



THE WILLIAM DAVIDSON INSTITUTE
AT THE UNIVERSITY OF MICHIGAN BUSINESS SCHOOL

*The Effect of Privatization on Wealth
Distribution in Russia*

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Working Paper Number 86
February 1998

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The Effect of Privatization on Wealth Distribution in Russia

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February 1998

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Abstract

This paper considers the Russian privatization process through the end of voucher privatization and examines how its deviation from the competitive sale standard was likely to affect wealth inequality. While empirical evaluation is all but impossible due to the dearth of reliable data, it is feasible to analyze the institutional features of Russian privatization in terms of their effect on redistribution of wealth. The attempt is made to consider distributional effects of privatization independently from the resolution of uncertainty about the value of privatized assets and from other market-oriented reforms such as liberalization of prices and foreign trade. (Privatization here is defined rather narrowly as the transfer of existing assets from government ownership to private hands.) The paper argues that there are at least two reasons to believe that Russian privatization might have systematically redistributed wealth and caused an increase in wealth inequality even compared to the informal distribution of property rights that existed prior to reforms. The first reason has to do with the rent-seeking nature of privatization, and the second relates to the differences in opportunities for various wealth groups to take advantage of privatization due to the differences in the composition of their wealth. The analysis of these two reasons and their implications constitutes the main contribution of the paper. The effect of wealth redistribution on economic growth in Russia is also discussed.

JEL Classification: D7, P2, P3

Keywords: privatization, wealth distribution, rent-seeking, transition, Russia

The Effect of Privatization on Wealth Distribution in Russia

1. Introduction

Privatization process in Russia is widely considered to have resulted in a significant redistribution of wealth. A popular Russian pun equates privatization with grabbing of state assets. Privatization, particularly privatization of enterprises, is referred to as *prikhvatizatsiia*, from Russian *khvatat'* (to grab). The perception of increased concentration of wealth due to privatization is also confirmed by surveys. For example, Appel (1997) reports on a survey conducted in October of 1994, where 47.7% of respondents thought that privatization was equal a robbery of national property. Of course, more or less reliable data on either pre- or post-privatization wealth distribution are virtually nonexistent, making it all but impossible to evaluate empirically the overall validity of this perception.¹ It is feasible, however, to analyze the institutional features of Russian privatization in terms of their effect on redistribution of wealth.

Assuming away informational asymmetries about the value of assets, privatization, which consists of a sale of state-owned assets through a transparent and competitive procedure in a conventional marketplace, would not result in an *ex ante* redistribution of wealth, because all known rents would be competed away. Under these circumstances, privatization would represent simply an *ex ante* equivalent exchange of resources. Of course, large *ex post* redistribution of wealth could very well occur and, in fact, would be expected in a well-functioning post-reform market economy as a result of normal activities of privatized enterprises.² Moreover, the absence of significant redistribution following privatization in an economy in transition would suggest that little genuine reform has taken place.

Informational asymmetries, however, may be quite important and could result in *ex ante* redistribution. Those agents who have better information than anybody else about the true value of assets being privatized, would stand to gain from privatization. It

¹ Some of the available data on wealth distribution in the USSR are presented in the next section. Russian Longitudinal Monitoring Survey (RLMS) data on post-reform wealth distribution were examined by Brown and Foley (1997). RLMS data, however, apparently do not lend themselves for calculating overall measures of wealth distribution.

² See Epstein and Axtell (1996) for computer simulations, demonstrating that rather unequal wealth distribution is a typical outcome of the internal dynamics of a simple economy. *Ex post* redistribution of wealth could happen either due to chance (as in computer simulations in Epstein and Axtell, 1996) or systematically (e.g., due to different abilities of the individuals to value assets and forecast economic performance and political outcomes). In an economy in transition, such as Russia's, random redistribution of wealth after privatization has probably played a greater role than in a stable market economy because reliable valuation of assets in the early stages of privatization was often an impossible task. The economy was sufficiently distorted, so that it was difficult to determine what assets will become relatively more valuable after privatization and what assets would lose value. Moreover, privatization coincided with other fundamental reforms, which made reasonably accurate forecasting of future profits all but impossible.

is possible to argue that managers were better informed about true characteristics of their enterprises than the public at large or even the workers of these enterprises. Nonetheless, given the radical and comprehensive nature of Russian reforms, even better informed managers may find it difficult to evaluate the potential value of their enterprises in the new environment. Also, informational asymmetries could hardly explain the perception of privatization as robbery or "grabbing" of assets. After all, a better-informed investor who acquires an asset that is generally perceived as having low value would not be immediately viewed as an unfair player, although we cannot rule out the possibility of much of the public being simply sour losers.

In any case, asymmetry of information about asset values is by no means unique to Russian privatization. The perception that Russian privatization resulted in an unusually large redistribution of wealth is probably due to its other institutional characteristics. This paper will consider the Russian privatization process through the end of voucher privatization and examine how its deviation from the competitive sale standard was likely to affect wealth inequality, independently from the resolution of uncertainty about the value of privatized assets and to a large extent independently from other market-oriented reforms such as liberalization of prices and foreign trade.³

Human capital, of course, constitutes a significant part of total wealth. Even apart from other reforms, privatization in Russia has had a dramatic effect on the value of human capital. For example, the possibility of legal entrepreneurial activities presumably made entrepreneurial abilities more valuable. Also, private enterprises pay wages determined largely by the value of marginal product of labor, while wage policies of state-owned enterprises are often strongly influenced by the redistributive goals of the state or individual politicians. While redistribution of human capital due to privatization is quite important, it is beyond the scope of this paper.

The next section discusses the stylized features of pre-privatization distribution of wealth in Russia and establishes the standard of comparison against which redistribution caused by privatization will be evaluated. Section 3 describes the distributional effects of enterprise privatization. Section 4 examines the consequences of housing privatization. The final section speculates about the influence of wealth redistribution on economic growth in Russia.

2. The initial distribution of wealth

When analyzing redistribution resulting from privatization, the first question to ask is, Redistribution relative to what? Formal property rights in Soviet Russia can be contrasted with a complex web of generally recognized property relations that were to one degree or another informal or implicit.

Officially, virtually all productive capital assets in pre-reform Russia belonged to the state although households exercised control over the use (but not disposition) of agricultural private plots. Most residential housing in Russia was also state-owned. Soviet citizens were allowed to accumulate wealth in the form of cash, savings accounts.

³ Privatization here is defined rather narrowly as the transfer of existing assets from government ownership to private hands. This paper does not consider the consequences of the possibility created by reforms to set up new firms.

government bonds, consumer durables, including cars, and cooperative and private housing.

Predictably, the available data on pre-reform distribution of wealth either in Russia or in the USSR are scarce and rather unreliable. To the best of my knowledge, the only published systematic measurements of wealth inequality in the USSR were based on the surveys of Soviet emigrants. These data reveal a degree of inequality that was comparable to that of the UK although differences in methodology of asset valuation, scope of asset inclusion, and sampling make such comparisons problematic. The Gini coefficients for gross wealth obtained by Ofer and Vinokur (1992) were 0.77 and 0.61 for 1973 and 1979 surveys, respectively. Meanwhile, according to Atkinson (1983), the 1979 Gini coefficient for the UK was 0.74.

Note that the survey of Soviet emigrants measured the formally recognized distribution of wealth although some of that wealth might have been acquired out of illegal or at least unofficial income. In particular, these measurements did not account for any assets that officially belonged to the state. In the USSR, however, individuals or groups of individuals often possessed considerable property rights over officially state-owned assets. In particular, state-owned housing in Russia has long been considered *de facto* property of its tenants, rather than the state. It was relatively easy and apparently not uncommon for a household to even sell state-owned housing it officially only rented to another household.⁴

Many aspects of the tenants' property rights to state-owned housing (although not the right to sell) were to a large extent codified in the laws and regulations. For example, eviction of tenants from their state-owned apartments was extremely difficult. Private property rights over many other types of state-owned assets were more informal but sometimes almost as strong. Grossman (1989, p. 81) defined informal property rights in the USSR as "legally unsanctioned and even illegal, yet in reality effective, control over assets for private profit or other form of access to future streams of informal/illegal income and consequent wealth." He also notes that these informal property rights were quite often "an expected and *de facto* accepted by-product of a legitimate job." Just as formal ownership of assets in market economies, informal ownership implied that private individuals were often residual claimants of income streams from officially state-owned enterprises, whereas "planned profit" remitted to the state resembled a fixed payment.⁵

How would inclusion of informal property rights over formally state-owned housing and enterprises affect the measures of wealth distribution in pre-reform Russia? Based on Berkeley-Duke survey data, Alexeev (1990) estimated the Gini coefficient for per capita housing space (in square meters) in the northern part of the USSR, which included primarily households from Russia and Ukraine, at .248. The Gini coefficient for the number of rooms per person was .246. These results were not unexpected, given the Soviet system of housing allocation, however hard some households tried to get around it. Of course, rich households were likely to own higher quality housing, implying that these Gini coefficients underestimated housing inequality, but probably not by too much. Because housing in Russia was relatively evenly distributed, there is little doubt that inclusion of state-owned housing in household wealth would have drastically

⁴ See Alexeev (1988 a,b) on the role of the second economy in allocation of housing in the USSR.

⁵ For a more detailed discussion of this phenomenon see Leitzel (1995, pp. 94-95).

lowered wealth inequality measures reported by Ofer and Vinokur (1992).

On the other hand, it is likely that inclusion of informal property rights over state-owned enterprises in private wealth of the individual owners would raise the measures of wealth inequality. This is because presumably informal property rights over enterprises belonged overwhelmingly to the top enterprise management, ministerial bureaucracy, and party functionaries, who were richer than the rest of the population in official terms as well.

Clearly, the conclusions about the effects of privatization of state-owned assets on wealth distribution in Russia would depend on whether one accounts for the informal property rights in the initial distribution. If we take the official initial wealth distribution as a starting point, then almost certainly privatization in Russia has resulted in a systematic redistribution of wealth. Russian enterprise privatization generally gave significant advantages to those who had informal property rights over state-owned assets subject to privatization (mostly workers and managers of privatized enterprises). Therefore, the formally measured wealth of those favored by privatization procedures increased, without significantly changing the wealth of the pensioners, the young, and the employees of enterprises that remained state-owned. Due to the scale of privatization and because its greatest beneficiaries (enterprise management) already belonged to the wealthier strata of society, this most likely significantly increased wealth inequality. Given the relatively egalitarian distribution of state-owned housing, its privatization must have resulted in a reduction of wealth inequality relative to formal pre-privatization situation.

If one chooses the informal distribution of property rights, existing prior to privatization, as a standard of comparison, however, then the implications of privatization for wealth distribution are far from clear. After all, as was pointed out above, both enterprise privatization and housing privatization largely favored the informal owners of formally state-owned assets, with the possible exceptions of the ministerial bureaucracies. If the shares of privatized assets received by the informal owners were in proportion to their pre-reform informal property rights, then privatization would not have immediately resulted in a significant redistribution of wealth. In this case, the main result of privatization with respect to wealth distribution would have been the conversion of implicit property rights into explicit ones.⁶ This paper will argue, however, that there are at least two reasons to believe that Russian privatization might have systematically redistributed wealth and caused an increase in wealth inequality even compared to the informal distribution of property rights that existed prior to reforms. The first reason has to do with the rent-seeking nature of privatization, and the second relates to the differences in opportunities for various wealth groups to take advantage of privatization due to the differences in the composition of their wealth. These two reasons will be discussed in the next two sections.

⁶ Note that to the extent the value of the privatized assets increased due to privatization, their formal appropriation by the former informal owners would also represent wealth redistribution caused by privatization.

2. Rent-seeking nature of enterprise privatization

When an asset is privatized through a conventional auction, the winner pays the amount he bid in exchange for the asset, while the loser does not lose the amount of his bid. In this case, a rent-seeking model, where everybody's expenditures are lost in the process of competition, is not applicable. Privatization in Russia, however, was in many ways closer to a rent-seeking game than to a conventional auction. This argument is based on two main considerations. *First*, out-of-pocket financial resources used by the participants in more or less conventional auctions to obtain or to retain control over privatized enterprises usually were relatively small. Control over most privatized enterprises was established by the enterprise insiders prior to the open privatization auction through a less-than-transparent process, where some players had advantages over other players. During the voucher phase of privatization, well over 70% of all participating enterprises were privatized according to the so-called second option, under which the insiders obtained 51% of the enterprise shares prior to the initial public offering, usually at deep discounts to their market prices.⁷ Moreover, the insiders could use the retained earnings of the enterprise to purchase the shares (see Boycko et al., 1995, p. 79). Also, some extra shares could be purchased for the pension plan.

Second, despite the wide diffusion of share ownership in privatized enterprises (or perhaps because of it) privatization has apparently resulted in the concentration of effective property rights over individual enterprises, relative to the pre-privatization situation. Those shareholders who do not own (either by themselves or as members of a small coalition) a controlling block of shares have disproportionately little part in real income generated by the enterprise, particularly if these minority shareholders were not the top managers of the enterprise. In other words, the value of a share to a minority shareholder is often much smaller than the per share value of a controlling block of shares. Given the diffusion of share ownership, the controlling block of shares may be actually quite small, particularly if these shares are owned by the top management. In fact, it is quite possible that managers sometimes are able to control their enterprises without significant holdings of shares.⁸

The first consideration implies that the privatization process included a large amount of rent-seeking behavior, which took place outside of the conventional market. In fact, at many enterprises, privatization process started long before the official privatization program was finally adopted in 1992. The explosive growth of the cooperatives affiliated with industrial enterprises, which took place in 1989, signaled a

⁷ Boycko et al. (1995), p. 98.

⁸ Blasi (1994) provides evidence of difficulties facing minority shareholders in placing their representatives on the board of directors soon after privatization. He also documents the extent of insiders (particularly, management) control of privatized corporations. Moreover, I suspect that even when apparent outsiders take part in control, they often are connected to the insiders. Another evidence of the disregard of minority shareholders is reported by Saburov and Simonian (1996), who assert that share prices of many corporations increase when somebody attempts to acquire a controlling interest in them and then plunge to almost zero after such an interest has been acquired. These considerations were probably at least partly responsible for the low initial valuations of Russian privatized enterprises reported by Boycko et al. (1993).

new phase in enterprise independence from the state. These cooperatives, controlled by the enterprise management, were used to privatize most of enterprise profits and some assets through transfer-pricing schemes, to raise salaries of certain employees beyond the state-determined scales, and to conduct other activities outside of the plan.⁹ The possibility of leasing enterprise assets to its employees permitted an almost complete *de facto* privatization of some enterprises as early as 1990. During the official privatization process that started in late 1992, considerable rent-seeking efforts at the enterprise level were needed to develop a privatization plan, facilitate its adoption by the employees, overcome some of the official restrictions on distribution of shares at a discount, assure that this discount was as deep as possible, and so on.¹⁰

In addition, enterprise insiders, especially management, and their lobbyists played an important role in shaping the Russian privatization program when it was being prepared and during parliamentary discussions. In particular, managers' lobby apparently played an important role in making sure that the second privatization option was included in the adopted legislation. More generally, it was not by accident that the Russian privatization procedure that essentially gave away state-owned assets to the entire population was very manager-friendly. Bos and Harms (1997) argued that "the driving force behind the decision to distribute ownership among the entire population is the political influence of the incumbent managerial class, whereas the average citizen hardly benefits from this program." (p. 344) This is because dispersed ownership impedes the ability of shareholders to monitor managers, making managers effective owners despite their relatively small formal ownership shares.¹¹

It must be already clear that different participants of the privatization process were in vastly different initial positions to rent-seek and, therefore, to benefit from privatization. In particular, enterprise employees had clear advantages in the privatization game over outsiders. The advantages of top managers in rigging privatization process to their benefit were much greater yet. According to Boycko et al. (1995), putting together and filing of privatization plans was "probably the single most important benefit that the managers received in the privatization program: within certain guidelines they ... had almost complete control over the strategy for privatizing their firms." (p.80)

Note also that pre-privatization rent-seeking, including rent-seeking related to cooperatives prior to radical reforms and that connected to obtaining export licenses, import privileges, and subsidized credits in 1992, greatly enriched many enterprise managers. As a result, during privatization, the top managers were in an excellent position to benefit from the employees' ability to purchase shares at essentially nominal

⁹ See Jones and Moskoff (1991) for a detailed analysis of the Russian cooperatives in the late 1980s.

¹⁰ Such rent-seeking efforts were described in a number of sources, including Boycko et al. (1995), Leitzel (1995), and Johnson and Kroll (1991). Particularly vivid description of rent-seeking during privatization is contained in Zubakin (1994). Evidence based on surveys is presented in Dolgopiatova (1995), among others.

¹¹ In this regard, Boycko et al. (1995) recognized that the most important concession to the managers in the choice of privatization program was that it "did not impose large shareholders on the firm, so managerial independence in Russia, at least *ex ante*, was much greater than elsewhere in Eastern Europe." (93)

prices in the most popular second privatization option. At the same time, most of the workers could not afford to purchase many of these shares even at a discount. More important for the argument below, managers had other methods for establishing their control over the privatized enterprise. Appel (1997) describes several such methods. For example, managers could "pressure workers to invest their vouchers in the company's voucher fund. ... As a result, each individual worker did not technically own a share of the company, but a share of the fund, and had no way to redeem their share." (p. 1438) Another difficulty with the worker use of company shares was the management's control of the share register. This made it difficult both for workers and outsiders to transfer their shares to others without the management's consent. The workers were in a particularly difficult situation in this respect because managers had a possibility to withhold the workers' certificates that documented their ownership rights. Therefore, the workers could not even prove their ownership of shares to the potential buyers. Appel even discusses the possible connection between delays with wage payments and the managers' attempts to increase their control over enterprises.¹²

The second consideration implies that effective ownership of an enterprise and its cash flow was not dispersed over all shareholders but belonged to the owner or manager of a controlling block of shares. This was usually the main, if not the only, relevant prize in the privatization game. Those players who did not obtain a controlling block of shares, received a very small return on their efforts and resources (in this sense, even the funds spent on purchasing shares by everybody but the eventual owner of the controlling block could be viewed as rent-seeking expenditures in the model below). Although controlling blocks of shares may change hands over time and even the treatment of minority shareholders may eventually improve, privatization process itself could be largely viewed as the fight over who would control enterprise assets immediately after privatization.

The above discussion suggests that a standard rent-seeking model with incumbency advantage (see Rogerson, 1982 and Alexeev and Leitzel, 1991) may provide an appropriate framework for the analysis of privatization outcomes at Russian enterprises. In its simplest formulation, the model can be described as follows. Consider two players, 1 and 2, and asset A valued at $\$ \pi$. Assume that prior to privatization the distribution of informal property rights between these two agents over asset A was described by coefficients $\beta > 1$ and 1, respectively. In other words, player 1 ("enterprise director") had greater control over the use and disposition of asset A than player 2 ("worker") and this advantage was measured by β . It is natural to assume that the initial distribution of informal property rights translates into a similar distribution of advantages in a rent-seeking privatization game, i.e. that β describes both property rights advantage and the "incumbency advantage" in the privatization game. This last assumption is crucial for the argument below. Given this double role of β , it will be shown that as a result of the game, managers as a group would obtain a share of privatized assets that is significantly greater than β . This would imply that rent-seeking leads to a redistribution of assets even relative to the initial informal property rights measured by β .

Denoting the players' rent-seeking expenditures by x_i , the probability that player i wins the rent-seeking contest is given by:

¹² For other sources on managerial advantages prior, during, and after privatization process see sources listed in footnote 10.

$$p(x_1, x_2) = \begin{cases} \beta x_1 / (\beta x_1 + x_2) & \text{for director} \\ x_2 / (\beta x_1 + x_2) & \text{for worker} \end{cases} \quad (1)$$

Each risk-neutral player is assumed to maximize his expected gain $V_i = (p_i \pi - x_i)$. In the unique Nash equilibrium of this game, the director's probability of winning is $\beta/(\beta+1)$. The worker wins with probability $1/(\beta+1)$. The expected payoffs are

$$\begin{aligned} Eu_1 &= \beta^2 \pi / (\beta+1)^2 & \text{for director} \\ Eu_2 &= \pi / (\beta+1)^2 & \text{for worker} \end{aligned} \quad (2)$$

Notice that the ratio of expected payoffs is $\beta^2 > \beta$, i.e. it is greater than the ratio between the sizes of initial property rights. If this rent-seeking contest is repeated at a large number of enterprises, then on average the wealth of the incumbents (i.e. top management) would increase considerably in relation to the wealth of the workers.

The above setup viewed managers and workers as monolithic groups. But while it may be relatively easy for the top managers to collude and act as a single player, workers, who are much more numerous, would find collusion more difficult to achieve. Therefore, workers are unlikely to be able to coordinate their actions and should therefore be modeled as $(n-1)$ separate players with an incumbency advantage of 1. In this more general case, the ratio between the payoff to the incumbent and the payoffs to a representative non-incumbent is equal to

$$[\beta(n-1) - (n-2)]^2 > \beta \text{ for all } n > 1 \quad (3)$$

Notice that in this setup the managers' advantage becomes even greater. For example, if $\beta = 4$, then in the 2-player model the incumbent is 16 times more likely to win the control of enterprise than the non-incumbent. In the contest with 10 workers and one incumbent manager, the ratio between the expected payoffs of the manager and a representative worker becomes $(4 \cdot 10 - 9)^2 = 961$. In fact, the manager's payoff for these parameters is 96.1 times greater than the combined payoff of all 10 workers.

While the incumbency advantage (or inequality of pre-reform distribution of informal property rights) leads to wealth redistribution as a result of the rent-seeking nature of privatization, it also reduces total rent-seeking expenditures relative to a game without incumbency advantage. In the n -player game with incumbency advantage, total rent-seeking expenditures, TE, are

$$TE = (n-1)[2\beta(n-1) - (n-2)] / (\beta(n-1) + 1)^2 \quad (4)$$

Clearly, TE monotonically declines in β . In the limit, as β goes to infinity, total rent-seeking expenditures converge to zero. The following table shows the magnitudes of the decline for some values of n and β .

Total rent-seeking expenditures in the privatization game

Value of β	$n = 2$	$n = 11$
1	0.50	0.91
4	0.32	0.37
7	0.22	0.26

Following Tullock (1980), a possible generalization of the above rent-seeking game is to allow for scale effects in the rent-seeking game by modifying the probability of winning to:

$$p(x_1, \dots, x_n) = \begin{cases} (x_i)^c / [(\beta x_1)^c + \sum_{k \neq i} (x_k)^c] & \text{for } i \neq 1 \\ (\beta x_1)^c / [(\beta x_1)^c + \sum_{k \neq 1} (x_k)^c] & \text{for } i = 1 \end{cases} \quad (5)$$

Numerical solutions for various parameter values in this game suggest that wealth inequality increases in the presence of diseconomies of scale, i.e. $c < 1$.

To summarize, assuming that the players combined formal and informal "incumbency advantage" corresponded to their informal pre-privatization property rights, the model demonstrates that these property rights were likely to get "magnified" during the rent-seeking game, increasing wealth inequality relative to the pre-privatization situation. Note that the results of this model are applicable to other situations involving rent-seeking with incumbency advantage. For example, similar conclusions can be made about wealth redistribution resulting from reallocation of export quotas, subsidized credits and other state subsidies to enterprises, choice of "authorized banks" for handling state budget funds, etc. Similar conclusions apply to the elections where incumbents have advantages.

3. Composition-of-wealth approach

Privatization also has had a significant effect on wealth distribution due to differences between the rich and poor in the composition of their wealth. The argument here is based on the premise that in pre-reform Russia the poor held a much larger share of their assets in illiquid form (primarily housing) than did the rich. While this premise may not hold for some conventional developing countries,¹³ it is almost certainly valid for Russia.

The data on the composition of wealth for different wealth groups either in Russia or in the USSR are, of course, almost non-existent. As with wealth distribution, the data on wealth composition come exclusively from the surveys of immigrants from the USSR. At first glance, the scant available information provides only weak support for the above premise. According to Ofer and Vinokur (1987), the Gini coefficient for gross wealth in the USSR in 1979 was .61, while for financial assets it was .64, suggesting that the distribution of financial assets was only slightly more skewed than that for gross wealth.

¹³ Tommasi and Velasco (1995) refer to the very poor as "people whose meager wealth is largely held in cash". I would appreciate suggestions about other sources on wealth composition in various wealth groups.

Using the Berkeley-Duke survey data which pertain to late 1970s, Grossman (1991) reported that the share of movable and immovable property in total wealth for urban Russian households in the lowest quintile was 56.6%, compared to 52.3% for the richest fifth.

Note, however, that these data did not consider state-owned housing, which accounted for over 70% of all urban residential housing in the USSR, as part of household wealth.¹⁴ At the same time, as was argued in Section 2, tenants had strong formal and informal property rights over state-owned housing. Confirming these property rights, housing privatization in Russia has given state-owned housing to its tenants essentially free of charge.

Exclusion of state-owned housing from household wealth data would not have mattered much if this housing was distributed similarly to other wealth. This was not so, however. First, rich households in the USSR were much more likely to own cooperative housing than poor households because cooperative housing, which was not rationed as strictly as state-owned housing, was rather expensive to purchase and to own.¹⁵ Therefore, wealth distribution and wealth composition data presented above were likely to count a much greater share of housing owned by the rich and than that owned by the poor. This would result in overestimating wealth inequality and, most important for our purposes, severely underestimating the share of property in poor households' wealth. Second, as was pointed out in Section 2, housing of all types was relatively evenly distributed in pre-reform Russia. Therefore, inclusion of state-owned housing in household wealth would have drastically lowered the ratio between liquid and illiquid wealth in the lowest quintile in the Berkeley-Duke survey.

The importance of housing in Russian household wealth and the fact that it was distributed much more evenly than more liquid assets suggests that the effect of housing privatization on wealth distribution strongly depends on how privatization affected relative prices of housing and financial assets.

Privatization of housing made housing assets more liquid and it appears (although there are no comprehensive and reliable data) that housing prices rose relative to such financial assets as foreign currency and savings bank deposits during most of 1992-93 period. Given that housing constituted a much greater share of wealth of the poor than that of the rich, this must have lowered wealth inequality compared to pre-reform situation even if formally state-owned housing is viewed as part of household wealth of the tenants. Later on, however, the rate of appreciation of housing in Russia has lagged badly behind general inflation.¹⁶ At the same time, a number of financial instruments, including bank deposits have been providing positive real return at least since early 1994. Returns on shares of privatized enterprises have been particularly strong, significantly outpacing inflation since Moscow Times started tracking share prices using its MT index. According to Russian Economic Trends, between late August 1994 and February 1997, MT index went up almost by a factor of six. During the same period CPI only about quadrupled. Assuming that the rich held a greater share of their wealth in securities or other forms of enterprise ownership than did the poor, this implies that wealth inequality has increased since middle 1994.

¹⁴ For derivation of this estimate see Alexeev (1988c).

¹⁵ Alexeev (1990) reports some survey data confirming this statement.

¹⁶ Nozdrina et al. (1996) and Nozdrina (1995).

This type of argument can be easily illustrated formally. Let subscripts p and r denote the poor and the rich, respectively. Also, let household wealth be partitioned into liquid assets (e.g., shares in privatized enterprises), denoted by S , and illiquid assets (mainly housing), denoted by H . In other words,

$$W_i = S_i + H_i, \quad i = p, r \quad (6)$$

Suppose that units of S and H are chosen so that their prices are initially equal to 1. Let $\sigma_i = S_i/W_i$ denote the shares of liquid assets in each group's wealth. Obviously,

$$W_i = [\sigma_i + (1-\sigma_i)] W_i, \quad i = p, r \quad (7)$$

Let now relative prices of S and H change to q and 1, respectively. Then the ratio of wealth of the poor to that of the rich under the new prices would become

$$R = \frac{[\sigma_p(q-1) + 1] W_p}{[\sigma_r(q-1) + 1] W_r} \quad (8)$$

Given that $\sigma_p < \sigma_r$, R would be less (greater) than the old wealth ratio W_p/W_r if q is greater (less) than 1. In other words, an increase in relative prices of enterprise shares and other financial assets makes wealth distribution more unequal.

4. Implications for economic efficiency and growth

If it is true that privatization resulted in increased wealth inequality, particularly in the way suggested by the rent-seeking model, what implications does this have for economic efficiency and growth?

In general, maximum static efficiency is attained when distribution of capital corresponds to entrepreneurial abilities, so that marginal product of capital is equalized over all entrepreneurs. A market system with well-functioning banking institutions may hope to come close to such distribution regardless of the initial allocation of capital. When the banking system is underdeveloped, however, the initial allocation of capital becomes very important.

Polyshchuk (1994) showed that allocation of capital resulting from a competitive rent-seeking contest with a continuum of players and no incumbency advantage may approximate optimal allocation as long as rent-seeking abilities coincide with entrepreneurial abilities (i.e. assuming that the same people who are good at rent-seeking are also good at managing capital in a market-oriented environment). The cost of rent-seeking in this case reduces to the players' rent-seeking expenditures or, essentially, to the transaction costs of rent-seeking. These costs may be substantial but costs of organizing well-functioning capital markets in a short period of time may be quite high as well. Therefore, allocation of capital via rent-seeking may be a good way of conducting privatization.

Introduction of incumbency advantage into the model alters somewhat the implications of the rent-seeking nature of privatization for efficiency. First, even if rent-seeking abilities coincide with market entrepreneurial abilities, the effects discussed in Section 2 may lead to reduced efficiency because the resulting wealth distribution magnified the initial differences in property rights and, presumably, in rent-seeking abilities. In other words, even if rent-seeking does channel capital to the best entrepreneurs, the resulting allocation may still be far from efficient because the best entrepreneurs receive too much capital, while marginally inferior entrepreneurs receive too little capital. On the other hand, incumbents have better information both about the true value of the assets and about the day-to-day operations of the privatized enterprises. Also, the greater the incumbency advantage, the lower are the total rent-seeking expenditures. These considerations mitigate the negative effect of allocating a disproportionately large part of asset ownership to the incumbents, at least in the initial stages of transition.

Polyshchuk's assumption corresponds to a fairly common view in the literature that ability is general and that the most able people make choices about whether to become entrepreneurs or rent-seekers.¹⁷ The validity of this assumption is far from obvious, however. After all, rent-seeking, particularly in the pre-reform (pre-Gorbachev?) USSR, was in many respects very different in nature from entrepreneurship in market economies. Some of the most talented entrepreneurs may not be good at rising through the Soviet government or enterprise management hierarchy. Conversely, good rent-seekers in the USSR would not necessarily be entrepreneurial in a market environment. If so, Polyshchuk's conclusions would not necessarily hold.

Tastes also play an important role in determining careers. Some able people may be willing to forgo higher monetary returns in order to avoid engaging in unpleasant, from their point of view, activities such as "non-market" rent-seeking. This was likely to be particularly true about rent-seeking in the pre-reform USSR. In fact, the consideration of tastes may partly explain advances in basic sciences in the USSR, where a large number of extremely able individuals used to choose careers in engineering and natural sciences, over the potentially more profitable careers in government and management of state-owned enterprises. It appears that a rather significant number of former physicists, mathematicians, engineers, and other practitioners of hard sciences became successful entrepreneurs when management and entrepreneurial career became unbundled with ideology and Soviet-type rent-seeking. Casual observation suggests that these former scientists often became successful by setting up new firms instead of acquiring ownership of existing firms during privatization. In general, new private firms in Russia seem to be doing much better than the privatized enterprises. To be sure, this is partly due to the outdated capital of the privatized enterprises, as well as their baggage of social assets such as housing, schools, and hospitals. But the rent-seeking orientation of management of privatized enterprises probably plays a role as well. All this implies that the incumbents (and the winners) in the rent-seeking privatization game in Russia often were not the ablest individuals even if ability is general.

Furthermore, even if the incumbents at privatized enterprises were able entrepreneurs, skills acquired during their history of successful rent-seeking together with substantial network capital (connections and information, useful for rent-seeking) would

¹⁷ See, for example, Murphy et al. (1991).

predispose them to continue to rely on rent-seeking after privatization.

If, for whatever reasons, former incumbents in the rent-seeking privatization game turned out not to be good entrepreneurs, then the costs of the rent-seeking nature of privatization would far exceed rent-seeking expenditures proper because capital would be grossly misallocated. Given underdeveloped banking system, this misallocation may persist and reduce both economic efficiency and growth for some time to come. The immediate effect of rent-seekers standing at the helm of privatized enterprises is to hinder their restructuring. Delays with restructuring as well as reliance of rent-seekers on government subsidies increases the tax burden on above-ground enterprises headed by market entrepreneurs, impeding their growth. Such environment pushes some entrepreneurs underground and many others into rent-seeking activities.

There is, however, a positive effect of the virtual exclusion of non-incumbent entrepreneurs from rent-seeking during privatization. These non-incumbents are then forced into creation of new firms and other genuinely entrepreneurial activities, instead of spending their energies in trying to acquire ownership of existing firms.¹⁸ Even after the most intensive phase of privatization has been concluded, the fact that some of the best entrepreneurs run new firms, largely unburdened by the legacy of the old system, benefits the economy.

Regardless of whether the allocation of capital is efficient and conducive to growth, increased and more visible wealth inequality creates problems by itself and because it generates income inequality. Inequality creates political pressure for redistributive taxation, which hinders growth.¹⁹ This political economy argument is particularly relevant when redistribution results in creating a large group of the "new poor" who are relatively well-educated and politically active.²⁰ The "new poor" appear to be quite numerous in Russia, implying that the political pressure for redistributive taxation should be quite strong.

Political consequences of wealth inequality could be alleviated without an increase in government's social expenditures by significantly improving targeting of subsidies, particularly by reform of housing and utilities sector and by eliminating some of the tax privileges that are particularly ineffective in helping the poor. Efforts to this effect are already under way. Housing sector reform has been announced and tax reforms proposed by the government eliminate some tax exemptions. It remains to be seen whether these reforms are successfully implemented. Also, as is often the case in Russia, hidden subsidies maybe more important than open ones.²¹ Selective enforcement of tax rules apparently represents one of the common types of hidden subsidies in today's Russia. Reductions in poorly targeted tax and other subsidies (both explicit and implicit)

¹⁸ This argument resembles an argument made by Murphy et al (1991) with respect to discrimination against minorities wishing to enter certain rent-seeking activities.

¹⁹ See, for example, Alesina and Rodrik (1994) and Persson and Tabellini (1994). Tommasi and Velasco (1995) provide a brief survey of rather ambiguous empirical evidence for this argument.

²⁰ Graham (1994) and Tommasi and Velasco (1995).

²¹ Leitzel (1995) discusses the explicit vs. implicit economic phenomena in the Russian transition. As Alexeev and Leitzel (1997) argue, however, some types of ostensibly untargeted subsidies may work better than targeted ones, if explicit targeting is administratively difficult.

would save resources and reduce the scope and size of government involvement in the economy, decreasing the attractiveness of rent-seeking, thereby channeling individuals' efforts into productive undertakings.

Finally, the development of the modern banking system is crucial for mitigating the consequences of high wealth inequality for economic growth. While the Russian banking system might improve simply in response to market pressures, government policies, both specific banking regulations such as removing the restrictions on foreign banks and broad stabilization policies such as keeping inflation under control, are important as well.

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