongly disagree,” “rather disagree,” and “rather agree” are coded as 0 and “strongly agree” as 1. The results from these alternative specifications were qualitatively similar to those from the ordered probits, implying that the data do not contradict the monotonicity assumption.

(“restituent” in tables 5–7) to represent the effect of restitution of property. Voucher participation is also defined as a dummy variable (“voucher participant”) equal to 1 if the individual participated in at least one of the two waves of voucher privatization. The dummy variable for continued ownership (“retained shares”) equals 1 if the individual still retains any shares from voucher privatization, and zero if the individual either did not participate or participated and subsequently sold all her shares. Thus, the latter voucher program variable is nested in the former: it represents the additional impact of retaining shares, beyond voucher participation. The sample was restricted to those old enough to have participated in at least the second wave of voucher privatization.

Additionally, as discussed above, we control for demographic characteristics that might be correlated both with restitution of property and with the dependent variable. The covariates are the natural logarithm of family income per capita; a dummy variable equal to 1 for male (zero for female); years of age; vocational, secondary, and university education dummies (where elementary education is the omitted category); and a dummy for Prague residency. We report the estimates of the impact of restitution and voucher program participation, including the simulation elasticities, for each of the three categories of attitudinal variables considered in this paper: evaluation of economic reform, opinions on economic policies and systems, and perceptions of legitimacy and democratic values.

Table 5 displays the ordered probit equation estimates where the dependent variable is one of three indicators of an individual’s evaluation of economic reform. For all three questions—“satisfied with economic reform,” “believe economic situation improving,” and “expect future improvement in family living standards”—participants in the survey who received property through restitution are more likely to have a positive opinion of economic reform: the

coefficient on the restitution dummy is positive and statistically significantly different from zero at the 1 percent level.

With respect to the voucher program, participation in at least one of the two waves is estimated to have a negligible effect on all three dependent variables. The estimated coefficient on retained shares in these models, however, is positive and highly significant, and appears to be nontrivial in magnitude (for instance, compared to the size of the  $\mu$ 's). In alternative specifications, when we omitted the retained shares variable, the estimated coefficient on voucher participant became statistically significant, taking on a value midway between the coefficient estimates for voucher participant and retained shares. These results suggest that the voucher program did have an impact on attitudes towards reform, but that the effect worked through share retention rather than participation per se.

The simulation results shown at the bottom of the table support the argument that both the restitution and the voucher program produced not only statistically significant, but also politically significant, results. Restituent status raises the predicted incidence of support (either “strongly” or “somewhat” agree) for all three measures from 15 to 26 percent, while the proportionate increase in support due to participation in voucher privatization and subsequent retention of shares ranges from 0.18 to 0.27. Given the magnitude of the coefficients, it is evident that the large effects from voucher privatization are almost entirely due to retained shares and not at all to participation. Thus, the data provide evidence that receipt of property through restitution and continued ownership of shares obtained through the voucher program are strongly associated with support for economic reform, but that participation in voucher privatization alone is not.

Table 6 reports the estimates of ordered probit regressions with evaluations of economic policies—“complete freedom for private enterprise” and “state should not increase price controls”—and systems (whether the individual supports a socialist, social market, or free market system) as dependent variables. The results show consistently positive coefficients on the restituent dummy, but both the

statistical significance of the coefficients and the elasticities implied by the simulations are smaller than in the first set of dependent variables.

In contrast to the regressions in table 5, voucher participation is estimated to have a strong positive impact in these models, although its estimated coefficient is statistically significant at conventional levels only in the case of the first variable: “complete freedom for private enterprise.” Together, the positive coefficients for voucher participant and retained shares combine to produce large elasticities of support (ranging from 0.06 to 0.39) for the market economy as measured by the three dependent variables. Thus, while the previous table suggested that only share retention has a big impact on favorable views of reform and its consequences, the results in this table are consistent with the hypothesis that both participation and share retention increase support for markets.

The final set of ordered probit estimations are shown in table 7, which reports results with proxies for perception of legitimacy and democratic values as dependent variables. As might be expected, restituteds are more likely than other respondents to believe that there is “more social justice today” than under the prior system, as well as to believe that “privatization was not unfair”; the coefficient on both terms is positive and statistically significant, and elasticities of support are large. In contrast, while the coefficient is positive in the equation for “no rule by ‘strong hand,’” the result is not precisely estimated, and the implied elasticities are very small.

As with the evaluation of reform, the estimated coefficient on voucher participation is small and consistently insignificant in all of the models in the third group, but share retention is estimated to have large, positive effects that are statistically significant in the “more social justice today” and “no rule by ‘strong hand,’” estimations. The estimated elasticities are also sizable in those two models. It is notable that neither mass privatization participation itself nor retaining shares enhances belief in the fairness of the privatization process (possibly even non-

participants believe it was fair, knowing that they could have participated), but the experience of keeping shares is positively associated with belief in increased social justice and with anti-authoritarianism. Thus, even if shareholders may see a need for government regulation of financial markets (as the results for “complete freedom for private enterprise” hint), they also appear to be more likely to oppose arbitrary government power, possibly because that could reduce the value of their investments or because their pro-market and pro-democracy values have developed in tandem.

As expected, the covariates generally have considerable explanatory power. Income, for example, is always positively correlated with support for reform, markets, and democracy, and its coefficient is always significantly different from zero. Men are more optimistic about the economy, and show greater support for market-oriented economic policies and a free-market system, but the effect of gender is otherwise not precisely estimated. Age effects are negative and large in every model except “no rule by ‘strong hand.’” That one exception is consistent with evidence that supporters of the far-right Republican Party are drawn disproportionately from the ranks of the disaffected young. Education is consistently associated with pro-reform attitudes, an effect especially large for university compared to elementary education. Finally, somewhat contrary to conventional wisdom, Prague residency is only inconsistently associated with pro-reform attitudes.

A possible objection to our interpretation of the effects of restitution is that our measure of receipt of property through restitution might be proxying for some third, unmeasured factor affecting attitudes. One important possibility is unmeasured aspects of family background. Respondents whose families were part of the “bourgeoisie” before communism, for instance, might have been inculcated with more liberal beliefs from an early age, and therefore might be



more likely to support liberal capitalism and democracy than other individuals, even controlling for such observable characteristics as age, gender, education, and income. If such individuals are also more likely to receive property in restitution (because their ancestors were more likely to have possessed property that was expropriated), then the estimated coefficient on restitution in our equations would suffer from an upward bias.

Although we are unable to measure such “class” effects directly, a bourgeois background seems likely to be correlated with entrepreneurship in the family. Our data show that restituted are, in fact, considerably more likely to either be entrepreneurs themselves or to have family members who are: 45.4 percent of restituted have some member of their household who is registered as an entrepreneur, while the same is true for only 27.5 percent of nonrestituted. To examine the robustness of our results for restitution, therefore, we reestimated our estimations with a model that included a dummy variable for registration by any household member (including the respondent) as an entrepreneur. The effect of restitution holds up in these estimations, even while registration of a household member as an entrepreneur is often positively correlated with pro-reform attitudes. For only one dependent variable—“state should not increase price controls”—is the estimated coefficient on the restitution dummy statistically insignificant in the unrestricted model (i.e., including the family member entrepreneurship dummy) where it is positive and significantly different from zero in the restricted model.

Similarly, one might suspect that individuals who are more optimistic about the economy would be more likely to retain shares acquired through voucher privatization, and that the positive association between retention of shares obtained through voucher privatization and pro-reform attitudes captures this predisposition rather than any change in sentiment resulting from ownership of shares. However, only two of our attitudinal indicators measure economic

optimism per se: “believe economic situation improving” and “expect future improvement in family living standards.” It is difficult to explain why an individual who felt, for example, that there was “more social justice today” or favored “no rule by ‘strong hand’” would be inherently more likely to hold on to shares acquired through voucher privatization. When viewed across all of the attitudinal measures used, the evidence suggests that retention of shares shaped attitudes, rather than the converse.

In summary, we find that both restituent status and retention of shares are consistently more supportive of economic reforms and optimistic about their effects, more inclined to harbor free-market attitudes, and more likely to perceive the transition as legitimate and (for those who retained shares only) to support democratic values. More ambiguous is the case of voucher participants who did not retain their shares: such individuals are significantly and substantially different from nonparticipants only for the dependent variable representing support for complete freedom for private enterprise.

## **8. CONCLUSION**

In this paper, we have presented evidence of an empirical relationship between the attitudes of individuals toward the economic and political transition, on the one hand, and their experiences of privatization policies introduced by the Czech government, on the other. In our sample of 1,459 adult Czech respondents, restituent status and retention of shares acquired through the voucher program both have significant predictive power for attitudes which may be characterized as pro-reform. Through a variety of possible channels—perhaps because they have acquired a vested interest in continued progress towards a market economy, because their

participation has enhanced their understanding and trust in the reform process, or because they are grateful to the government that arranged the privatization program in such a way as to make them the beneficiaries—these new owners of property are more likely to appraise past reform efforts positively, to expect good future developments, to oppose state intervention in the economy, to believe that the reforms are legitimate, and (for those who retained shares only) to hold democratic values. Using an original simulation method, we have shown that the magnitudes of the impacts of privatization experiences are substantial in terms of the elasticity of the movement across the categories of most of these dependent variables.

The results have a number of wider implications. First of all, most of the empirical literature on the effects of the economy on individual attitudes has studied macroeconomic variables, such as inflation, unemployment, and growth in national income, relating them to voting for a particular party or for the incumbent versus the challenger in presidential elections.<sup>34</sup> Other studies have emphasized the role of sociodemographic characteristics—such as age, gender, education, occupation, and income—on attitudes.<sup>35</sup> While such analyses have their own intrinsic interest, their usefulness to policymakers is limited since macroeconomic variables and demographic characteristics are not policy instruments that can easily be controlled. From a Machiavellian point-of-view, what the Prince or Princess (at least a democratic one) would like to know is how to design policies to strengthen his/her political base, or indeed whether policy design can affect the attitudes of the citizenry whatsoever. Our work thus sheds light on issues

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<sup>34</sup> For an extensive study of Western democracies, see Lewis-Beck (1988). In the transition context, see Przeworski (1996) for a study of the effects of unemployment, inflation, and wage levels on support for the Balcerowicz program in Poland. Another approach [e.g. Whitefield and Evans (1994), Evans and Whitefield (1995)] relates support for democracy (the dependent variable) to subjective evaluations of the political and economic situation (the independent variables), rather than, as we do here, to the actual experiences of policies.

<sup>35</sup> The classic reference in American politics is Campbell et al. (1960).

of tactics and leadership, demonstrating both the political opportunities and the political constraints that policymakers face in their policy design decisions.<sup>36</sup>

Second, we find that the transition context is both an apt and a fascinating setting in which to investigate these issues. Seldom in world history have democratic policymakers faced both the opportunity and the conundrum that privatization represented to the East European leaders coming to power in the early 1990s. In some ways, the chance to implement such a program must be the dream of every politician out to buy votes with pork barrel or worse, and of course policymakers in the transition countries also had some awareness of the importance of privatization in improving economic performance, at least in the long run. At the same time, designing privatization policy was a daunting challenge to face, full of invisible political and economic pitfalls. As we have shown, the designs of the restitution and voucher programs in the Czech Republic contained specific elements that in purely political terms served to maximize their positive impact and to minimize their negative consequences. Their history provides a useful case study of policymaking under political and economic uncertainty: Klaus and his colleagues were either politically adept or, if one is unwilling to impute intentionality, extremely lucky.<sup>37</sup>

Finally, our work provides some support for viewing attitudes themselves as an important element in the large-scale institutional change of transition. Like institutions, attitudes of individuals toward alternative policies carry consequences, for instance for the sustainability of a reform process, and they carry some persistence in that habitual ways of thinking (what East

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<sup>36</sup> Shleifer and Treisman (2000) discuss tactics by which stakeholders might be encouraged to support economic reforms. Issues of tactics in designing social safety nets during democratic transitions are covered by Nelson (1992) and Graham (1994).

<sup>37</sup> It would be interesting to test the persistence of the relationships estimated in this paper in light of Klaus's subsequent fall from power in 1997 amid privatization-related scandals (that were, however, largely unrelated to the restitution and voucher programs) and his reemergence as a significant political actor in the 1998 parliament elections, but that would take us beyond the scope of this paper.

Europeans widely refer to as “the mentality of the people”) are not easily changed.<sup>38</sup> Most intriguing, however, is that despite their persistence, attitudes toward policies may be susceptible to influence by the particular design of the policies themselves. In the Czech example, the restitution and voucher privatization policies adopted at the outset of transition were fundamentally new, both in form and content: by contrast with economic policy under the Communist Party, they were largely open, transparent, and competitive (merit-based). Moreover, as we have emphasized, they involved the population as active participants in the process, giving them incentives and new opportunities for gain and profit. This paper provides evidence that these experiences may indeed have given Czech individuals more confidence in the policies and worked to encourage their support for reform, markets, and democracy.

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<sup>38</sup> Both Simon (1945) and Nelson and Winter (1982) discuss the possible conceptualization of personal habits as kinds of institutions. We would add that patterns of thinking may also be habits and that they also have real consequences. Our approach has parallels in the discussions of “cultural persistence” in the literature on ethnomethodology; see, e.g., Zucker (1991).

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Table 1 Attitudinal Variables

| Variable Name                                      |  | Attitudinal Question on Survey <sup>a</sup> |                               | Answers                  |                          |                 |
|--|--|---|-------------------------------|--------------------------|--------------------------|-----------------|
| A. Evaluation of Economic Reform                   |  | Definitely<br><u>not</u>                    | Rather<br><u>not</u>          | Rather<br><u>yes</u>     | Definitely<br><u>yes</u> | Total           |
| Satisfied with economic reform                     | “Can you say that you are satisfied overall with the course of economic reform to date?”   | 188<br>12.9%                                | 509<br>35.0%                  | 628<br>43.1%             | 131<br>9.0%              | 1,456<br>100.0% |
| Believe economic situation improving               | “Would you characterize the current period as the beginning of a substantial improvement in our economic situation?”   | 180<br>12.4%                                | 470<br>32.5%                  | 596<br>41.2%             | 201<br>13.9%             | 1,447<br>100.0% |
| Expect improvement in living standards             | “Do you think that the new economic situation will bring better living standards for your family in the near future (approximately in the next two years)?”  | 292<br>20.1%                                | 583<br>40.1%                  | 453<br>31.2%             | 125<br>8.6%              | 1,453<br>100.0% |
| B. Attitudes towards Economic Policies and Systems |  |   |                               |                          |                          |                 |
| Complete freedom for private enterprise            | “It is necessary to leave private enterprise completely free.”   | 195<br>13.4%                                | 476<br>32.7%                  | 500<br>34.4%             | 284<br>19.5%             | 1,455<br>100.0% |
| State should not increase price controls           | “The state should not increase the level of price controls.” <sup>a</sup>  | 276<br>19.0%                                | 599<br>41.2%                  | 442<br>30.4%             | 136<br>9.4%              | 1,453<br>100.0% |
| Preferred economic system <sup>b</sup>             | “Which economic system do you prefer?”   |   | <b>Socialist<br/>pre-1990</b> | <b>Social<br/>Market</b> | <b>Free<br/>Market</b>   | <b>Total</b>    |
|  |  |   | 158<br>10.9%                  | 872<br>60.3%             | 416<br>28.8%             | 1,446<br>100.0% |
| C. Perceptions of Legitimacy and Democratic Values |  | Definitely<br><u>not</u>                    | Rather<br><u>not</u>          | Rather<br><u>yes</u>     | Definitely<br><u>yes</u> | Total           |
| More social justice today                          | “Today’s system is more socially just than the previous (until 1989) one.”   | 303<br>21.0%                                | 520<br>36.0%                  | 461<br>31.9%             | 159<br>11.0%             | 1,443<br>100.0% |
| Privatization not unfair                           | “Do you think that privatization does not mean the transfer of assets primarily to the wrong hands?” <sup>a</sup>  | 273<br>18.9%                                | 535<br>36.9%                  | 535<br>36.9%             | 105<br>7.3%              | 1,448<br>100.0% |
| No rule by “strong hand”                           | “It would not be better for our country if, instead of discussion about the various possibilities for resolving the current situation, there were a government of a strong hand and somebody clearly said what should be done.” <sup>a</sup> | 277<br>19.1%                                | 453<br>31.3%                  | 454<br>31.3%             | 265<br>18.3%             | 1,449<br>100.0% |

Note: <sup>a</sup>The questions in quotation marks are exact translations from the survey questionnaire, with the exception of those marked with an <sup>a</sup>, which are inverted so that stronger agreement reflects a more pro-reform attitude. <sup>b</sup>Answer definitions: Socialist pre-1990 = “Socialist, as in our country until 1989;” social market = “Social market, where the state influences the economy to a marked degree;” free market = “Free market economy, with minimal state intervention.”

**Table 2 Property Received through Restitution**

| <u>Type of Property Received</u> | <u>Number of Respondents</u> | <u>Percent of Total</u> |
|----------------------------------|------------------------------|-------------------------|
| Business                         | 14                           | 1.0                     |
| Real estate                      | 38                           | 2.6                     |
| Financial Assets                 | 31                           | 2.1                     |
| Farmstead, farmland, forest      | 180                          | 12.4                    |
| Nothing                          | 1,191                        | 81.9                    |

**Table 3 Participation in Voucher Privatization**

| <b>Participation in Voucher Privatization</b> |                      |                       |  |  |
|---|----------------------|-----------------------|--|--|
| <b><u>(of those eligible)</u></b>             | <b><u>Number</u></b> | <b><u>Percent</u></b> |  |  |
| First Wave                                    | 1,189                | 84.6                  |  |  |
| Second Wave                                   | 1,182                | 84.2                  |  |  |
| Neither Wave                                  | 116                  | 8.3                   |  |  |
| One of Two Waves                              | 185                  | 13.2                  |  |  |
| Both Waves                                    | 1,103                | 78.6                  |  |  |

  

| <b><u>Points Invested in IPFs (of participants)</u></b> | <b><u>First Wave</u></b> |                       | <b><u>Second Wave</u></b> |                       |
|---|--------------------------|-----------------------|---------------------------|-----------------------|
|   | <b><u>Number</u></b>     | <b><u>Percent</u></b> | <b><u>Number</u></b>      | <b><u>Percent</u></b> |
| None  | 327                      | 27.5                  | 458                       | 38.7                  |
| < 1/2   | 39                       | 3.3                   | 52                        | 4.4                   |
| About 1/2   | 113                      | 9.5                   | 98                        | 8.3                   |
| > 1/2   | 34                       | 2.9                   | 33                        | 2.8                   |
| All   | 674                      | 56.8                  | 541                       | 45.8                  |

  

| <b><u>Shares Sold (of participants)</u></b> | <b><u>Number</u></b> | <b><u>Percent</u></b> |
|---|----------------------|-----------------------|
| None  | 678                  | 52.7                  |
| < 1/2                                       | 91                   | 7.1                   |
| About 1/2                                   | 209                  | 16.3                  |
| > 1/2                                       | 60                   | 4.7                   |
| All   | 248                  | 19.3                  |

**Table 4 Income and Demographic Characteristics of Sample and Population**

| Variable               | Sample        | Population | Sample N |
|------------------------|---------------|------------|----------|
| Income (mean [S.D.])   | 5,699 (4,681) | N/A        | 1,430    |
| Age (mean [S.D.])      | 44.2 (15.8)   | 37.0       | 1,459    |
| Male %                 | 47.3          | 48.6       | 690      |
| Female %               | 52.7          | 51.4       | 769      |
| Elementary education % | 22.6          | 26.0       | 330      |
| Vocational education % | 36.3          | 39.0       | 529      |
| Secondary education %  | 29.6          | 27.1       | 432      |
| University education % | 11.5          | 7.9        | 168      |
| Prague resident %      | 13.0          | 11.8       | 189      |
| Non-Prague resident %  | 87.0          | 88.2       | 1,270    |

Sources for Population Statistics: UNDP/Charles University report *Zpráva o lidském rozvoji: Česká republika 1996* for average age; winter 1996 Labor Force Survey for education; and Czech Statistical Office, *1995 Czech Statistical Yearbook* for gender and Prague residency.

Notes: Income in Czech Koruna is total family monthly income per capita, calculated as (wage income + entrepreneurial income + social insurance + child support + alimony + gifts + other assistance + withdrawals from savings) / number of family members. Individuals aged 18 and over were surveyed. Population statistics for education are computed for individuals 15 years of age or older.

**Table 5 Privatization Experiences and Evaluation of Economic Reform: Ordered Probit Estimates**

(Significance levels: 10% - \*; 5% - \*\*; 1% - \*\*\*)

| <u>Independent variables</u>   | <u>Satisfied with economic reform</u> |                       | <u>Believe economic situation improving</u> |                       | <u>Expect future improvement in family living standards</u> |                       |
|--|---------------------------------------|-----------------------|---|-----------------------|---|-----------------------|
|  | <u>Estimated coefficient</u>          | <u>Standard error</u> | <u>Estimated coefficient</u>                | <u>Standard error</u> | <u>Estimated coefficient</u>                                | <u>Standard error</u> |
| Constant   | -1.97***                              | 0.48                  | -1.81***                                    | 0.47                  | -3.12***  | 0.45                  |
| <b><u>Privatization experiences</u></b>  |                                       |                       |   |                       |   |                       |
| Restituent   | 0.36***                               | 0.08                  | 0.23***                                     | 0.08                  | 0.28***   | 0.08                  |
| Voucher participant  | -0.04                                 | 0.12                  | 0.05  | 0.12                  | 0.01  | 0.12                  |
| Retained shares  | 0.26***                               | 0.07                  | 0.20***                                     | 0.08                  | 0.25***   | 0.08                  |
| <b><u>Controls</u></b>   |                                       |                       |   |                       |   |                       |
| Ln (family income per capita)  | 0.39***                               | 0.06                  | 0.37***                                     | 0.06                  | 0.51***   | 0.05                  |
| Male   | 0.07                                  | 0.06                  | 0.10*                                       | 0.06                  | 0.20***   | 0.06                  |
| Age  | -0.01***                              | 0.00                  | -0.01***                                    | 0.00                  | -0.02***  | 0.00                  |
| Vocational education   | 0.11                                  | 0.08                  | 0.08  | 0.08                  | 0.01  | 0.08                  |
| Secondary education  | 0.29***                               | 0.09                  | 0.29***                                     | 0.09                  | 0.27***   | 0.09                  |
| University education   | 0.42***                               | 0.12                  | 0.30***                                     | 0.11                  | 0.45***   | 0.12                  |
| Prague resident  | 0.01                                  | 0.09                  | 0.11  | 0.08                  | -0.05   | 0.09                  |
| <b><u>Thresholds</u></b>   |                                       |                       |   |                       |   |                       |
| $\mu(1)$   | 1.17***                               | 0.05                  | 1.10***                                     | 0.05                  | 1.23***   | 0.04                  |
| $\mu(2)$   | 2.71***                               | 0.06                  | 2.41***                                     | 0.06                  | 2.50***   | 0.06                  |
| Maximized log likelihood   | 1,556.33                              |                       | -1,636.98                                   |                       | -1,589.37   |                       |
| $\chi^2$ statistic   | 197.03                                |                       | 165.76                                      |                       | 272.37  |                       |
| Valid N  | 1,371                                 |                       | 1,362                                       |                       | 1,369   |                       |
| <b><u>Simulation results: relative impact of privatization experiences on support for reform</u></b> |                                       |                       |   |                       |   |                       |
|  | support                               | strong support        | support                                     | strong support        | support   | strong support        |
| Restituent   | 0.26                                  | 0.81                  | 0.15  | 0.39                  | 0.26  | 0.57                  |
| Participant and retained shares  | 0.18                                  | 0.47                  | 0.20  | 0.48                  | 0.27  | 0.55                  |

Note: Omitted categories for dummy variables: nonrestituent, nonparticipant, nonshareholder, female, elementary education, non-Prague resident.



**Table 6 Privatization Experiences and Attitudes towards Economic Policies and Systems: Ordered Probit Estimates**  
(Significance levels: 10% - \*; 5% - \*\*; 1% - \*\*\*)

|   | <u>Complete freedom for<br/>private enterprise</u> |                           | <u>State should not increase<br/>price controls</u> |                           | <u>Preferred economic<br/>system</u> |                           |
|---|--|---------------------------|---|---------------------------|--------------------------------------|---------------------------|
| <u>Independent variables</u>  | <u>Estimated<br/>coefficient</u>                   | <u>Standard<br/>error</u> | <u>Estimated<br/>coefficient</u>                    | <u>Standard<br/>error</u> | <u>Estimated<br/>coefficient</u>     | <u>Standard<br/>error</u> |
| Constant  | -0.87*   | 0.50                      | -1.09**   | 0.50                      | -1.80***                             | 0.57                      |
| <u>Privatization experiences</u>  |  |                           |   |                           |                                      |                           |
| Restituent  | 0.17**   | 0.08                      | 0.17**  | 0.08                      | 0.17**                               | 0.09                      |
| Voucher participant   | 0.23*  | 0.12                      | 0.16  | 0.13                      | 0.13                                 | 0.13                      |
| Retained shares   | 0.00   | 0.08                      | 0.19**  | 0.08                      | 0.16**                               | 0.08                      |
| <u>Controls</u>   |  |                           |   |                           |                                      |                           |
| Ln (family income per capita)   | 0.22***  | 0.06                      | 0.22***   | 0.06                      | 0.38***                              | 0.07                      |
| Male  | 0.15***  | 0.06                      | 0.26***   | 0.06                      | 0.30***                              | 0.07                      |
| Age   | -0.01***   | 0.00                      | -0.01***  | 0.00                      | -0.02***                             | 0.00                      |
| Vocational education  | 0.21***  | 0.08                      | 0.27***   | 0.08                      | 0.24***                              | 0.09                      |
| Secondary education   | 0.20**   | 0.09                      | 0.48***   | 0.09                      | 0.50***                              | 0.10                      |
| University education  | 0.22**   | 0.11                      | 0.78***   | 0.11                      | 0.70***                              | 0.13                      |
| Prague resident   | -0.07  | 0.09                      | 0.41***   | 0.09                      | 0.20**                               | 0.10                      |
| <u>Thresholds</u>   |  |                           |   |                           |                                      |                           |
| μ (1)   | 1.06***  | 0.04                      | 1.26***   | 0.05                      | 2.07***                              | 0.06                      |
| μ (2)   | 2.03***  | 0.05                      | 2.44***   | 0.06                      |                                      |                           |
| Maximized log likelihood  | -1,771.71  |                           | -1,606.59   |                           | -1,103.41                            |                           |
| χ <sup>2</sup> statistic  | 77.55  |                           | 255.07  |                           | 252.69                               |                           |
| Valid N   | 1,370  |                           | 1,370   |                           | 1,366                                |                           |
| <u>Simulation results: relative impact of privatization experiences on support for reform</u> |  |                           |   |                           |                                      |                           |
|   | support  | strong support            | support   | strong support            | support                              | strong support            |
| Restituent  | 0.13   | 0.26                      | 0.16  | 0.31                      | 0.03                                 | 0.19                      |
| Participant and retained shares   | 0.19   | 0.39                      | 0.39  | 0.81                      | 0.06                                 | 0.39                      |

Note: Omitted categories for dummy variables: nonrestituent, nonparticipant, nonshareholder, female, elementary education, non-Prague resident.

**Table 7 Privatization Experiences, Perceptions of Legitimacy, and Democratic Values: Ordered Probit Estimates**

(Significance levels: 10% - \*; 5% - \*\*; 1% - \*\*\*)

|   | <u>More social<br/>justice today</u> |                           | <u>Privatization not<br/>unfair</u> |                           | <u>No rule by<br/>“strong hand”</u> |                           |
|---|--------------------------------------|---------------------------|-------------------------------------|---------------------------|-------------------------------------|---------------------------|
| <u>Independent variables</u>  | <u>Estimated<br/>coefficient</u>     | <u>Standard<br/>error</u> | <u>Estimated<br/>coefficient</u>    | <u>Standard<br/>error</u> | <u>Estimated<br/>coefficient</u>    | <u>Standard<br/>error</u> |
| Constant  | -1.44***                             | 0.48                      | -0.33                               | 0.48                      | -0.56                               | 0.50                      |
| <u>Privatization experiences</u>  |                                      |                           |                                     |                           |                                     |                           |
| Restituent  | 0.28***                              | 0.07                      | 0.28***                             | 0.08                      | 0.02                                | 0.08                      |
| Voucher participant   | -0.04                                | 0.12                      | -0.13                               | 0.13                      | 0.03                                | 0.13                      |
| Retained shares   | 0.19**                               | 0.08                      | 0.12                                | 0.08                      | 0.30***                             | 0.08                      |
| <u>Controls</u>   |                                      |                           |                                     |                           |                                     |                           |
| Ln (family income per capita)   | 0.29***                              | 0.06                      | 0.16***                             | 0.06                      | 0.12**                              | 0.06                      |
| Male  | 0.08                                 | 0.06                      | 0.09                                | 0.06                      | 0.01                                | 0.06                      |
| Age   | -0.01***                             | 0.00                      | -0.01**                             | 0.00                      | 0.00                                | 0.00                      |
| Vocational education  | 0.07                                 | 0.08                      | 0.19***                             | 0.08                      | 0.17**                              | 0.08                      |
| Secondary education   | 0.17**                               | 0.09                      | 0.30***                             | 0.09                      | 0.44***                             | 0.09                      |
| University education  | 0.26**                               | 0.11                      | 0.50***                             | 0.12                      | 0.65***                             | 0.11                      |
| Prague resident   | 0.07                                 | 0.09                      | 0.06                                | 0.08                      | 0.22**                              | 0.09                      |
| <u>Thresholds</u>   |                                      |                           |                                     |                           |                                     |                           |
| μ(1)  | 1.05***                              | 0.04                      | 1.10***                             | 0.04                      | 0.93***                             | 0.04                      |
| μ (2)   | 2.13***                              | 0.06                      | 2.48***                             | 0.06                      | 1.86***                             | 0.05                      |
| Maximized log likelihood  | -1,713.34                            |                           | -1,634.07                           |                           | -1,791.84                           |                           |
| χ <sup>2</sup> statistic  | 120.11                               |                           | 100.84                              |                           | 117.48                              |                           |
| Valid N   | 1,361                                |                           | 1,365                               |                           | 1,365                               |                           |
| <u>Simulation results: relative impact of privatization experiences on support for reform</u> |                                      |                           |                                     |                           |                                     |                           |
|   | support                              | strong support            | support                             | strong support            | support                             | strong support            |
| Restituent  | 0.26                                 | 0.55                      | 0.26                                | 0.66                      | 0.02                                | 0.03                      |
| Participant and retained shares   | 0.15                                 | 0.29                      | 0.00                                | -0.01                     | 0.31                                | 0.62                      |

Note: Omitted categories for dummy variables: nonrestituent, nonparticipant, nonshareholder, female, elementary education, non-Prague resident.