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Theory of Privatization in Eastern Europe: Literature Review

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Summary

This paper provides a discussion of the most important theoretical contributions to the literature on privatization, focusing on emerging economies, and gives a summary on recent research concerning the ways privatization might affect the development of securities markets. In addition, the paper provides a number of policy implications, emphasizing the trade-off between privatization and the reduction in social welfare and the possibility that the privatization process itself may have conflicting objectives (creation of incentive mechanisms, fairness, fast privatization).

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1 Introduction

The rapid expansion of financial markets over the last decade and large privatization programs accomplished in several countries in the same period have been a core of recent research in economics (Demirgüc-Kunt and Levine 1995; Megginson and Netter, 2000). A primary question that should be addressed is whether the two phenomena are related. Specifically, to what extent national privatization programs have played a role in the development of securities markets?

Evidence has been provided that privatization share issues significantly contribute to stock market development in obvious direct ways: they increase the number of quoted companies and trading volume, thereby promoting the broadening of the market (Megginson and Boutchkova, 1999). More importantly, privatization sales produce positive externalities and therefore indirect benefits for stock markets, as well. Pagano (1993) argues that new listings increase the potential for diversification and as a consequence contribute to market deepening and enable further risk-sharing. Perotti and van Oijen (2000) provide evidence that in emerging economies privatization brings along the resolution of political risk, thereby attracting new investors to the stock market.

No theory provides yet an explanation for the relation between privatization and stock market development. To establish a theoretical framework describing this relation, first the primary questions of privatization should be reviewed. This paper provides a discussion of the most important theoretical aspects of privatization, focusing on emerging economies, and gives a summary on recent research concerning the ways privatization may affect the development of securities markets.

The setup of the paper is as follows. The first section provides a thorough overview of the theories on privatization with a special focus on Eastern-Europe. The second part is a discussion on how privatization and securities market development might relate.

2 Theoretical approaches to privatization

Theoretical literature on privatization in Eastern Europe initially focused on the question of how to design an optimal privatization plan in order to reallocate ownership rights and maximize revenues. A first theoretical approach assumes a benevolent government which focuses on the establishment of management incentives and the social costs of restructuring during the privatization process. Schmidt and Schnitzer (1993) argue that a fundamental trade-off exists between the social costs of restructuring and management incentives in transition: fast privatization creates more efficient incentive structures while brings about higher social costs than a low speed privatization program.

Anticipating large restructuring costs, several authors propose a graduate transition to new market-type corporate governance structures. Blanchard (1991), Lipton and Sachs (1990), and Tirole (1991) argue that first interme-

diate governance structures should be introduced, with the participation of the government, and only later Western-type incentive mechanisms can be applied. Aghion and Blanchard (1996) also emphasize the incentive problem in privatization and call attention that an appropriate restructuring of companies requires the sale of shares to outside investors rather than to insiders.

A second approach to privatization takes the assumption of a self-interested government and argues that during privatization, politicians and managers have conflicting interests: politicians often allow inefficient enterprise operation since excess employment and high wages may bring them political benefits. On the contrary managers, anticipating some ownership in the company, do prefer efficiency. Shleifer and Vishny (1994), and Boycko, Shleifer and Vishny (1996) present bargaining games between politicians and managers. The level of employment is the key variable over which the parties bargain. The primary issue is whether privatization can serve as a mechanism to decrease excess employment and thereby to mitigate the inefficiency, in an environment that allows for the transfer of subsidies (from the treasury to the firm) and bribes between the bargaining parties.

Apart from politicians' interests, another core issue concerning privatization in transition is the long-term sustainability of the process. Laban and Wolf (1993), and Roland and Verdier (1994) suggest that in emerging economies, successful privatization requires that the initially announced volume of sales by the state exceeds a critical level. In both models, there is a positive externality attached to the size of the private sector: once the number of privately owned companies has achieved a specific level, the economy converges to a full privatization equilibrium. Below this critical mass, however, due to a reverse in policy, a low-privatization trap might arise.

A fourth approach in the literature places the process of privatization in a political economy context. Biais and Perotti (1997) and Schmidt (2000) argue that expropriation by the government depends on the choice of the median voter at election after privatization. Results by Schmidt justify free share distribution, which has been applied in many privatization programs in Eastern Europe: this method mitigates expropriation by the government after privatization and restructuring. Biais and Perotti focus on how privatization and underpricing share issues might support a right wing government maximizing the utility of the rich class to stay in power, by providing median class voters shareholding property.

In an emerging economy, efficient transformation of ownership rights is often hindered by political forces: to gain popularity, the government may be interested in ex-post expropriation of firm value after privatization. Policy uncertainty thus affects prices and incentives. Perotti (1995) presents a signaling game focusing on the time-inconsistency of government's policy of selling state-owned enterprises. In the beginning of privatization, a committed government prefers to sell small fractions of its property at a discounted price in order to signal its willingness to share the risks of a possible future expropriation of privatized firms.

2.1 The incentive mechanism approach

A first theoretical model focusing on the impact of different governance structures on the efficiency of restructuring is provided in Schmidt and Schnitzer (1993). In this paper, two main approaches to the establishment of new corporate governance structures are distinguished: the 'market approach' and the 'government approach'. The first refers to immediate and fast privatization at the very beginning of the transition process leaving restructuring of companies to new owners. Excluding the government's active participation, this approach considers mass privatization (free share distribution) and the set up of holdings as first owners of the new private companies, in order to achieve the goals of fairness and efficiency in the privatization process. The so-called 'government approach' aims at restructuring and establishing competitive market structures before any ownership change. This method requires the government's active participation (through a government agency at the firm) and allows for reallocation of revenues up to some degree in order to reduce the social costs of restructuring. Both governance structures result in socially sub-optimal allocations: managers under both regimes exert an inefficiently low amount of effort. However, a trade-off exists between the two ways: government control allows more reallocation of profits and therefore lowers the social costs of restructuring, but induces managers to spend less effort and therefore has detrimental effects on incentives. The market approach favors incentives but increases welfare loss to citizens.

Proposals favoring intermediate governance strucures during transition received considerable attention in the early literature. Lipton and Sachs (1990) suggest that initially government agencies should own a small fraction of shares in privatized companies, which in the long term should be sold to core investors. This would restrain cross-subsidization by the government, and provide firms harder budget constraints. Tirole (1991) argues that the short-term objective of privatization should be to create a stable ownership of firms through the setup of holding companies as temporary owners. The establishment of Western-type market structures requires competition oriented restructuring before the ownership change, especially in industries where monopolies had prevailed under socialism. In the process, foreign institutions should be used as a commitment device to counter-balance the influence of different interest groups on government's decision making. The introduction of a stock market should occur after privatization, during a more mature phase of transition.

Aghion and Blanchard (1996) concentrate on the incentive issue at the firm's level. They show the superiority of selling shares to outside investors over insider privatization. Their argument is that, although insider privatization aligns control and property rights and therefore creates appropriate incentive structures, it might lead to inefficient restructuring. Also, after a failure to restructure by insiders (which is a realistic scenario in transition economies), a resale to outside investors can happen only with small probability. This may be because, worker-owners either extract the surplus of restructuring by requiring an excessive price from an outside investor or, when the probability of becoming

unemployed is high, they do not carry out restructuring at all. Under managerial ownership, when the probability of becoming unemployed and the size of private benefits are both high (which is typical in transition), the resale process is more likely if managers own small stakes. Large managerial ownership, under these circumstances, hinder a possible resale.

2.2 Political goals after privatization

The analysis by Shleifer and Vishny (1994) and by Boycko, Shleifer and Vishny (1996) address the issue of efficient employment level at companies after privatization. Both papers argue that politicians favor inefficient company operation (equivalent to a high employment level) even after an ownership change since it brings them political benefits. The two models differ in the primary question they focus on: the first concentrates on whether the transfer of control and cash flow rights should be separate or parallel when the main objective is to achieve efficiency, while the latter aims at finding conditions under which politicians themselves become interested in low employment. These issues are addressed in the framework of a bargaining game between a politican and a manager, the two key players in the privatization process.

Shleifer and Vishny examines whether corporatization and /or privatization affect the level of inefficiency (excess employment and transfers) at public enterprises. The fundamental assumption here is that cash flow and control rights are completely separable: corporatization (the transfer of control over employment) might occur without privatization (the transfer of cash flow rights). Employment and subsidies (transfers from the treasury) are the variables over which the manager and the politician bargain. Both parties can bribe the other, which ensures a possibility for an efficient allocation.

Without restrictions on corruption, the social optimum in the bargaining game can not obtain. Although, equilibrium leads to efficiency from the point of view of the manager and the politician (they receive their highest possible utility from bribing each other), employment remains at its inefficient level. In this situation, allocation of control and cash flow rights will influence bribes but not the decision about employment: when corruption is allowed, neither privatization, nor corporatization affects resource allocation.

Unrestricted corruption is, however, an unrealistic assumption since corruption contracts are not enforceable in courts. Therefore, the opposite case, the case of no corruption is considered as well. A key result of the paper is that, when bribes are not allowed, the level of employment does depend on who has control rights. Without corruption, giving the control over employment to the manager promotes restructuring and results in better resource allocation. Compared to the full corruption case, the conclusion is that the effect of corporatization (the transfer of control over employment) depends on whether bribing is possible or not.

Restrictions on corruption do not bring along efficiency effects of privatization. In the no corruption case, when the politician controls employment, giving cash flow rights to managers or shareholders might have deleterious effects: a

regulated private firm can have lower subsidies and higher excess employment than a public firm. Since privatizing cash flows is a means for politicians to extract profits, politicians do like privatizing and keeping control at the same time. In the opposite case, when the manager has the control over employment, a change in cash flow rights does not affect equilibrium employment and transfers: privatization does not add much to corporatization.

The possibility of unrestricted transfers from the treasury is not a realistic assumption either, except for money-losing firms. When subsidies are restricted (the government is not allowed to subsidize a firm that is able to provide its manager with a minimum utility level), giving both control and cash flow rights to the manager does lead to substantial restructuring. In conclusion, the paper claims that privatization and corporatization entails efficiency, when bribing is not allowed and subsidies are restricted.

In another version of the bargaining game presented in Boycko, Shleifer and Vishny, the politician and the manager bargain exclusively over employment. Subsidies are not bargainable, they serve as a 'counter-bribe' from the politician to the manager to prevent restructuring after privatization. A major difference compared to the previous model is that here, corporatization is not distinguished from privatization: the latter implies the transfer of both control and cash-flow rights. In addition, the politician incurs a cost since the treasury foregoes profits due to inefficient operation of the firm. This cost substantially affects the politician's decisions.

When control over employment is in the hand of the politician, efficiency (lower employment) is achieved when the marginal cost of one unit of profits foregone by the treasury is higher than the marginal benefit of an extra unit of labor spending. If the manager bribes the politician, the condition for low employment will be less restrictive than in case of no bribing. Therefore, the authors claim that corruption tends to raise efficiency in terms of lower employment at public enterprises.

When control over the employment decision is given to the manager, the politician still can prevent restructuring by giving the firm a subsidy to set labor costs at high level. The condition for low employment is that the costs of getting the firm not to restructure in terms of foregone profits and the needed subsidies exceed the political benefits from high employment. In this case, the costs of foregone profits are partially internalized by the politician and the condition for low employment is again less restrictive than in the case of politician's control. Therefore, in this bargaining context, the transfer of control encourages restructuring in such a way that it gets the politician internalize the costs of foregone profits by the manager (shareholders).

2.3 Systemic effects of privatization

Besides the conflict of interests between politicians and managers, further papers on privatization in transition focus on the sustainability of the process: they argue that a policy reversal might arise during changing ownership structures. The rationale for this is the strong pressure for redistribution from previously

favored interest groups after new owners take actions following the ownership change.

Focusing on the long-term sustainability of privatization, Laban and Wolf (1993) and Roland and Verdier (1994) suggest that the government should privatize a relatively large stake early in the transition process: when privatization is carried out in large scale, the possibility of a policy reversal becomes less realistic.

According to Laban and Wolf, the success of transformation of ownership structures substantially depends on the expected aggregate volume of privatization at the time when the privatization plan is announced. They argue that due to a positive externality related to the size of the private sector, if a certain amount of aggregate capital is to be privatized relatively early in the course of transition, a higher number of investors will choose to invest in buying state-owned property. The paper by Roland and Verdier reinforces the existence of a critical mass effect in privatization. It proves that once a critical number of privatizations has been achieved, there is no further possibility for a policy change.

In both papers, as a result of an endogenous probability of political continuation, several equilibria might arise. On the condition that the critical (threshold) level of capital is privatized relatively early, a full-privatization equilibrium will be approached by the end of the transition process. In the opposite case, however, due to a coordination problem among agents, a low-privatization trap may occur, meaning that the total amount of capital given to private hands by the end of transition does not reach the threshold level. The low privatization trap, in the Laban and Wolf model, rises due to a change in government policy towards capital income taxation. In the other paper, however, a possible renationalization of privatized assets represents the way of ex-post expropriation by the government. The low privatization equilibrium might be brought along by investors' fear of a political backlash or high entry costs born by them when they enter the state-owned asset market. Therefore, a possible change in policy (political risk) drives the optimal design of privatization in both papers.

In the Laban and Wolf model, equilibrium capital sold is determined through strategic interaction by workers and foreign investors. The government is not an active player in the game. Policy change or continuation is an endogenous function of workers' minimum wage relative to the decrease in their welfare. In the model by Roland and Verdier, it is the government that maximizes citizens' welfare. In the early privatization period, welfare is a decreasing function of the number of companies privatized since privatization implies an increase in efficiency by decreasing employment. The raise in unemployment might give rise to a policy reversal in the form of renationalization. The difference compared to the Laban and Wolf model is that there, workers accept lower wages therefore the question of unemployment is not directly addressed. Here, wages are sticky downward, therefore, the adjustment can not take place through changes in the wage rate. Workers are inactive: equilibrium capital depends on the decisions by the government and investors.

The policy of free distribution of shares applied in some Eastern European

countries is also considered as a means of stimulating privatization, in the paper by Roland and Verdier. Free share distribution eliminates government's incentives to renationalize even below the critical mass, therefore it solves the problem of a potential policy reversal. At the same time, it raises entry costs for private investors engaging in buying state enterprises, by which it increases the costs of restructuring. Even though, the government's temptation to renationalize is eliminated, when entry costs are too high and privatization volume is below the threshold, there still remains a coordination problem among private investors. Therefore, multiple equilibria persists. A possibility to eliminate bad equilibria is subsidizing entry costs.

2.4 The political economy of privatization

Schmidt (2000) and Biais and Perotti (1997) place the possibility of a policy reversal in a political economy context: they assume a government interested in ex-post expropriation of privatized companies, with the aim at gaining political benefits through revenue reallocation. In both models, the probability of the policy change comes from individual utility maximization: the level of expropriation is considered as the choice of the median voter at election after privatization.

Results by Schmidt suggest that mass privatization lowers the degree of expropriation of profitable companies after privatization. This is especially true, when free share distribution occurs in such a way that voters are entitled to obtain shares of several companies (for example through a voucher scheme). If workers receive a proportion of the shares of the company they are employed by ('insider' mass privatization), the mitigating effect on expropriation is not unambiguous.

In the model, the success of restructuring represents uncertainty at the time the median voter decides on the level of expropriation at election. Expropriation is chosen by maximizing the expected utility of his income which originates from private savings, from shareholding, and from earnings. Since wages depend on the success of restructuring at the employee firm, they are unknown to the median voter at the time of election. Therefore, the level of expropriation chosen will be a function of the probability of success of the firm and the proportion of shares owned.

Expropriation might serve as a means of redistribution (subsidization of wages at unsuccessful companies). Since it has devastating effects on incentives to restructure, it is considered as ex-post inefficient (every dollar expropriated will bring less than a dollar to those that receive it as a wage subsidy). When workers are risk averse, they gain by redistribution on the condition that the level of this redistributive efficiency is higher than their level of shareholding.

Expropriation also has a risk-sharing or insurance motive. Since the wage subsidy is a certain income for the median voter, she might favor to give up uncertain future income from her shareholding and prefer getting the subsidy. Therefore, when the voter is risk-averse and wants to get insured against uncertain future states, she has incentives to choose a higher level of expropriation

at election.

Through the utility maximization of the median voter, similar to Schmidt (2000), Biais and Perotti (1997) provide explanation how right wing, market-oriented parties can win elections with the help of well designed privatization mechanisms. The main result is that a privatization program allocating an appropriate quantity of shares to the median voter shifts her political preferences to the right, and therefore such a policy is able to keep the right wing party in power. When, at the market clearing price, the median class can not afford to buy enough shares to become averse to redistributive policies of the left wing party, underpricing and rationing of shares are necessary to get the shareholding motive prevail.

The ability to carry out such a Machiavellian program depends on the level of income inequality and the relative size of the company to be privatized. The quantity of shares required to change preferences of the median class is increasing in the level of income inequality and decreasing in privatization size. When social inequality is large, underpricing would ensure that the median class buys an appropriate number of shares. In case of extreme income inequality, the privatization price goes to zero implying a need for free share distribution. Whenever underpricing is required, the government must prevent median voters to resell their shares after privatization, otherwise they will no longer be interested to vote for the right wing party. This result provides an explanation for why, for example in the Czechoslovak privatization, the government postponed the distribution of shares until after election.

A further implication of the paper is that voucher privatization can be a means for the government to manipulate political expectations. Citizens expecting the left wing party to win would not buy shares since they would be afraid of expropriation, and as a result, the left would indeed win. In such a situation, the right wing government might distribute shares for free enticing the median class to vote for the right.

Machiavellian privatization, however, is not possible when large stakes are assigned to insiders, when efficiency gains associated to the privatization are very small, or social inequalities are extreme.

2.5 Privatization with policy uncertainty

The possibility for a policy reversal serves as an explanation in Perotti (1995), for the puzzle of partial sale and underpricing observed in many privatization programs. Initial equity retention and a discounted share price may help the government to signal its commitment to a long-term pro-privatization policy.

In transition, to counter-balance the loss in popularity resulted by the general decrease in the country's welfare, at privatization, the government is often interested to ex-post reallocate value to its favored constituencies. Therefore, there is significant uncertainty for investors about government's interests concerning future interference. The model shows that in the presence of uncertainty, the best privatization strategy for a committed government is to offer a small

proportion of its equity in the beginning thus reassuring investors that the government is willing to share the risk of an ex-post value redistribution.

When the efficient transfer of control requires selling a large stake of the company, equity retention may not serve as a signal of commitment. Instead, strategic underpricing can be a substituting device: when large sales are necessary, a committed government will offer shares at discount. A combination of underpricing and graduate selling can be the most efficient signaling method.

3 Privatization and Stock Market Development: an Externality Approach

The ground for theoretical research on the relation between privatization and stock market development is the idea that besides the direct effects privatization stock issues have on the deepening and broadening of securities markets, there exists an indirect influence that contributes to the development of financial markets to a large extent. The existence of this externality is justified by the fact that the immense increase in market capitalization in many emerging economies, happened in the same period as the privatization process, substantially exceeded the raise of stock market capital from privatization issues (Perotti and van Oijen (2000)).

Only a few explanations exist in the literature for the positive externality that a privatization process may imply for the economy. Pagano (1989 and 1993) argues that new entries to the stock market provide investors better portfolio diversification possibilities and thereby have a positive effect on the size of the market. He shows that the development or stagnation of stock markets can arise as a result of a coordination success or failure among agents that may enter as investors or issuers. Following this idea, privatization can be a means for the government to introduce new entries to the stock market thereby enhancing its development. Perotti and van Oijen (2000) suggest another way in which privatization might have an indirect effect on stock markets. The idea especially applies in emerging economies where there is uncertainty concerning the government's commitment to market oriented policies: a sustained privatization program can help the government to build up credibility and thereby to make investment in the country attractive for potential stock market participants.

3.1 Policy Risk Resolution

The channel, suggested by Perotti and van Oijen, through which privatization affects securities markets is the resolution of political risk. Using a sample of 22 emerging economies, Perotti and van Oijen provide evidence that policy uncertainty measured by political risk indices decreases as privatization proceeds. At the same time, a significant positive relationship exists between the growth in stock market capitalization and the improvement in the policy risk index in those countries.

Political risk in this context is meant to measure the government's ability to adopt appropriate economic policies and its willingness to adjust decisions to people's expectations (credibility of its policy). In addition, it implies an evaluation by financial market experts and bankers, of the country's financial stability and ability to service its debts.

An important result is that in the period preceding the announcement of the privatization program and even at the time of the announcement, political risk indicators reflect a negative change in the countries' rating. This suggests that governments start to privatize in periods of declining credibility. When sales start and later when they are at the peak, the policy risk indicators show substantial improvements referring to a resolution of the uncertainty about government's future policy.

The relation between the evolution of policy risk and stock market development is shown for a dataset including about 300 observations for 31 countries (9 additional countries are involved above the 22 privatizing ones). Policy risk proves to be a significant explanatory factor for several measures of stock market development such as growth in market capitalization or traded value over GNP. The coefficient of the privatization sales over GNP term appears insignificant in all regressions, which is consistent with the notion that policy risk resolution rather than the direct effect of privatization issues brings about the development of stock markets in transition economies.

3.2 Participation externalities

Pagano (1989 and 1993) adresses another type externality argument for stock market development: participation externalities may give rise to coordination failure among investors or firms issuing equity.

On one hand, there is a feedback from stock market volatility and liquidity to investors' expectations and entry decisions. Thin stock markets described with high risk and a small number of participants might remain thin and highly volatile in the future because of self-fulfilling expectations of potential entrants, formed on the basis of previous history of the market. On the other hand, expectations influence the behavior of potential issuers as well, to a large extent. The number of firms floating shares on the stock market has an indirect effect on other firms' decisions about going public. When only few firms are expected to seek flotation, diversification possibilities and therefore the demand for stocks remain limited, which implies that flotation will be unattractive for other firms. Under certain circumstances, these feedback mechanisms can produce multiple equilibria in strategic decision making by potential investors / issuer companies. Participation in the different equilibria is positively correlated with market depth (market size, stability of prices, risk sharing opportunities).

In Pagano (1989), every additional trader in the stock market generates a positive externality for other traders to enter by decreasing the market's volatility. A raise in the number of investors results in increasing prices and lower expected returns, which induces firms to issue more equity and brings about an increase in market size. In the presence of transaction costs, however, the exis-

tence of this positive feedback becomes ambiguous: individual investors might have no incentive to enter even though as a group they would benefit from doing that.

In the presence of transaction costs, the interaction between thinness and price volatility might produce multiple equilibria: some equilibria can be characterized by small number of transactions and high volatility while some others with a large number of trades and small volatility. Which equilibrium occurs in a particular market, depends on agents' expectations: in the presence of transaction costs, when expectations are self-fulfilling type, high liquidation costs will keep agents out of thin markets, which preserves market thinness and high volatility. If the ground for expectation formation is not past history, many traders may decide to enter to a small size market and consequently, the high trade and low volatility equilibrium might arise.

From the social-welfare point of view, the "high-trade" equilibrium is superior to the "low-trade" one. Incentives can be created to shift the economy to the first type, Pareto optimal equilibrium, but the adjustment process would be such that investors entering the stock market early might suffer losses. Government intervention is therefore necessary to implement those incentives.

In the model describing the flotation of companies on the stock market (Pagano 1993), the externality arises because every additional new listing enhances risk sharing opportunities. If there exist imperfections in the capital markets (borrowing constraints or flotation costs), besides each participant gains from further risk sharing as a consequence of an additional entry, each has an incentive to go public. Under such circumstances, each additional listing affects incentives of potential entrants. Therefore, the positive externality gives rise to the potential of multiple equilibria: depending on agents' expectations about the behavior of others, several equilibria might arise with different number of flotations. In a thin market, if expectations are based on past history, only few new listings will occur and the market will be trapped in stagnation. If agents believe that a large number of new listings will occur, they will benefit from flotation themselves.

As in the previous case, the resulting equilibria can be ranked, the higher number of public issues being Pareto-superior. Government intervention might create incentives to adjust expectations of potential issuers such that the superior outcome prevails.

In emerging economies, where stock markets are at their low level of development, privatization may serve as a means for the government to prevent that inferior equilibria occurs. Through a sustained privatization program, the government can ensure an appropriate number of issues such that every potential investor and each firm going public may expect a large number of other participants to enter the stock market, as a consequence of which an equilibrium with high number of trades and many-listings can arise.

4 Conclusion

This paper reviews the privatization literature with a focus on economies that proceed from a socialist to a market oriented system, and discusses the externality effects that privatization may have on the development of stock markets in those economies.

To conclude, we summarize the most important characteristics of privatization in Eastern Europe in the following paragraphs.

1. Several trade-off exist in the process of transition to a market economy, one of those is the trade-off between privatization and the reduction in social welfare. At the same time, different goals (creation of incentive mechanisms, fairness, fast privatization) of the privatization process itself represent trade-offs. Therefore several privatization mechanisms have been suggested (free share distribution, temporary government ownership, setup of holding companies, insider privatization or sales to outsiders) depending on which goal should be considered as of primary importance.

2. Politicians' interests play a substantial role in the privatization process. Being able to use the basic trade-off between the costs of restructuring the economy and efficient privatization, politicians might obtain private benefits from hindering privatization. Bargaining models of privatization suggest that in order to achieve efficient privatization, corruption should be impossible and firms should face hard budget constraints.

3. Expectations play an important role in privatization: when agents expect that large stakes are given to private ownership early in transition, privatization will be successful with great probability (full privatization equilibrium arises).

4. Since people know that politicians are interested to reallocate value after privatization, benevolent governments in favor of efficiency need to build up credibility. Public sales of companies at a discounted IPO price can serve as signals of commitment. When obtaining high revenues from privatization is a primary objective, gradual sales of equity (with a large initial retention) can substitute underpricing and signal commitment at the same time.

5. Privatization can be a means for right wing governments (that do not intend to ex-post expropriate) to give ownership to citizens and thereby obtain popularity and win elections.

6. Privatization has an indirect effect on stock market development, both through the positive feedback provided by each new entry to market size and liquidity, and through the resolution of political risk.

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