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# PRIVATIZATION OF STATE ENTERPRISES IN ESTONIA: A PUBLIC CHOICE APPROACH

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This paper offers a framework for evaluating the choice of reform strategy, the reform strategy being the privatization of state-owned enterprises in Estonia. Using a public choice approach, the study shows that in Estonia, the model of bureaucracy is the appropriate model for analyzing the privatization outcome. The experience of Estonia suggests that choice of privatization strategy might have been dictated by a choice of target unemployment rate. As to the choice of mechanism, selling for money versus vouchers, many factors are seen to have impacted the choice. As to private agents, the model suggests that they have had little control over the privatization agenda. This is explained by two factors: uncertainty over the outcome and existence of few interest groups able to yield power in the process. The paper concludes with a few suggestions to improve the privatization process so that social welfare may be maximized.

## 1. INTRODUCTION

Governments in the former Soviet republics are currently in various stages of liberalization of their respective economies. In the transition process, the most critical issue policy makers face is the choice of reform strategy. Policy makers know that to stay in power (to be re-elected) the reform proposed must win the approval of the majority of the electorate. Given this constraint, the decision maker needs to ascertain the cost and benefit associated with alternative strategies.

Public choice models tell us something about optimal choice subject to political constraints. The median voter model predicts that the successful strategy is the one that maximizes the net benefits of the median voter. According to an alternative model, the bureaucrats adopt that strategy which maximizes the bureaucrats' utility or objective function. The outcome may or may not correspond with that which is preferred by the median voter; as the bureaucrats' objective is the maximization of their power, patronage or agency size.[1]

Using the public choice approach, we analyze reform strategy adopted in Estonia during the period 1991—1993. The paper is organized as follows: Section 2 presents the choice model. In this model, it is assumed that the government is the agenda-setter.[2] Section 3 spells out the institutional setting and the decision making structure governing privatization in Estonia. Section 4 evaluates the reform (privatization) strategy adopted thus far in light of the theoretical model. The last Section is the conclusion.

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[1] For a review of public choice models see Mueller, 1991.
[2] Rome T. and Rosenthal H., 1978, and Filimon, 1982.



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## 2. THE PUBLIC CHOICE MODEL

A public choice is a non-market choice that is made through political interaction of many individuals according to established rules. In some instances unanimous consent is required while in others decisions are made on the basis of a majority rule. A basic tenet of the public choice approach is that the individual voter, politician, or bureaucrat is a rational utility maximizer. In a direct democracy, individuals vote directly on the issues, each voting for the choice that maximizes his/her utility. A voter will vote in favor of a particular outcome, for example privatization through vouchers of all state-owned flats, if his/her net benefits under the plan exceed his/her net benefits associated with all other options. The actual outcome, whether the program is voted up or down depends on the choice rule — unanimity or simple majority.[3] Since direct democracy is impossible with large numbers of voters, non market choices are usually analyzed in the framework of a representative democracy.

In modeling privatization of public enterprises in Estonia, in the context of public choice models we can follow either of two approaches suggested by the public choice literature. We could follow Downs (1957) in arguing that representatives (parliament), like voters, are rational and are bent on maximizing their own utilities. As Downs stated, "Parties formulate policies to win elections." Since each voter has a most preferred position along the spectrum of positions the political candidate can take, the further the representative is from the voter's preferred position, the less desirable his election is to the voter. In this framework the outcome resembles that of direct democracy. That is, a victory of the position or issue favored by the median voter. The median voter is the one with median preferences. If all voters vote, the median outcome holds regardless of the distribution of preference.[4] Alternatively, we could follow the bureaucratic model, advanced by Niskanen (1971), which emphasizes the limited control of the electorate over many aspects of public decision making and the goals of those who administer government polices. Limited control is explained by asymmetry of information — bureaucrats know the true cost functions and the agent's demand functions, but the representatives are ignorant of the true costs of different actions.

This asymmetry of information gives the bureaucrats power over the parliament and allows them to offer "take it or leave it" level of activities which may not be the most preferred by the parliament (and ultimately the voters) if information was symmetrical. Because of this asymmetry, the parliament reacts passively to the proposals of the bureaucrat.[5] But representatives compete for voters on the basis of how well government decisions serve their interests. The most plausible outcome in this framework is a compromise; slack and inefficiency may result.[6] In the context of Estonian privatization, we believe the bureaucratic model is the appropriate framework for analyzing the privatization outcome. Thus, we assume that the bureaucrat (the government: privatization agency) is the agenda setter. Its goal is the maximization of the agency's utility, which as the Niskanen framework may be interpreted to mean the maximization of power, patronage, salaries, or agency size.

In modeling the agency behavior, it is useful to begin by outlining privatization strategies as well as state the constraints the agency faces. The mechanics of privatization will be discussed in the next section. For

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[3] See Black 1958; Buchanan and Tullock 1962, Smith 1977, Rae 1969, and Taylor 1969.
[4] If the distribution of the voter preferences is either asymmetric or multimodal this result can be upset. For details see Commanor, 1976.
[5] Mueller, 1991, p. 230.
[6] Ibid.

simplicity we assume that there are only three options to choose from: a) Full privatization — sell the entire stock of public assets in one year, b) Staggered privatization — sell the stock of assets over several periods, and c) No privatization — maintain the status quo. Under asymmetry of information, the agency will present to parliament the strategy that maximizes its utility. As stated earlier, this may not necessarily be the most preferred strategy from the parliament's viewpoint had information been symmetrical. For expositional purposes, the three strategies may be stated in terms of sales proceeds. Let $R$ denote the sales proceeds, $K$ denote stock of state-owned enterprises, $P_k$ the price per unit of stock (i.e. price of $a$ share), $\alpha_i$ a fraction [0, 1], and $r$ the discount rate. Variable subscripts 1,2, . . ., $n$ designate the time period.

**Privatization strategy**

Strategy (a): $R_a = P_{k1}K_1$ (1)

Sales proceeds under strategy (a) are equal to the share price times the stock sold; the stock being sold in one period.

Strategy (b): $R_b = P_{k1}(\alpha_1 K) + 1/(1+r)[P_{k2}(1-\alpha_1)K]$. (2)

Assuming sales take place over two periods only, then sales proceeds under strategy (b) are equal to the share price in period 1 times the fraction ($\alpha_i$) of the stock sold in period 1 plus the discounted value of the sales proceeds in period 2, where $(1-\alpha_1)K$ is sold.

Strategy (c): $R_c = 0$. (3)

No privatization of state-owned assets.

The privatization agency is assumed to face a revenue constraint, if either strategy (a) or (b) is chosen. The revenue constraint may be spelled out as follows: the sales proceeds must be invariant to the strategy:

$$R_a = R_b. \tag{4}$$

If we choose (for simplicity) $P_k = 1$, then Eq. (4) may be written as

$$K_1 = \alpha_1 K + 1/(1+r)[1-\alpha_1]K. \tag{4'}$$

Eq. (4′) has two unknowns, $\alpha_i$ and $r$. $\alpha$ is a government (agency parameter), $r$ is the market interest rate assumed not to be controlled by the agency. Under full privatization (strategy a) $\alpha = 1$; under staggered privatization the value of $\alpha$ in any one period is less than one and the sum of all $\alpha_i$'s is equal to one. As mentioned earlier, the goal of the agency is maximization of utility. Assume that the only argument in the agency utility function is power and that this power is maximized if the level of unemployment associated with privatization (release of workers from enterprises that were privatized) is minimized.

The preference function of the bureaucrat (the agency in this case) may be described by a loss function, assumed to be quadratic.

$$U = -h(\mu - \mu^*)^2. \tag{5}$$

$U$ denotes utility, $\mu$ the unemployment rate (which can be termed a "state variable"), and $\mu^*$ is the target value of the unemployment rate, $h$ is a non-negative weight. Eq. (5) restricts the dependent variable to non-positive values. The maximum value attainable is zero and occurs only when $\mu = \mu^*$. The bureaucrat governs the state variable indirectly through forces which can be controlled directly in the privatization model, through the choice of strategy (also referred to as an instrument) which can be undertaken. The instrument interacts with the state variable in a manner dictated by the structure of the economy and that structure may be represented by a reduced form equation:

$$\mu=\Phi+b\alpha K. \tag{6}$$

The problem facing the agency, therefore, translates into one of a constrained maximum. Inserting (6) into (5) gives

$$U=-h[\Phi+b\alpha K-\mu^*]^2. \tag{7}$$

The privatization agency sets:

$$\alpha K=(1/b)(\mu^*-\Phi). \tag{8}$$

To illustrate this solution, a simulation was carried out using the parameter values given in the Table with $K$ normalized to 1. Figs. 1 and 2 show the results.

**Estimated value of $\alpha$ for different numerical values of the parameters**

| | Parameter value | | | Estimated | Number of periods |
|---|---|---|---|---|---|
| | $\Phi$ | $b$ | $\mu^*$ | $\alpha$ | $N$ |
| Case 1 | 0.002 | 0.04 | 0.040 | 0.974 | 1.0 |
| | 0.002 | 0.07 | 0.040 | 0.551 | 1.8 |
| | 0.002 | 0.10 | 0.040 | 0.376 | 2.4 |
| | 0.002 | 0.15 | 0.040 | 0.255 | 3.9 |
| | 0.002 | 0.30 | 0.040 | 0.126 | 7.9 |
| | 0.002 | 0.50 | 0.040 | 0.077 | 13.0 |
| | 0.002 | 0.90 | 0.040 | 0.043 | 23.0 |
| Case 2 | 0.002 | 0.15 | 0.01 | 0.053 | 18.9 |
| | 0.002 | 0.15 | 0.02 | 0.120 | 8.3 |
| | 0.002 | 0.15 | 0.03 | 0.187 | 5.3 |
| | 0.002 | 0.15 | 0.05 | 0.320 | 3.1 |
| | 0.002 | 0.15 | 0.07 | 0.453 | 2.2 |
| | 0.002 | 0.15 | 0.10 | 0.653 | 1.5 |
| | 0.002 | 0.15 | 0.15 | 0.987 | 1.0 |

Note: Numerical simulation with $\Phi$ held constant at 0.002. $\Phi$ refers to the variability of unemployment under state ownership of enterprises.

The model simulation has to be calibrated so that $\alpha$ falls in the interval [0, 1] and $b\leqslant 1$. Two cases are reported in the Table. In the first case, the critical parameter is the value assigned to $b$ (the structural parameter linking privatization and level of unemployment). In the second case, $b$ is set to 0.15, while numerical values are selected for the target unemployment rate $\mu^*$. $\mu^*$ takes on values between 1 percent and 15 percent (below 1% $\alpha=0$ and above 15 percent $\alpha>1$). The numerical values estimated for $\alpha$ reported in the third column of the Table are quite informative. If the target unemployment rate that maximizes the agency's utility function is equal to 4 percent, then the choice of privatization strategy depends on the "true" value of the structural parameter $b$. A small value of $b$, for example $b=0.04$, implies that the agency's optimum strategy is to sell the entire stock over one period ($\alpha=0.974$). On the other hand, a large value of $b$ would mean a "staggered privatization" lasting for several years.

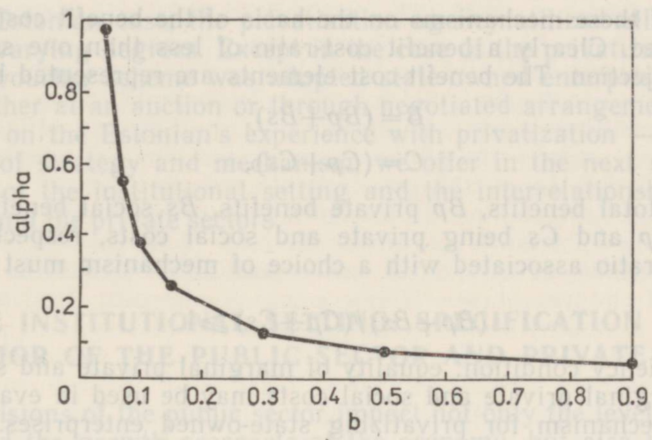


Fig. 1. Simulation of alpha (Unemployment = 4%).

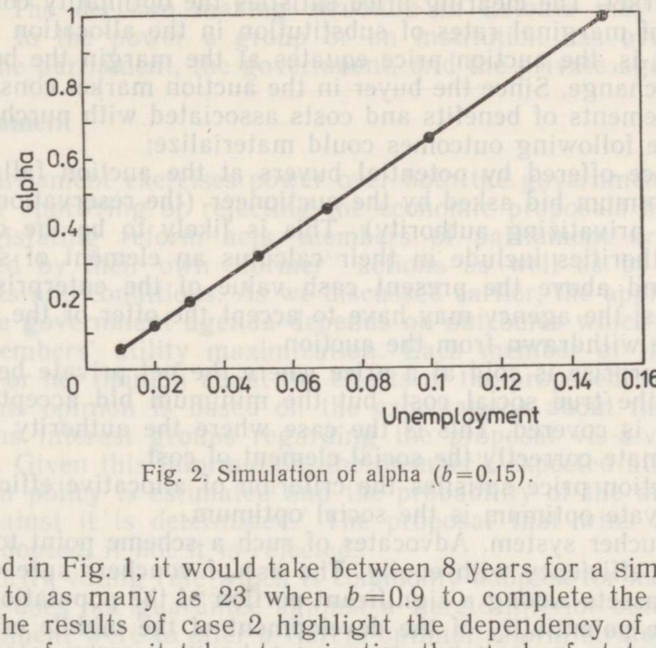


Fig. 2. Simulation of alpha ($b$=0.15).

As depicted in Fig. 1, it would take between 8 years for a simulation value of $b=0.3$ to as many as 23 when $b=0.9$ to complete the privatization process. The results of case 2 highlight the dependency of $\alpha$, and hence the number of years it takes to privatize the stock of state-owned enterprises on the target unemployment rate for a given value $b$. When setting $b=0.15$, the lower the target unemployment rate, the smaller $\alpha$ is. As shown in Fig. 2, the lower $\mu^*$ the higher the number of years that would be required to complete the privatization process, and vice versa. In the numerical simulation, the maximum value $\mu^*$ would take is 15 percent. At that level, $\alpha$ approaches 1, and the privatization process would be completed in 1 period.

**The choice of mechanism**

Once the maximization problem is solved, the next issue to be resolved is the choice of mechanism. Most commonly suggested mechanisms for privatizing state-owned enterprises are: auction, vouchers, and negotiated agreements. Each of these options entails costs and benefits, economic as well as political. If the focus was limited to the economic calculus, then a ranking of these mechanisms on the basis of the benefit cost ratios can be established. Clearly a benefit cost-ratio of less than one sets the criterion for rejection. The benefit-cost elements are represented below:

$$B=(Bp+Bs), \tag{9}$$

$$C=(Cp+Cs), \tag{10}$$

where $B$ is total benefits, $Bp$ private benefits, $Bs$ social benefits, $C$ total cost with $Cp$ and $Cs$ being private and social costs, respectively. The benefit-cost ratio associated with a choice of mechanism must satisfy the condition:

$$(Bp+Bs)/(Cp+Cs)\geqslant 1. \tag{11}$$

The efficiency condition: equality of marginal private and social benefits and marginal private and social costs may be used in evaluating the choice of mechanism for privatizing state-owned enterprises. Note that $Bp$ and $Cp$ are known, while $Bs$ and $Cs$ are not. Some values have to be assigned to them under alternative mechanisms.

1) The auction market. The auction market price is the price that clears the market. The clearing price satisfies the optimality condition — the equality of marginal rates of substitution in the allocation of private budgets. That is, the auction price equates at the margin the benefit and cost of the exchange. Since the buyer in the auction market considers only the private elements of benefits and costs associated with purchase of the enterprise, the following outcomes could materialize:

a) the price offered by potential buyers at the auction falls short of the minimum bid asked by the auctioneer (the reservation price set by the privatizing authority). This is likely to be the case when the authorities include in their calculus an element of social cost over and above the present cash value of the enterprise. If this happens, the agency may have to accept the offer or the enterprise may be withdrawn from the auction.

b) the enterprise is sold at a price where the net private benefits are below the true social cost, but the minimum bid accepted by the agency is covered. This is the case where the authority has failed to estimate correctly the social element of cost.

c) the auction price satisfies the criterion of allocative efficiency and the private optimum is the social optimum.

2) The voucher system. Advocates of such a scheme point to the need for balancing efficiency with equity. The use of vouchers spreads ownership of state assets among a significant portion of the population, thereby increasing the potentiality of the development of the middle or entrepreneurial class. Assume social cost associated with vouchers is zero, i. e. $Cs=0$, the selling share price of the enterprise and the quantity of shares sold will be determined by equating marginal private benefit to the offer price — the price at which the privatization agency is willing to accept. The possibility exists that all shares may not be sold. This depicts a disequilibrium framework where the transaction point falls on the demand curve. This may be the case where the authority has slated for privatization an enterprise whose market value is in excess of the value of vouchers offered by the public in exchange (failure to perceive correctly the benefits of ownership), and/or significant transaction costs are present. In this case, the government may either join in as a copartner or withdraw the offer.

3) Negotiated agreements. In the case of negotiation, the outcome clearly hinges on the negotiating powers of the two parties. This is best analyzed in the context of models with specific assumptions about information, symmetric or asymmetric.

In the Estonian case, the privatization agency utilized all three mechanisms in varying degrees. Except in the case of the privatization of flats, where the voucher scheme was adopted state-owned enterprises were sold for cash either at an auction or through negotiated arrangements. To shed some light on the Estonian's experience with privatization — in terms of the choice of strategy and mechanism, we offer in the next section some discussion of the institutional setting and the interrelationships between the public and the private sectors.

## 3. THE INSTITUTIONAL SETTING: SPECIFICATION OF THE BEHAVIOR OF THE PUBLIC SECTOR AND PRIVATE AGENTS

The decisions of the public sector impact not only the level of economic activity and the growth prospects of the economy, but also the evolution of the economic system. In other words, a decision that is carried out (i. e. privatization) not only affects the total level of output, currently and in the future, but also affects the public/private mix of goods within the economy. The decision making structure in Estonia may be classified according to the power a group or an institution has over the reform agenda: the parliament, the government, and the private agents.

### The parliament

The parliament exercises power over both the government and private agents; in approving or rejecting the economic proposals brought before it. In legislating reform acts, members of parliament are most often constrained by their own "former" actions as well as by international agreements and conditions. As we discussed earlier, the approval or rejection of the government agenda depends on outcomes which are governed by the members' utility maximization. Each member of the parliament forms his or her opinion about the effects of the proposed reform on their voters. This opinion is based on the expectations about the behavior of the various interest groups regarding the proposal vis-à-vis alternative proposals. Given this information, the member's expected utility of voting on a given policy is estimated and the probability of the member voting for or against it is determined.[7] The proposal that wins a majority of votes is adopted, if not it is rejected.

A majority voting rule which is commonly adopted for most legislative initiatives does not guarantee against a Pareto inferior outcome. Even if the government were to offer a Pareto optimal reform strategy, this strategy can be blocked by opposing coalitions on the basis of different information. A Pareto optimal strategy is one which satisfies both the productive and allocative efficiency criteria. By definition, it cannot be improved upon. As Buchanan and others have shown, in few cases "unanimous" consent may be achieved if the strategy improves the position of at least one member without loss to any other.[8]

### The government

The government of Estonia (here also in the role of privatization agencies) operates within the framework of the parliamentary laws. In formulating its policy the government forecasts its environment as a function of the information it receives for the current period and from its forecast

[7] Hettich and Winer, 1988.
[8] See Buchanan, 1987.

for the subsequent periods. The constraints on its actions depend on parliamentary laws. In any economic system, the basic function of governments is the reallocation of resources between private and public uses. The most common reasons cited for this role are: meeting market failures, correcting market outcomes, improving information, and efficiency.[9]

In economies where the public sector is the dominant sector — as in the former Soviet Union, the government's role is reversed — "reallocation" of society's resources from public or state sectors to the private sector. In this sphere of operation, there is "less certainty" about the extent (magnitude) of "privatization" as well as the speed and sequencing of reforms. In representative democracies, government decisions have to be approved by a parliamentary majority. Given the range of policy alternatives available, not every choice is likely to satisfy the utilities of both parliament and the bureaucrats, thus frustrating the reform objectives. Unless the expected utilities of the government and the parliament are maximized (objectives coincide) and/or information is symmetrical the outcome may not be the one that is most preferred by voters (representatives).

**Private agents**

Agents: consumers and producers choose their activities and make their plans according to their own forecasts, in the form of probability distributions on the basis of information available about the economy. The forecasting model contains, in addition to information about one's own environment, decisions enacted or contemplated by the parliament and the government.

In Estonia, the parliament and the government are making decisions about implementations of new policies and abolishing old ones, and the institution of new structures. The most important policy decisions among these are those associated with changes in the property rights and laws of liberalization of economic activities. The government and parliamentary decisions for restructuring the economy comprise the changes of information flows and incentive systems of private agents. Private agents, in making their decisions, not only face uncertainty over their own sphere of influence, but also changes in the (exogenous) factors making it all the more difficult to predict which agents are gaining and which are losing. This can make the system's status quo more preferable and gives rise to a wait and see strategy which could lead to their withdrawal from the decision process.[10]

Private agents, like the government or the parliament behave so as to maximize their expected utility. On the basis of the agent's forecasting model the private agent will support the reform (re-elect the parliament and/or support government agenda) if his/her post reform expected utility exceeds that of the status quo. The agent may be indifferent if these expected gains or losses in utility are zero and will oppose it (withhold his/her support for the representative in the next election) if he/she is worse off if the reform is approved. Under representative democracy, voters (private agents) may only be able to exercise their power "after the fact". That is, their control over the outcome depends on the political structure (who sets the agenda), the power of interest groups and the availability of information.

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[9] See Ott, 1993.

[10] Fernandez and Rodrik, 1991.

## 4. ESTONIA'S PRIVATIZATION SYSTEM: A CASE STUDY

In this section we analyze Estonia's privatization strategy during the period 1991—1993. While the preferred method of privatization, according to the Estonian parliament, is through voucher privatization of state-owned property, this mechanism was not the one chosen by the Estonian government. To fully appreciate the significance of this issue requires a knowledge of the political background accompanying the move to a private market economy, and the general problems of privatization connected with that. But, since these have been discussed extensively by Raun (1991) and in «Estonia» (1993), we limit our discussion to those closely related to the privatization method followed by the Estonian government.

The most significant change in the Estonian's environment during the transition was undoubtedly the reform of ownership. In November 1989, the USSR Supreme Soviet, after hard lobbying by Estonians, adopted a law granting economic autonomy to the Baltic Republics. This law made possible the adoption of a number of laws in Estonia concerning ownership. In March, 1990, the new parliament passed a resolution, which declared that the Soviet occupation in 1940 did not suspend the de jure existence of the Republic of Estonia. Following that a large number of economic laws have been adopted.[11] Among them is the Law on the Privatization of State-Owned Service, Trade and Catering Establishments which was passed on December 13, 1990. This law is also referred to as the Small Privatization Law and started to function in March, 1991, where the actual selling of state-owned assets for money was initiated. The Law on the Fundamentals of Ownership Reform, a second and perhaps more significant law, was adopted on June 6, 1991. The law establishes in the privatization process a priority for direct restitution and the use of vouchers. Article 36 of the law states that the main mode of privatization was selling for the compensation and for national capital vouchers. Other modes of selling were also permitted under this law.

Eastern European countries' experience with privatization offers two mechanisms for selling off state enterprises: one is to create "owners" and hope that a suitable mechanism for enterprise management and control will evolve in due course. The other is to introduce rudiments of an effective enterprise management and control mechanism from the beginning in the process of widespread privatization.[12] In the Estonian case, the voucher mode of privatization — creation of "private ownership" was viewed by parliament as the socially desirable strategy. The main motivation behind this choice was adherence to the principle of economic justice. The objective of the parliament is clearly the fair distribution of the state-owned property to past owners and those participants in the economy during the Soviet period, where a significant part of the state-owned property was acquired.[13] Moreover, there was a fear that Estonian property might fall under the control of foreigners or those who had accumulated money through speculation or other related means and a strong reaction against the continuing spontaneous "nomenclature privatization". The nationalist parties were the chief supporters of this emphasis on restitution.[14] Unfortunately privatization through vouchers has yet to be implemented, although public pronouncements suggest that it should be in the near future.

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[11] "Estonia", 1993.
[12] Phelps et al., 1993.
[13] "Estonia", 1993.
[14] "Estonia", 1993.

Privatization for money in Estonia, on the other hand, has extended to all branches of the economy and ranges from the small to medium and large enterprises. According to statistics released by the Estonian privatization agency, 54 enterprises had been wholly or partly sold for money in 1993. The majority of these establishments employed between 100 and 500 workers.

The Estonian government's preference for money over voucher privatization may be deduced from events that took place in the period following the enactment of the Law. Sales for money was clearly viewed by the government as preferential to vouchers. Accordingly, separate institutional structures were established to sell state-owned property for money. In September, 1992, an Estonian Privatization Enterprise was set up and in 1993 was reorganized into Estonian Privatization Agency. The Department of the State Property which was established in 1990 had been given the authority to give orders and set prices for privatization of governmental institutions. In contrast, the voucher privatization scheme had neither special institutional structures established, nor the program to be followed exactly described. One clear sign that the government had devalued the importance of the so-called "national capital or work contribution vouchers" was the governmental decree of February 4, 1993, named Fundamentals of the Privatization Vouchers. According to clause 1.6 the national capital vouchers will be issued to all permanent residents in the value of EEK 300 for each year of employment (between January 1, 1945, to January 1, 1992). This is a relatively small sum of money in view of the fact that a sum of EEK 300 is equivalent only to an average week's salary of workers (as of 1994). Nonetheless, vouchers, it is believed, will play a significant role in the privatization of the stock of public housing or flats. According to the decree of February 4, 1993, the average price of a square meter of housing selling for vouchers is set by the government at EEK 300 (although the average market prices for housing are about 3 to 5 times as high), thus enabling many to purchase their own flat with vouchers received.

We can only speculate about the reasons which underlie the agency's choice of the privatization for money mechanism. For one thing, selling for money may be needed to meet a budget constraint. That is, sales proceeds are needed to meet current or anticipated budget expenses. Also, selling for money might be the only way to bring in new capital to the enterprise. The delay in implementing the voucher scheme also suggests that the revenue constraint is more binding than the political constraints are. Members of parliament seem to be less worried about how their constituents feel about the government's chosen mechanism for privatization. In the parliamentary elections of September 20, 1992, the «Fatherland» party won seats on the basis of the campaign for restitution. This group appears to have modified its position toward privatization judging from the parliamentary discussions which failed to show their dissatisfaction with the course of privatization that is currently taking place.

The evidence also supports our contention that the bureaucrat is the agenda setter. Voters (private agents) in Estonia seem to have had little control over the privatization outcome. That is, they have not succeeded in pushing their preferred agenda (vouchers) forward. What can be observed about privatization behavior is the formation of few interest groups — mostly producers, lobbying for special favors. Among this group there is a powerful subgroup representing the insiders-managers of the state-owned enterprises. This group understandably is resisting the loss of power to outside owners or managers.[15] A voucher

[15] Phelps et al., 1993.

system would bring new owners, thus lessening the insiders' chances for securing for themselves shares of the enterprise at lower prices. As this group is closely tied with the government structure, their behavior may help to explain the delay in the implementation of the voucher scheme. As to consumers or potential voucher owners, the majority exhibit a status quo bias. Given that the main type of property to be exchanged for vouchers is state-owned housing — and at present the state-owned housing is heavily subsidized by the government — there is little incentive for them to push for a change.

A significant element contributing to the bias for the status quo is uncertainty over the magnitude of the housing subsidies and property taxes once private ownership has been established. Moreover, in view of the fact that vouchers, for the most part, are non-tradable and that there is a great deal of skepticism over the ownership value of these vouchers, it is unclear if said vouchers will be used to acquire other types of state-owned assets.

If indeed the voucher scheme is to begin in the summer of 1994 or shortly thereafter, it may be useful to set a target date for its full implementation. In the Lithuanian case, the target was set between 1 and 2 years. In Lithuania the Law on Privatization of Flats was passed on May 28, 1991, and the privatization program was essentially completed by October, 1992.[16] Over this span of time some 468 thousand flats have been sold, and of the total payment received by the government 82.2 percent was in the form of vouchers.

## 5. CONCLUSION

On the basis of the discussion presented above, we have shown that the model of bureaucracy is the appropriate model for analyzing the privatization outcome in Estonia. We have also shown that their delay in implementing a voucher plan may be consistent with both the bureaucrat's objective and the preferences of private agents under the assumption of asymmetric information. The experience of Estonia also suggests that the value of $\alpha_i$ in any given year is extremely small — the privatization of the stock is likely to be staggered over a number of years. From the point of view of private agents, there is a great deal of uncertainty over the outcome (gains and losses associated with ownership) hence preference for the status quo (at least as far as ownership of flats is concerned). If one accepts the premise that the social welfare function maximum is attainable under the voucher option — all other options being inferior — there is a cause for advocating a change in the behavior of the government and parliament. To this end we propose the implementation of an incentive scheme to induce the parliament to implement the socially optimum strategy. This may be accomplished by increasing voters' access to information through publicizing the debate that goes on in the relevant privatization agencies as well as announcing the vote of each Member of Parliament on privatization issues. Second, uncertainties should be minimized. This may be accomplished with specification of time limits for completing the privatization process, the implementation strategy, and related issues. Finally, some mechanism needs to be set up to encourage the formation of competing interest groups so that the influence of one or a few interest groups on the outcome may be minimized.

[16] "Lithuania", 1993.

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## AVALIKU VALIKU MEETOD JA RIIGIETTEVÕTETE PRIVATISEERIMINE EESTIS

Attiat F. OTT, Ülo ENNUSTE

On esitatud skeem majandusreformi analüüsimiseks avaliku valiku meetodil. Skeemi rakendusnäitena on vaadeldud riigiettevõtete privatiseerimisstrateegiat Eestis 1991—1993.

# МЕТОД ОБЩЕСТВЕННОГО ВЫБОРА И ПРИВАТИЗАЦИЯ ГОСУДАРСТВЕННЫХ ПРЕДПРИЯТИЙ В ЭСТОНИИ

Аттиат Ф. ОТТ, Юло ЭННУСТЕ

В статье представлена одна схема анализа стратегий экономических реформ на основе метода общественного выбора и в качестве приложения этой схемы проанализирована стратегия приватизации государственных предприятий в Эстонии в 1991—1993 годы.