Governing Enterprises in Transition Economies: The Problem of Mixed Ownership in the Czech Republic*

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Program on Central and Eastern Europe Working Paper Series #37

Abstract

This paper examines how formerly state-owned enterprises are governed in a post-Communist economy. Privatization was intended to clarify ownership rights by making private property the basis for productive relations. Inreality, governments still own substantial percentages of share capital in "privatized" enterprises, and the question of who controls the company often remains unclear. Two dimensions of emerging corporate-governance structures are examined for enterprises under joint public-private ownership: contract enforcement and the influence of the state-as-shareholder. The main argument is that these structures are determined according to government-investor negotiations over how to relinquish control of firms and privatize their cash flows, and proceeds in two steps. First, state authorities and prospective investors commit to the terms of privatization. Second, instruments of contract enforcement and state influence emerge from these commitments through bargaining. Evidence from two industry cases in the Czech Republic—steel and petrochemicals—shows that contract-enforcement is delegated to a third party when a government cannot credibly commit to all the privatization terms desired *ex ante* by investors who prefer long-term, large-bloc equities; additionally, the state's fiduciary influence will be limited if ministries and property agencies are politically unified. Delegating contractual responsibility while limiting state discretion will make progress in establishing property rights.

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*An earlier version of this paper was delivered at the annual meeting of the American Political Science Association, Chicago, September 1995.. The author is grateful for comments from Peter Hall, Joel Hellman, Grzegorz Ekiert, and the participants of the Seminar on Post-Communist Institutions (Russian Research Center), and the Workshop on East European Politics (Center for European Studies), Harvard University.

I. INTRODUCTION

The economic collapse of state-socialist regimes in Eastern Europe can be attributed to the inability of central planning to solve two basic agency problems: to obtain undistorted information (adverse selection) and to punish poor performance (moral hazard). An efficient agency relationship rests on exclusive ownership rights. Overlapping or ambiguous ownership means that the surpluses which derive from an asset will not be clearly divisible; as a result the incentives of parties to invest in a relationship are weakened, as is the power of owners to enforce their will.[1] From this perspective the basic challenge confronting serious reformers in post-Communist economies (PCEs) is to delineate "ownership" rights. Rapid privatization was to have taken substantial steps towards that end, first, by making private property the dominant basis for productive relations, and second, by building capital markets. In fact, the experience of the former East Bloc reveals that "hand-over" points are difficult to establish for formerly state-owned property, and that there is no magic line separating public from private ownership. Instead, the majority of "privatized" assets continue to be held by ill-defined combinations of state and non-state parties; indeed, in all the countries of the region, governments are still the largest single property owners. Mixed ownership, then, is likely to remain the predominant ownership arrangement in PCEs for some years to come.

A government in a transitional economy, consequently, faces a basic dilemma, being both a party to, and adjudicator of, property transactions. Politicians can use the state's position as legitimate "owner" of enterprises to further personal or political goals—graft, protection of employment, regional development, and so forth. Implications of mixed ownership for enterprise adjustment and restructuring in PCEs are the theme of a growing number of studies.[2] This paper, however, is somewhat differently conceived. Rather than examine the effects of mixed ownership on performance, I focus instead on the specific institutional responses to joint control, and the special organizational forms which have developed under such an ownership structure. One of the central themes of this essay is that the constraints and incentives which owners face are ultimately reflected in agency or

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1. For statements of this fundamental assumption, see Oliver D. Hart and John Moore, "Property Rights and the Nature of the Firm," *Journal of Political Economy* 98, 6 (1990): 1119-58; Sanford J. Grossman and O. Hart, "The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Ownership," *Journal of Political Economy* 94, 4 (1986): 691-719; Eugene Fama, "Agency Problems and the Theory of the Firm," *Journal of Political Economy* 88, 2 (1980): 288-307; Michael C. Jensen and William H. Meckling, "Theory of the Firm: Managerial Behavior, Agency Costs, and Capital Structure," *Journal of Financial Economics* 3, 4 (1976): 305-60.

2. See, for example, Roman Frydman and Andrzej Rapaczynski, "The Ambiguity of Privatization and the Paths to a Private Property Regime," in R. Frydman and A. Rapaczynski, eds., *Privatization in Eastern Europe: Is the State Withering Away?* (London: CEU Press, 1994); Alice H. Amsden, Jacek Kochanowicz, and Lance Taylor, *The Market Meets its Match: Restructuring the Economies of Eastern Europe* (Cambridge, Mass.: Harvard University Press, 1994); Andrei Shleifer and Robert W. Vishny, "Politicians and Firms," *Quarterly Journal of Economics* 111, 4 (1994): 995-1025; Katharina Pistor and Joel Turkewitz, "Coping with Hydra: State Ownership after Privatization," World Bank-CEU conference paper, Washington, D.C., 1994; Edmund S. Phelps, *et al.*, "Needed Mechanisms of Corporate Governance in Eastern Europe," *Economics of Transition* 1, 1 (1993): 171-207; David Stark, "Recombinant Property in Eastern European Capitalism," Discussion Paper 93-102, Wissenschaftszentrum, Berlin, 1993.

governance structures. The relevant puzzle for this paper, then, is to account for these relationships where legal ownership is part public, part private.

For those interested in these matters, the Czech Republic presents a unique laboratory. Here, privatization of the largest state-owned enterprises (SOEs) was completed faster than in any Eastern European country, in a relatively stable environment. New shareholder structures in the typical privatized, large SOE have arisen though unique combinations of direct sales and voucher bidding, with potentially decisive shares often reserved for the state.[3] The Czech experience allows for a controlled study of the following question: ***how are former SOEs governed where large equity blocs are held by private parties and the state?*** The emerging corporate-governance strategies and activities of the major financial players in the Czech market for control—banks and investment privatization funds—have been examined at length elsewhere.[4] What has been relatively neglected in the Czech context (as in others) is a concrete examination of how governments choose to manage their partially-held assets when governments themselves are responsible for establishing property rights. Certainly all the usual caveats are in order. This question cannot be answered without a great deal of conjecture, and any discussion of permanent features is bound to be premature. Significant state ownership and participation, however, is both a confirmed and defining feature of the Czech economy. Although 80% of Czech economy is now supposedly in private hands after two waves of large-firm privatization, the Czech government's property agency, the National Property Fund (FNM), still holds 40% of "ex-state" assets by original value.[5] Voting rights in 43 "strategic" companies, moreover, were transferred from the FNM to the Ministry of Industry and Trade (MPO)

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3. For overviews of privatization in the Czech Republic, see Michal Mejstřík and James Burger, "Vouchers, Buyouts, and Auctions: the Battle for Privatization in the Czech Republic," in UNCTAD, *Privatizatiion in the Transition Process: Recent Experiences in Eastern Europe* (New York: UN, 1995); chapter on "Czechoslovakia" in Roman Frydman, *et al.*, *The Privatization Process in Central Europe* (London: CEU Press, 1993); Josef Kotrba and Jan Švejnar, "Rapid and Multifaceted Privatization: the Experience of the Czech and Slovak Republics," Working Paper 37, CERGE, Charles University, Prague, 1993; Jan Mládek, "The Different Path of Privatization," in John Earle, Roman Frydman, and Andrzej Rapaczynski, eds., *Privatization in the Transition to a Market Economy* (London: Pinter, 1993); Roman Češka, "Privatization in the Czech Republic - 1992," in Andreja Böhm and Marko Simoneti, eds., *Privatization in Central and Eastern Europe* (Ljubliana: CEEPN, 1993); Nemat Shafik, "Making a Market: Coupon Privatization in the Czech and Slovak Republics," Working Paper 1231, World Bank, Washington, D.C., 1993; Milan Krčmař, "Voucher Privatization," *CERGE Lectures on Practical Aspects of Privatization* 10 (1992).

4. John C. Coffee, Jr., "Institutional Investors in Transitional Economies: Lessons from the Czech Experience," Working Paper 106, Center for Law and Economic Studies, Columbia University School of Law, New York, 1995; Raj M. Desai, "Financial Market Reform in the Czech Republic: the Revival of Repression?" Working Paper 85, CERGE-EI, Charles University and the Czech Academy of Sciences, Prague, 1995; Jana Matesová and Richard Seďa, "Financial Markets in the Czech Republic as a Means of Corporate Governance in Voucher Privatized Companies," Working Paper 62, CERGE-EI, Charles University and the Czech Academy of Sciences, Prague, 1994; Iraj Hashi and Jan Mládek, "Voucher Privatization, Investment Funds, and Corporate Governance in Czechoslovakia," *British Review of Economic Issues* 15, 37 (1993): 67-96; Karla Brom and Mitchell Orenstein, "The 'Privatized' Sector in the Czech Republic: Government and Bank Control in a Transitional Economy," Working Paper, Institute for East-West Studies, Prague, 1993.

5. European Bank for Reconstruction and Development, *Transition Report Update, April 1995* (London: EBRD, 1995), p. 55; "Czech Republic: property fund lists its remaining holdings, *Finance East Europe*, April 21, 1995.

in mid 1994.[6] For all these firms it was the government which finally determined how privatization was to take place, and which thus directly or indirectly created the mechanism for corporate governance.

The main argument of this paper is that governance regimes are a consequence of negotiations between governmental and private parties over how to relinquish control over SOEs and privatize their cash flows. First, government authorities and prospective investors commit to the sale of enterprises according to certain constraints. In a second step, these commitments structure the governance arrangement of which state and non-state parties are a part. Thus the allocation of control rights by the state to investors is a policy choice and a deeply political matter. Two special aspects of the principal-agent relationship under joint ownership are analyzed: (1) the mechanism by which the investor contract is enforced; and (2) the level of discretionary power which the state holds. Section II presents a basic typology of these governance forms. Sections III and IV explain these forms. The fifth section presents evidence from two industrial sectors in the Czech Republic, and the last section concludes.

II. GOVERNANCE AND MIXED CONTROL

In the perspective of organizational economics, governance structures are a cure for the unique hazards which equity-financiers in modern corporations face. Unlike suppliers of other inputs, shareholders are characterized in the following way: (1) they invest for the life of the corporation; (2) their investments, not being tied to particular assets, are redeployable; and (3) their fortunes will to some extent rise and fall with upswings and downswings in share prices.[7] Factors (1)-(3) make shareholders' investments subject to the considerable threat of expropriation. A board of directors arises endogenously as means of safeguarding investments against these risks.[8]

This view does not, however, explicitly consider how the direct participation of a state-as-owner alters the governance arrangement. Presumably there would be no need to alter fundamentally the standard theory of the firm if the government were perfectly profit-maximizing. In such a case, the government's representative should behave as any private shareholder interested in maximizing share value. Historically, the justification for state-ownership in market economies involved the exploitation of natural or artificial monopoly power to raise revenues for the state budget, to promote industrial development, or to

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6. These were companies in which the state held a greater-than-30% share. The MPO had originally requested the transfer of shareholder rights in 70 companies, 43 of which were transferred June 1, 1994. *Hospodářské noviny*, May 13, 1994, p. 2.

7. Mathias Dewatripont and Jean Tirole, "A Theory of Debt and Equity: Diversity of Securities and Manager-Shareholder Congruence," *Quarterly Journal of Economics*, 111, 4 (1994): 1027-54; Bengt Holmström and Jean Tirole, "The Theory of the Firm," in Richard Schmalensee and Robert D. Willig, eds., *Handbook of Industrial Organization*, Vol. I (Amsterdam: Elsevier Science, 1989), pp. 61-133; Oliver E. Williamson, *The Economic Institutions of Capitalism* (New York: Free Press, 1985), pp. 304-5.

8. Oliver E. Williamson, "Corporate Finance and Corporate Governance," *Journal of Finance* 43, 3 (1988): 567-91.

charge prices which more accurately reflect marginal social costs.[9] The pursuit of profit, in theory, is not the source of state ownership. In practice, however, there is a large class of revenue-raising SOEs which do attempt to maximize profits.[10] The constraints facing a government are unique, and will generate structural outcomes in a corporation under mixed ownership which are distinct from that of a completely privately-owned firm.

Incomplete Contracting and Privatization

The problem for a positive theory of governance is to specify *ex ante* the organizational forms which are expected to develop, to explain why they take a particular form, and ultimately, to determine why they behave as they do.

In a PCE, privatization represents a contract—a voluntary agreement between the government and a prospective investor or group of investors—which establishes three elements: (1) the decision rights and responsibilities of enterprise managers; (2) criteria for measuring and evaluating their performance; and (3) a system of rewards and sanctions.[11] In more complex exchanges—particularly those involving joint ventures, partial or outright acquisitions—the government may be obliged to provide certain forms of assistance upon the sale of its assets such as debt relief, side payments, or credit guarantees; an investor may be required to increase the company's share capital after a certain period, to invest in and develop certain product lines, to maintain employment levels, or to sub-contract with specified parties. Even in the simpler exchanges, the government is obligated to sell portions of its assets in return for payment agreed upon in advance. Because the agreement extends into the future, there is the threat that one or both parties will not uphold their end of the contract. As a result, contracting parties are forced to provide a means of making the agreement enforceable at varying costs. The first element of governance, therefore, is: *what method of enforcement characterizes the agreement?*

For simplicity, two forms of enforcement are examined here. One form is direct, or *self-enforcement*, where, if one party violates the terms of the agreement, the only recourse for the other is to withdraw from the relationship.[12] In a privatization contract SOE managers and prospective investors will attempt to obtain binding commitments from each other to ensure each other's compliance. Such commitments can appear as efforts by one or both parties to hold hostages, to link unrelated issues to successful completion of the agreement, or to put aside a specified amount of payment to be made if the agreement is

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9. Ray Rees, *Public Enterprise Economics*, 2nd Edition (London: Weidenfield and Nicholson, 1984); Anthony B. Atkinson and Joseph E. Stiglitz, *Lectures on Public Economics* (London: McGraw-Hill, 1980); Cotton M. Lindsay, "A Theory of Government Enterprise," *Journal of Political Economy* 84, 5 (1976): 1061-77.

10. Colin Lawson, "The Theory of State-Owned Enterprises in Market Economies," *Journal of Economic Surveys* 8, 3 (1994): 283-309; Ravi Ramamurti, "Performance Evaluation of State-Owned Enterprises in Theory and Practice: an Empirical Exploration," *Management Science* 33, 7 (1987): 876-93.

11. See Robert G. Eccles, "Transfer Pricing as a Problem of Agency" in John W. Pratt and Richard J. Zeckhauser, *Principals and Agents: the Structure of Business* (Boston, Mass.: Harvard Business School Press, 1991), pp. 158-9; Michael C. Jensen, "Organization Theory and Methodology," *Accounting Review* 58, 2 (1983): 319-39.

12. Oliver E. Williamson, "Credible Commitments: Using Hostages to Support Exchange," *American Economic Review* 83, 4 (1983): 519-40; Lester Tesler, "A Theory of Self-Enforcing Agreements," *Journal of Business* 53, 1 (1981): 27-44.

not fulfilled.[13]

A second form of enforcement is third-party, or *delegated* enforcement, in which institutions are deliberately created in order to settle contracts and oversee their completion. In the context of PCEs, delegation is considered in the following manner. A government initially sets up an incentive scheme for managers of a specially-established holding company and assigns authority over a group of SOEs to this intermediate, third party. As governments commercialize enterprises, sell some shares to private parties, but keep others, the government becomes a legal shareholder in several corporations. In the process, the government separates its contract-negotiating and fiduciary responsibility from other functions, and delegates them to holding companies whose officials serve as state's representatives on boards, and who vote the state's share.

State-owned holding companies, then, act as the state's intermediary, consolidate state's equity in certain industries, negotiate contracts, and strike deals as they see fit. The holding company typically has full control over a portfolio of individual firms. Within the confines of commercial law, holding company managers are free to ask for bids, wait for offers, close firms, sell their companies by auction, and sell shares on the stock market.[14] The question of concern here is how and why this occurs in reality, that is, why delegation is or is not observed in governance structures.

The second critical element of a governance structure is nature of state influence, or the *level of discretionary authority* held by the state, which I define as the ability of politicians to alter, *ex post*, the exercise of the state's fiduciary responsibility in "extra-legal" ways. Commercial codes grant fiduciary responsibility to the state *pro-rata* according to the percentage of company shares held, and for as long as the state is a shareholder in the corporation. As already mentioned, the state is both a participant and a rulemaker; this dual role enables a government to exercise control far in excess of its legal rights. Thus the transfer of control rights from the government to shareholders does not by itself create private control rights if the government holds significant discretionary power and influence. In PCEs this danger is especially large due to the lack of genuine administrative reform in the economic ministries. Reform to date has been limited to formal changes, namely, the dismantling of command structures. In the economic ministries there remains a strong tendency to favor the status quo, and to resist substantial reorganization of bureaucratic missions or inter-ministerial relationships.

By and large, a functioning public administration equipped to deal with the regulatory and supervisory exigencies of a market is not currently in place.[15] As experience

13. Benjamin Klein and Keith Leffler, "The Role of Market Forces in Assuring Contractual Performance," *Journal of Political Economy* 89, 4 (1981): 615-41.

14. This sort of deliberate holding-company arrangement was recommended to reforming Eastern European economies as one means of supervising privatization and restructuring while preventing insider giveaways. Olivier Blanchard, *et al.*, *Reform in Eastern Europe* (Cambridge, Mass.: MIT Press), pp. 43-50.

15. On the problems of administrative reform and administrative discretion in PCEs see Joachim J. Hesse, "From Transformation to Modernization: Adminstrative Change in Central and Eastern Europe," *Public Adminstration* 71, 1/2 (1993): 219-57; Richard Rose, "Problems of Post-Communism: Toward a Civil Economy," *Journal of Democracy* 3, 2 (1992): 13-26; Martin Myant, "Economic Reform and Political Evolution in Eastern Europe," *Journal of Communist Studies* 8, 1 (1992): 107-27; M. Rice, "Public Administration in Post-Socialist

in Russia shows, both politicians and bureaucrats exercise "political" control rights far in excess of that to which they are legally entitled.[16] In transition economies, politicians have been able to use discretionary authority to inhibit the use of private property through controls over licensing, restrictions on uses of real estate, prohibitions on production line changes, limitations on the ability of proprietors to fire employees, and other forms of intervention. The question for governance, then, is to account for that level of state influence.

A Typology of Governance

Four governance configurations are possible given the two characteristics outlined above: whether a special mechanism for contract enforcement exists, and the level of discretion with which the state's fiduciary authority can be exercised. These four arrangements are summarized in Figure 1. For each configuration, the state seeks to establish two things: the locus of responsibility for fulfilling the privatization contract *ex ante*, and the state's ability to intervene *ex post*.

[FIGURE 1]

The first arrangement is what I refer to as *hierarchical agency*. In hierarchical agency or governance, contracting is self-enforced, and parties to the agreement are forced to search for alternative ways to obtain pre-commitments from each other. In addition, the state maintains a large degree of discretionary power. In hierarchical governance it is the state ministries which are responsible for the privatization of assets, and it is the ministry which negotiates directly with prospective investors. Control is exercised as a governmental matter, according to the decrees and directives which are a part of normal bureaucratic activity. Thus hierarchical agency may also be thought of as "state-led" governance, in which state control over the process of privatization, and in the corporation under joint ownership, will be direct, intrusive, and bureaucratic.

Compromise agency occurs where alternatives exist to self-help as a means of contract adjudication. In compromise agency, delegated state-holding companies are the primary institutions which formally negotiate and enforce contracts according to a set of incentives established by the government in advance. There are two variants of this type of agency. In the first variant, called *corporatist agency*, delegated holding-company activities are controlled and influenced by ministries; in *parastatal agency*, by contrast, holding companies function, more or less as semi-independent, autonomous organizations. The term "corporatist" is used here since it properly suggests the small European-state

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Eastern Europe," *Public Adminstration Review* 52, 2 (1992): 116-24; George Schöpflin, "Post-Communism: Constructing New Democracies in Central Europe," *International Affairs* 67, 2 (1991): 235-50; Grzegorz Ekiert, "Democratization and East-Central Europe: a Theoretical Reconsideration," *British Journal of Political Science* 21, 2 (1991): 285-313.

16. Maxim Boycko, Andrei Shleifer, and Robert W. Vishny, *Privatizing Russia* (Cambridge, Mass.: MIT Press, 1995), pp. 19-46; Andrei Shleifer, "Establishing Property Rights," Discussion Paper 1683, Harvard Institute for Economic Research, Cambridge, Mass., 1994.

model of capitalism, in which governments exercise substantial discretion in allocating policy-making responsibility to groups which then behave as representational monopolies. Third-party enforcement coupled with discretionary state control captures the structural essence of corporatist arrangements. Parastatal organizations, on the other hand, are best known in the context of developing countries, where classic parastatal organizations function as the entrepreneurial agent of the state, pursuing business interests and expanding into commercial activities on behalf of a government.[17] Although parastatals, in reality, are hardly always autonomous, the term is used here to suggest an arrangement in which an organization is charged with a special duty (to privatize enterprises; to negotiate with investors) and with which the government deals only through regular, formal channels.

The last configuration is *decentralized agency*, which is found where contracts are self-enforced, and where the level of state discretion is low. In such a case, which might also be termed "market" governance, ministries, and other parts of the economic bureaucracy are only minimally involved; privatization is a matter left to the management of the individual SOE, and to the prospective share investors. Contract adjudication can occur with third-party intermediation but the parties rely on more or less universal institutions—namely, arbitration courts; neither the state nor investors make any effort to establish industry- or firm-specific enforcement mechanisms. More typically, one party will simply exit the relationship. The fiduciary discretion and influence of the state in decentralized agency, finally, is limited.

To repeat the main argument: the allocation of control rights in a PCE is akin to a policy choice. Governance structures or regimes are the formal expression of this allocation of control. Policy choices are shaped by policy processes, or bargaining among decision makers, and between decision makers and affected parties. But the policy process itself—particularly the relationship between politicians and other claimants—is shaped by a variety of influences. In contrast, therefore, to both "strong-state" and Stigler-Peltzman models of policy making, the argument here considers bargaining and associated policy processes to be endogenous. This argument proceeds in two steps:

1. First, the main state and non-state parties form commitments, subject to constraints, to the terms of privatization and the allocation of control rights.

2. Next, public-private bargaining, as a result of these commitments, determines the mechanisms of contract enforcement and fiduciary responsibility, and thus structures corporate governance.

[FIGURE 2]

The framework for this argument is laid out in the next section and the section following. In section III, the constraints which affect the policy orientations of politicians and prospective investors towards firms in an industry are examined. In section IV, these

17. See, for example, Anjali Kumar, *State Holding Companies and Public Enterprises in Transition* (New York: St. Martin, 1993); Merrie G. Klapp, *The Sovereign Entrepreneur* (Ithaca, N.Y.: Cornell University Press, 1987).

concrete policy orientations are described; the connection between these policy orientations and corporate governance is then explored.

III. VALUE CREATION IN VOLATILE MARKETS

The value of the capital stock in PCEs is something which is fundamentally unknown—no one knows with any degree of reliability which assets are productive, which assets are salvageable, and which assets are obsolete. One reason for this high degree of uncertainty is that the value of a SOE is not simply determined by the existing assets on its balance sheet; rather, value creation requires cooperation. Due to deeply-entrenched product and capital interdependencies which have evolved between a SOE, its suppliers, its financiers, and its customers, and due to the incompleteness of risk and externality markets[18], all concerned parties are forced to compromise when valuing and restructuring assets and liabilities. Without compromise, no single party is willing to undertake the risks involved, and resulting deadlocks will force assets to sit idle.[19] Thus SOEs in transition economies are, by default, subject to a version of the "value-dissipation" problem which plagues common-pool property. Common resources lose value because they are overused by individuals attempting to capture non-exclusive income streams from those resources.[20] SOEs, following the collapse of central planning, lose value because their managers are prone to destructive behavior—asset stripping, inventory hoarding, etc.—when the costs of value creation are not known.

Enterprise valuation is a significant burden in PCEs. Both governments and prospective investors are affected by the imperative to create value in a firm. But governments and investors view this task through different lenses, according to different sets of constraints; these must be specified in advance.

Policy Context

On the basis of efficiency alone, politicians would allocate control over SOEs to those most capable of increasing their value. In reality governmental actions are restricted by the policy context which surrounds a particular industry. The relevant constraint

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18. David Newberry, "Missing Markets: Consequences and Remedies," in Frank Hahn, ed., *The Economics of Missing Markets, Information, and Games* (Oxford: Oxford University Press, 1989), pp. 211-2.

19. On the collective-action problems in enterprise reform, see Aydin Hayri and Gerald McDermott, "Restructuring in the Czech Republic—Beyond Ownership and Bankruptcy," Working Paper, CERGE-EI, Charles University and the Czech Academy of Sciences, Prague, 1995; David Stark and László Bruszt, "Restructuring Networks in the Transformation of Post-Socialist Economies," mimeo, 1994; Janusz Dąbrowski, Michał Federowicz and Anthony Levitas, "Polish State Enterprises and the Properties of Performance: Stabilization, Marketization, Privatization," *Politics and Society* 19, 4 (1991): 403-37. For a a conventional (tangible-assets) approach to valuation, see Michael Birch, "Valuation and Privatisation: Main Aspects," in OECD, *Valuation and Privatisation* (Paris: OECD/CEET, 1993).

20. See Elinor Ostrom, *Governing the Commons* (Cambridge: Cambridge University Press, 1990); Yoram Barzel, *Economic Analysis of Property Rights* (Cambridge: Cambridge University Press, 1989); Steven Cheung, "The Structure of a Contract and the Theory of a Non-exclusive Resource," *Journal of Law and Economics* 13, 1 (1970); 49-70.

which politicians face is the domestic political setting inside which privatization decisions for a particular industry take place. For any given industry, the relevant question is: which policy externalities are politically significant?

Policy Externalities. Like all externalities, policy externalities can have the properties of either public, private, or mixed goods, depending upon the ability of one affected party to alter another's vulnerability to the external effect. A public externality is private or excludable if those persons who consume it can prevent others from doing the same. Non-excludable policy externalities, by contrast, occur where an adopted policy, by altering one person's utility in some direction, unavoidably alters everyone else's in the same way.

All industries have policy-related external effects. The range of externalities which derive from a particular policy can be a mixture of public, private, and mixed effects. To a great extent, whether policy externalities are classified as excludable, non-excludable, or something in-between depends upon the frame of reference. Thus policies towards a specific sector or single region (for example, price supports for farmers) have excludable effects with respect to a whole country, but non-excludable effects within agricultural regions. Industries can have spillover effects to parallel sectors, or can lead to competitive gains or losses for suppliers or customers, or can affect the whole nation in terms of economic stability or national security.

Privatization as a policy suggests several plausible kinds of policy externalities, depending upon the kind of privatization scheme selected. Mass privatization, by giving away state assets to the voucher-holding population, can "buy" popular resistance to reform, and thus reduce the likelihood of a political backlash (a non-excludable effect).[21] Although rapid, voucher-based privatization may spread equity over the whole population and thus be seen as a more egalitarian method, however, the fact that it does not usually bring in sufficient capital may threaten the future of a specific firm or industry (an excludable externality). An acquisition through a tender or direct sale, on the other hand, brings in a significant capital increase, but also creates a dominant shareholder. Governments will ultimately decide upon a privatization method, as with any other industrial or economic policy, according to these tradeoffs.

The Marketplace for Policies. The question of whether any of these externalities are excludable, non-excludable, or of mixed character is less a function of the economic characteristics of the industry than it is of the political market. In a political market, individuals and groups demand policies from which they derive some marginal utility; the marketplace for industrial policies determines which externalities can and cannot be consumed, depending upon the organizational strength industry defenders and advocates. At one extreme, excludable policy externalities are present alongside parties that are sufficiently organized to lobby for or against those policies. At another extreme, non-excludable externalities exist, but organized pressure groups do not. In the first case, policy-making bodies are confronted by more intense lobbying pressures; in the second case they are not.

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21. See Gérard Roland, "Political Economy Issues of Ownership Transformation in Eastern Europe," in Masahiko Aoki and Hyung-Ki Kim, *Corporate Governance in Transition Economies* (Washington, D.C.: World Bank/EDI, 1995), pp. 36-40.

[TABLE 1]

Table 1 shows that, in addition to these two extremes, there are two intermediate cases worth considering. Public externalities can be "privatized" if there are well-organized interests capable of constructing exclusionary mechanisms.[22] In any industry which normally carries non-excludable policy externalities—energy, telecommunications, transportation, etc.—the range of techniques which can privatize these externalities in practice is wide. Alternatively, private externalities can be left unconsumed if there are no mobilized, organized groups capable of capturing these externalities. In the first intermediate case, exclusion is created where there was none before, although this may require some expenditure on the part of the affected group. In the second intermediate case, excludable policy externalities remain uncaptured. Thus excludability is a matter of degree, and policy externalities can be more or less excludable depending upon first, the nature of the policy externalities themselves, and second, the resources and organizational capacity of pressure groups and industry defenders in the market for policies.

Monitoring Costs

In addition to politicians, the other significant players are the prospective institutional or corporate investors: conglomerates and holding companies, investment companies, mutual and pension funds, universal banks, or multinational corporations. In PCEs, investors are forced to accommodate to shifting, highly unstable markets. Accounting procedures are not standardized. Environmental liabilities, especially those incurred in the past, are unknown. The extent of a firm's indebtedness is similarly unknown due to the practice of inter-enterprise credit. Traditional raw material and export markets in COMECON countries have collapsed or are highly uncertain. Real consumer demand for products is unknown. Due to these legacies of socialist planning, the costs of value creation in SOEs are unknown.

Active monitoring is a possible solution; this, however, is costly, since it involves holding fairly large equity blocs for a long term and expending resources in acquiring firm-relevant information—exercising "voice" over "exit". Just as politicians are constrained by various policy contexts, investors are constrained by their marginal monitoring costs.

Investor Incentives. Monitoring costs are a function of the incentives which investors face, as well as their individual capabilities. Investors in privatizing industries are more likely to commit to a costly set of control rights if they have reason to believe that a greater reward—some competitive gain or market advantage—awaits them. Evidence from Eastern Europe demonstrates that even heavily indebted, financially weak companies will find investors if these enterprises enjoy strong positions in local markets.[23] That market

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22. On the "privatization" of public goods, see Michael Laver, "Political Solutions to the Collective Action Problem," *Political Studies* 28, 2 (1980): 198-209; Duncan Snidal, "Public Goods, Property Rights, and Political Organizations," *International Studies Quarterly* 23, 4 (1979): 534-44.

23. Wendy Carlin, *et al.*, "Enterprise Restructuring in the Transition: an Analytical Survey of the Case Study Evidence from Central and Eastern Europe," Working Paper 14, European Bank for Reconstruction and Development, London, 1994, pp. 56-7.

position can occur naturally or be guaranteed by barriers to the entry of potential competitors. Governments seeking to lure investors, additionally, can create various incentives through favorable tax, licensing, and regulatory legislation.

Institutional Capacity. Investors will be drawn to markets with differing levels of enthusiasm for the simple reason that some investors are better suited to monitor than others. Investors possess different kinds of resources, different organizational structures, different information-gathering capabilities. These variations will undoubtedly be a factor in any investor's monitoring-cost calculation. Capacities can differ both across and among different kinds of investors. Portfolio investors, generally speaking, are less likely to hold controlling equity in a company over the long term than, for example, investors who are contractually obliged to that company in other ways—such as if the investor is also a debtor, a supplier, a purchaser, or an employee.[24] Even these differences, however, will be affected by legal environment and custom.

Thus the monitoring costs which investors face will be partially determined by the economic characteristics of industries, partially determined by extra-economic factors. Industries which cannot compete even in local markets (particularly high-technology sectors), industries characterized by over-capacities, or industries burdened by large liabilities, are surely less likely to attract investors than industries, *ceteris paribus*, which are economically and financially better-off. But within a given class of industries or enterprises, institutional capacities make all the difference. Those investors with greater experience and expertise in a given industry are more likely to invest in that industry since organizational start-up costs have already been paid and the appropriate monitoring mechanisms or financial channels established.

IV. ESTABLISHING THE RULES OF GOVERNANCE

Commitments

Government and investor commitments are not necessarily the result of strategies chosen deliberately, but are subject to the constraints outlined in the previous section. Governments are affected by the excludability of policy externalities, while investors' preferences are shaped by their ability to monitor equities at relatively low costs.

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24. Shareholder overlap is at the heart of the Japanese *keiretsu* and the German "universal-bank" models of corporate governance. A traditional insight from studies of these economies is that shareholder overlap can lower relative monitoring costs—see Seiichi Masuyama, "Role of Japanese Capital Markets: the Effect of Cross-Shareholdings on Corporate Accountability," in Martha Prevezer and Nicholas Dimsdale, eds., *Capital Markets and Corporate Governance* (Oxford: Clarendon Press, 1994); Gary Gorton and Frank Schmid, "Universal Banking and the Performance of German Firms," Working Paper, Wharton School, Philadelphia, Penn., 1994; Mark J. Roe, "Some Differences in Corporate Structure in Germany, Japan, and the U.S." *Yale Law Journal* 102, 8 (1993): 1927-2003; Stephen D. Prowse, "The Structure of Corporate Ownership in Japan," *Journal of Finance* 48, 3 (1992): 1121-40; John Cable, "Capital Market Information and Industrial Performance: the Role of West German Banks," *Economic Journal* 95, 377 (1985): 118-32. On the implications of shareholder linkage for Eastern European economies see Cheryl W. Gray and Rebecca J. Hanson, "Corporate Governance in Central and Eastern Europe: Lessons from Advanced Market Economies," Working Paper 1182, World Bank, Washington, D.C., 1993.

Government Unity. Governments are composed internally of several groups: pluralist governments are composed of different political parties; even undemocratic governments are composed of factions. In making a choice among alternative methods of value creation for an industry, a government must ultimately bring its factions in line. Depending upon the depth and permanence of intra-governmental cleavages, governments will have varying degrees of difficulty in acting with a single voice.

I define a *unified* commitment as one in which the parties comprising the government agree *ex ante* upon how to manage relevant policy externalities. *Divided* commitments lack consensus, and the level of unity or division in a governmental strategy is a matter of continuous degrees.[25] In a cross-national model, governmental unity could be exogenously determined. With a single government, however, differences in unity must be explained by the nature of the issues on the agenda and by the interest-group dynamics involved; some issues, as a result, are simply more divisive than others. In other words, decision-making unity is a function of the significant policy externalities associated with a particular issue.

Excludable policy externalities make a divided government more likely. Politically significant excludable externalities, by definition, imply that the market for policies is filled with well-organized, coherent, active pressure groups, who have attempted to capture exclusive income from these externalities, or have attempted to "privatize" public externalities in order to make their income streams exclusive. Under these circumstances the sort of clientelistic phenomenon described as "regulatory-capture" is more likely, as governmental factions or parties become increasingly the focal points for organized pressure. In such a setting, intra-governmental rifts are probable, as different ministries and agencies become more submissive towards different constituencies. Choosing the means for externality management in this environment will not be a consensual affair.

By contrast, where policy externalities are relatively non-excludable—because markets for policies are weak, that is, are without well-financed, organized, interest groups—then a unified approach is more probable. Politicians will face fewer competitive, rent-seeking pressures, even where the potential externalities are private. Without a major threat of winners and losers mobilizing for or against particular factions and parties, a government can speak with a united voice. One implication of this argument is that a government strategy, once selected, tends to be self-reinforcing. Divided commitments allow winners and losers, in the aftermath of a policy choice, to prevent their gains from being appropriated or to counter their losses by fortifying relations with sympathetic parties. A unified commitment, on the other hand, tends to insulate decision-making from external pressures even once interests do become organized.

Competition for Control. For every possible investment, some investors will be interested in control or "voice" (long-term, large equity blocs), others in liquidity or "exit"

25. If one assumes that a "government" is simply a bundle of incentive contracts specifying control rights over various kinds of decisions to various agents (branches of government, executive departments), then a completely "divided" government would be motivated by optimal contracts which are "fully separating" (i.e., each government agent would be offered a different incentive scheme).

(quickly-tradeable equities).[26] Equity-purchase decisions are constrained by relative monitoring costs. Investors who can monitor equities at a relatively low cost—because the combination of incentives and institutional capabilities yields a positive marginal pay-off—will generally have a preference for larger-bloc, less-liquid purchases than is true for higher-cost monitors. This trade-off between voice and exit is a convenient way to conceptualize the "market for control" in any particular industry. For any industry or firm, competition in the market for control, by definition, is reflected in the median preference for holding majority-equity blocs over the long term. In other words, the more that long-term control is generally favorable to short-term control, the greater the competition between investors for control rather than liquidity. Industries for which there is an overwhelming preference for liquid equity, by contrast, will experience a correspondingly lower degree of investor competition for control.

Agency Relationships

On the basis of these commitments we can now specify the resulting organizational forms in the terms described in the first section. Commitment determines how two elements of governance—contract enforcement and state influence—will be structured. Table 2 and Figure 3 integrate the independent and dependent variables.

[TABLE 2]

Control and Delegation. The first hypothesis of governance structure is that a stronger median preference for control among investors will lead to delegated contract-enforcement—to third-party holding companies. By contrast, lesser competition for control will lead investors and governments toward self-enforced contracts. Consider two firms, Firm A and Firm B. Firm A is a ripe candidate for a direct sale because of the presence of low-cost monitors in that industry. Firm B, due to the absence of low-cost monitors, can only find portfolio investors. In designing a purchase contract—and therefore a method of privatization—for each company, privatization authorities must credibly commit to certain terms of the purchase. These terms will likely be far more complicated for Firm A than for Firm B. For Firm A, a government must specify a timetable according to which share blocs will be sold and for what price. The selling government must also specify in advance what, if any, assistance to give the buyer, and in what form, as well as the penalties.[27] For Firm B, on the other hand, no such special contract is involved. The government, it is assumed, will uphold generally applicable laws and commercial codes: disclosure rules, stock-exchange oversight, financial regulations, etc. Indeed, these functions may be and often are "delegated" to third-party agencies; the claim here, however, is that no firms-specific enforcement mechanisms will be necessary. Thus the government will find it more

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26. On the trade-off between voice and exit options, see John C. Coffee, Jr., "Liquidity Versus Control: the Institutional Investor as Corporate Monitor," *Columbia Law Review* 91, 6 (1991): 1278-369.

27. Direct sales typically involve agreements for the government to guarantee credit, to write-off past environmental liabilities or debt overhangs, to protect the final-product market from imports, to maintain price controls for inputs, etc.

difficult to commit to all the variables in the privatization of Firm A than for Firm B.

Additionally, investors fear that a government may renege on privatization terms *ex post*, or may use its market position to extract further concessions and entitlements—the time-consistency problem. As a result, a government will face a more severe credibility problem where the market for long-term control is competitive, and where purchase contracts are more complex.[28] Now suppose that the government assigns authority over privatization in this case to an intermediate party. The government then designs a suitable, simple incentive contract for the intermediate party, giving it formal responsibility over the enterprises. If investors believe that the government can credibly commit to the incentive contract for a third party more effectively than to the privatization contract, then a government can avoid its credibility problem by delegating contracting responsibility to an independent organization.[29]

Division and Discretion. The second hypothesis of governance is that a divided government will devise instruments by which it can exercise considerable discretionary influence as a shareholder. Such instruments include ministerial representation on boards, or the avoidance of governance boards altogether in place of improvised agreements between ministers and enterprise management. An example of the latter in the Czech Republic are the ministry-directed "enterprise commissions" (composed of ministry officials, firm management, creditors' representatives, and others) which allow ministries to implement production-line, organizational, and management-labor changes without requiring a vote by the board. Other instruments of state discretion are: *ad hoc* "infrastructure" allowances in budgetary rules which, in exception to restrictive fiscal policies, allow governmental authorities to provide funds indirectly to certain enterprises; impromptu exemptions from wage or tax laws, anti-trust regulations, or environmental audits, any other means of intervention by the state in a manner beyond that which is explicitly mandated by the rules of the original purchase agreement.

Discretion in PCEs solves three inter-related problems. First, discretion allows the kind of flexibility which rules do not, not being limited to *ex ante* specifications. This flexibility is valuable to a fragmented government in which ministries and agencies are motivated by different incentives.[30] Second, discretion allows opacity where rules do not.

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28. For a discussion of credibility problems as a rationale for delegation see Nahum Melumad and Dilip Mookherjee, "Delegation as Commitment: the Case of Income Tax Audits," *RAND Journal of Economics* 20, 2 (1989): 139-63; Morris Fiorina, "Group Concentration and the Delegation of Legislative Authority," in Roger G. Noll, ed., *Regulatory Policy and the Social Sciences* (Berkeley: University of California Press, 1985), pp. 177-97; Kenneth Rogoff, "The Optimal Degree of Commitment to an Intermediate Monetary Target," *Quarterly Journal of Economics* 100, 4 (1985): 1169-89; Bengt Holmström, "On the Theory of Delegation," in Marcel Boyer and Richard Kihlstrom, eds., *Bayesian Models in Economic Theory* (New York: North Holland, 1984); Kenneth Arrow, *The Limits of Organization* (New York: W. W. Norton, 1974).

29. Melumad and Mookherjee show formally that governments can design incentive or budgetary schemes for third parties such that the ensuing "subgame" (between the third party and investors in this case) has a unique equilibrium which achieves the full-commitment welfare level. Thus full commitment welfare is attainable under limited commitment with delegation. See *Ibid.*, pp. 153-7.

30. See, for example, Jean Tirole, "The Internal Organization of Government," *Oxford Economic Papers* 46, 1 (1994): 1-29; Jean-Jacques Laffont and Jean Tirole, *A Theory of Incentives in Procurement and Regulation* (Cambridge, Mass.: MIT Press, 1993), esp. chapter 11; Bengt Holmström and Paul Milgrom, "Multitask Principal-

Arms-length control is subject to oversight by other parts of government, including (but not only) legislatures and courts. Discretionary control obviates the need for executive-legislative bargaining or inter-ministerial negotiation and is therefore especially advantageous when branches of government or ministries are split over policies and laws. Finally, discretion reduces the vulnerability of SOEs to collapse. With discretionary power, politicians can "shelter" favored industries or enterprises within friendly parts of government. This last possibility is also invaluable to parties or factions whose political futures are in doubt, and who seek ways to shield the groups upon which they rely for concentrated support.[31]

Divided governments are more prone to discretionary behavior than are unified governments. In a divided government, where each party comprising the government faces different incentives, it is in the interest of every party or faction to behave in a discretionary manner towards its favored industries regardless of what the other party does. If one party ties its hands while the other does not, then the party restricted by *ex ante* rules inevitably loses because it will be unable to engage in the kind of intervention necessary to assist or shelter its industries. For this reason, divided governments tend to embrace the broadest range of channels for economic intervention. Unified governments, by contrast, are not split by diverging incentives, and thus do not need the safeguards of discretion.

[FIGURE 3]

Summary

Figure 3 shows the agency types which derive from different combinations of government unity and investor preference. The main argument is summarized in the four hypotheses below:

> 1: *Significant, excludable policy externalities for any industry divide the governmental commitment to the privatization of that industry; non-excludable externalities allow greater governmental unity.*
>
> 2: *For investors, the higher the monitoring costs for any investment the greater the preference for liquidity over control, and the less the overall level of competition in the market for control; low-cost monitors prefer control, with greater competition in the market for control being the result.*
>
> 3: *Competition for control leads to the delegated enforcement of contracts; the greater*

Agent Analyses: Incentive Contracts, Asset Ownership, and Job Design," *Journal of Law, Economics, and Organization* 7, Sp. (1991): 24-52.

31. On the related subject of "political" uncertainty and its effects on agency structure in public bureaucracies, see Terry M. Moe, "The Politics of Structural Choice: Towards a Theory of Public Bureaucracy," in Oliver E. Williamson, ed., *Organization Theory: from Chester Barnard to the Present and Beyond* (New York: Oxford University Press, 1990); T. Moe, "The Politics of Bureaucratic Structure," in John E. Chubb and Paul E. Peterson, eds., *Can the Government Govern?* (Washington, D.C.: Brookings Institution, 1989).

the preference for liquidity, the more likely that purchase contracts will be self-enforced.

4: *Divided governments embrace discretionary behavior; unified governments tend to vote shares at arms length.*

V. INDUSTRY EVIDENCE: IRON-STEEL AND PETROCHEMICALS

The remainder of this discussion examines whether the framework for corporate governance outlined above is empirically justified. The privatization experience of two "heavy" industries in the Czech Republic between 1990 and 1995 is summarized in this section.

Case Selection

In terms of economic, historical, and structural characteristics, both industries have highly identical profiles. Steel (raw iron and steel, rolled products) and petrochemicals (petroleum refining and the manufacture of petroluem by-products) are similarly located in the industry "food chain": both production lines are indispensable to the subsequent production of a wide array of industrial goods, and thus both represent branch points for heavy industry. In the Czech lands both industries historically grew as subsidiaries of or partnerships with Austro-Hungarian and German industrial concerns in regions close to their respective feedstocks and fuel sources—steel in the coal-mining regions of Northern Moravia, petrochemicals in the lignite fields of Northern Bohemia. Steel and petrochemicals were the twin pillars of the 40-year Communist effort to make Czechoslovakia the heavy-industrial center of the East Bloc. Both industries were entirely swept under state ownership as part of the Beneš Decrees of 1945 and the second wave of nationalizations following the establishment of the Socialist Republic in 1948. Following the third five-year plan (1958) enterprises in both industries were also consolidated into fewer and fewer large VHJ-trusts—the so-called "economic-production units."[32]

Both industries were hit hard by the collapse of COMECON trade. Both industries relied on the Ruble Zone—especially the USSR—for final-good exports. Both industries also depended heavily on the USSR for critical raw materials: ore in the case of steel, oil

32. The VHJ (*výrobní hospodářská jednotka*) system was set up as part of the planning-mechanism reforms. Their purpose was to improve coordination by the State Planning Commission, and yet allow greater enterprise participation in the elaboration of annual plans. Thus VHJs were set up to serve as a "middle layer of management" for each industrial sector. Within each sector, a VHJ was to act as a monopoly-conglomerate, coordinating upstream-downstream relations, investment demands, R&D, trading relations, and labor issues of the firms under its supervision, which were to behave as its subsidiaries. The VHJ industrial structure was revised on several occasions between 1958 and 1988, when they were abolished. For surveys see Lenka Kališová and Miroslav Gregus, "Economic Reforms and Enterprise Behaviour in Czechoslovakia, 1945-1989," Working Paper, CEU, Prague, 1991; Jarmila Pavlátová, *Hospodářské právo* (Prague: SNTL, 1982); Miroslav Rosický, *Organizace výrobní základny a plánovité řízení ekonomiky* (Prague: Svoboda, 1980).

in the case of petrochemicals.[33] Table 3 lists some economic and financial numbers for each sector. Both industries can be classified as "capital intensive," and both suffered severe cash shortages after the end of socialist planning. Both industries were also characterized by tremendous over-capacities in output (in per capita terms) and labor (as percentage of total industry), both within the local market and with respect to the rest of the world (steel and petrochemicals being, internationally, declining industries). As the table shows, both industries were also heavily concentrated domestically—as they have been historically—with most sales and output accounted for by a handful of giant enterprises.

[TABLE 3]

The Czech steel and petrochemical industries are also squeezed between restricted markets in the EU (which has levied duties against Czech products), and import competition from countries further east which produce the same goods more cheaply. The actual plants in both industries are, additionally, saddled with technological obsolescence, environmental liabilities, and huge debt overhangs. The blast furnaces and rolling mills, oil refineries and crackers within the Czech Republic have not been upgraded in excess of two decades, and all these units are extremely energy intensive compared to their Western European, U.S., and Japanese counterparts—currently the biggest steel and petrochemical producers. Serious pollution near facility sites, including contaminated soil and ground water, and high-sulfur emissions, is the result of decades of unsupervised manufacturing and waste disposal. Labor productivity is likewise low compared to the Czech companies' major competitors in industrialized nations. Both industries, finally, relied heavily on the practice of purchasing inputs on credit between 1989 and 1992, as bank loans dried up.

In short, steel and petrochemicals symbolize all that was chronically inefficient about state-central planning in the Czechoslovak Socialist Republic, and all that stands in the way of industrial restructuring and enterprise recovery.

Constraints

Despite this strong likeness, however, the Czech steel and petrochemical industries involved strikingly different constraints for both the Czech government and prospective investors. In brief: the steel industry represents an illustrative case of highly-excludable policy externalities, while the petrochemical industry is an equally-as-instructive case of non-excludable externalities; on the other hand, few low-cost monitors could be found for the steel industry, while petrochemicals found a larger presence of investors—both domestic and foreign—with lower monitoring costs.

Policy Context. Steel market externalities were highly excludable partly due to the nature of the industry itself, partly due to the political market for steel policies. Above all, the geographic concentration of the basic iron and steel industry involved highly excludable effects. As mentioned, the three biggest mills—the Vítkovice company, the Nová Huť

33. Ore deposits were basically depleted by the end of the 1980s, and Czech and Slovak mills were forced to rely entirely on Soviet ore imports. The chemical plants, on the other hand, stopped using soft coal for feedstock and shifted towards Soviet crude oil imports in the 1960s and 1970s.

Ironworks, and the Třinec Ironworks—were all located in the Ostrava-Karvina basin of Northern Moravia. These mills were built in a hard coal-rich industrial area. The dominant coal producer in the Czech Republic, the Ostrava-Karvina Mining Company (OKD), was also located in the same district (*okres*), and was the sole supplier of coking and steam coal to the three mills. In fact, 63% of all coking coal produced at OKD is still sold to the three mills; the rest is put into OKD's own coking plants around the country.[34] OKD thus depended upon the mills for revenue just as much as the mills depended on the coal producer for inputs. That this highly interdependent cycle of iron and steel production was located in a single district lent a strong "regional" character to steel industry issues.

More importantly, after 1989, all these plants began to shed labor in anticipation of commercialization (conversion to joint-stock status) and privatization.[35] The three iron and steel mills were among the largest industrial enterprises in Czechoslovakia at their peak, employing upwards of 40,000 persons at Vítkovice, 25,000 at Nová Huť, 20,000 at Třinec. OKD, with over 85,000 persons, was also one of the largest employers in the country. But by 1991, the Ostrava-Karvina region had the highest unemployment in the Czech lands at 9%, a figure which has more or less persisted to the present. In a country where, for the past four years, unemployment (between 2% and 4%) has been the lowest in Europe, Eastern or Western, the region in which unemployment hovers between 8% and 11% deserved special attention.

The steel industry also carries substantial downstream effects for the main users of raw and rolled products. One of the largest consumers was the noble steel producer Poldi Steel, located outside Prague. Poldi, the monopoly specialized steel maker, had its own basic rolling mills, but also purchased inputs from the three Moravian mills. Poldi and the three large Moravian mills (the "big four") accounted for 74% of all fixed capital in the domestic iron and steel sector, 78% of all labor, and 95% of all total output.[36] Additional downstream users were the huge machinery and engineering combines ČKD and Škoda-Plzeň, as well as the several other Czech and Slovak machinery, machine-tool, and metal-working concerns, and armaments manufacturers.

In general, policy-making in post-Communist Czechoslovakia was not characterized by extensive lobbying. Most of the industry pressure groups were simply too new, too poor, or too divided by internal tensions to articulate a clear agenda and lobby ministers and MPs. The majority of post-1989 labor union and business association heads were new to the job. More often, they simply did not know what their "interests" were or what they should be. The exception to this rule, however, was the iron and steel sector; here the presence of allied, well-organized pressure groups in the political marketplace sharpened the excludability of policy externalities. Along with iron and steel, practically all parallel, upstream, and downstream sectors affected by adjustment in the iron and steel industry were represented by their own labor unions and employers' associations. The Metalwork-

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34. IEA, *Energy Policies of the Czech Republic* (Paris: OECD/IEA, 1994), pp. 151-60.

35. "Hutnictví železa: předimenzovaná nabídka," *Ekonom* 37, 53 (1993): 37-8.

36. Calculated from Ministry of Industry and Trade of the CR, *Současný stav hutnictví železa České republiky*, Report to the Cabinet no. 44301/93, Prague, November 22, 1993.

ers Union (KOVO) and the Iron and Steel Federation (OSHŽ) which represented the big four, were among the more sophisticated Czech industry lobbies. In addition, enterprises in the iron and steel industry had on their side the most powerful "heavy industry" lobbies: the militant Miners Union, the Mining Industry Association, the Machinists Union, and the Machine-Tool Industries Association. In addition to the OSHŽ, the big four maintained overlapping memberships in the regional Moravian and Silesian Enterprises Association, the Union of Forges, the Association of Iron Foundries, the Plant Manufacturers and Engineering Suppliers Association, and the armaments industry lobby, the RDP.

These organizations, individually, were generally characterized by strong financial backing, clearly-articulated programmatic agendas, and aggressive lobbying.[37] Together they lobbied to exempt iron and steel from rapid, voucher privatization, and pushed both the 1990-92 Civic Forum government of the Czech and Slovak Federal Republic (CSFR) and the post-1992 coalition government in the Czech Republic to underwrite the social stability of the iron and steel regions. KOVO and OSHŽ, supported by the miners, wanted the government to cover the costs or early retirements and to provide salary compensation for poor health.[38] Strikes in Ostrava-Karvina in November 1990, and the threat of a nationwide strike softened the governments opposition to wage supplementation.[39]

Excludable externalities were also present, of course, in the petrochemicals sector.[40] But although there were huge downstream effects for the main petrochemical feedstock users—industrial and specialized chemical manufacturers, rubber and plastic producers—these were never politically significant. The petrochemicals industry was also less geographically concentrated than the iron and steel mills, with the largest plants built all along the Elbe River basin. But the petrochemicals sector did not have the lobbying strength of iron and steel. The main business association representing petrochemical companies—the Association of Chemical Industries (SChP)—did not develop the cross-cutting organizational ties and networks of the OSHŽ. Nor did the SChP coordinate with its logical downstream partners—the Association of Czech Plastics Manufacturers, or the Pharmaceutical Industry Association. Neither the SChP nor the chemical industry trade union (OSCh) developed the kind of local, regional base which the OSHŽ and KOVO used so effectively; the SChP and OSCh could not, in the opinion of both enterprise management and SChP-OSCh leaders themselves, represent industry interests from Prague without branch offices in the major petrochemical areas. Another disadvantage was that

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37. Vladislav Flek, *Employers' Unions in the Czech Republic* (Prague: Friedrich Ebert Foundation, 1993), pp. 35-9; Alena Buchtíková and V. Flek, "Wage Determination in Czechoslovakia: Government Power versus Trade Union Power," Working Paper 2, Institute of Economics, State Bank of Czechoslovakia, Prague, 1992; Michael C. Burda, "Labour and Product Markets in Czechoslovakia," *European Economy*, Sp., 2 (1991).

38. HŽ, a.s., *Průmyslová politika, ingerence státu k hutnímu průmyslu* (Prague: HŽ/BBDS, 1994), pp. 4-5; "Odborový svaz KOVO a ekonomická transformace," *Ekonom* 36, 1 (1992): 30-1.

39. Martin Myant, "Trade Unions in Czechoslovakia," mimeo, University of Paisely, October 1993, pp. 15-6; M. Myant, *Transforming Socialist Economies* (London: Elgar, 1993), pp. 200-1; Vladislav Flek, "The Concept of Industrial Relations Applied in Czechoslovakia," *Prague Economic Papers* 2 (1993).

40. Two giant refinery-petrochemical complexes (Chemopetrol, Kaučuk), two smaller refineries (Koramo and Paramo), two large consumers of petrochemical feedstocks (Spolana and the Sokolov Chemical Works), the monopoly gasoline distributor in the Czech lands (Benzina), and the Czech pipelines operator (Petrotrans) made up the Czech petrochemicals sector.

the chemical plants represented by SChP could not agree on basic industry positions—for example, whether prices of petroleum feedstocks should be controlled.

More significantly, certain non-excludable externalities overshadowed the excludable effects due to the fact that oil is both a raw-material input *and* a fuel. Mainly, the petrochemical industry was a vital part of the struggle for oil security in the Czech Republic. Changes in the energy-price structure, as well as in the supply, of of oil following the break-up of COMECON exposed Czechoslovakia's economic dependence on the unstable and potentially hostile states over whose territory crude oil was transported. The struggles involved disputes both between the Czechoslovak Federation and the disintegrating Soviet Union, as well as between the Czech and Slovak republics prior to and following their separation. Ninety-nine percent of Czech and Slovak crude oil was imported, and all of that was delivered by the "Friendship" (*Druzhba*) pipeline from the USSR.[41] But Czech and Slovak authorities fought fiercely over how best to diversify crude oil supply—whether to connect to the Transalpine pipeline *via* a shorter, cheaper but lower-capacity line from Slovakia to the Adria-Vienna line in Austria, or whether to build a longer, costlier, larger-capacity line between Ingolstadt in Bavaria and the Czech refining center in Kralupy-Litvínov. The battle for control over oil between the Czechs and Slovaks continued when the Federation split in January, 1993. The governments clashed over dividing operating revenues and share capital of the crude oil pipeline; the Czech side, now having to rely on crude transported over Slovakia, feared that the Slovaks might use the pipeline for economic leverage.[42]

The largest local refinery-petrochemical companies—Chemopetrol and Kaučuk—featured prominently in the new search for oil security, since these companies refined practically all crude oil in the Czech Republic. The MPO, as well as enterprise management, also realized that Chemopetrol and Kaučuk would have to compete with the regional giants in a saturated Central European petrochemicals market—ÖMV of Austria, Leuna of Germany, now Slovnaft of Slovakia. These factors, along with the absence of active, organized interest groups, made the Czech petrochemical sector, unlike iron and steel, a sector of "national" (non-excludable) importance.

Monitoring Costs. Monitoring costs for investors in the Czech iron and steel industry were high. With the exception of Poldi, all iron and steel companies were profitable (although those profits had fallen slightly). Cheaper Ukrainian and Russian steel, however, began flooding the Czech market in 1990-91. Moreover, German, French, and Italian steel producers complained to Eurofontes—the EU iron and steel confederation—about Czech product dumping, and successfully argued for tariffs against Czech pig iron and seamless tubes (the main Czech exports). In addition to import competition and export restrictions, each of the three Moravian mills had their own narrow specialty—slabs and plates for Vítkovice, construction steel and tubes for Nová Huť, and long rolled products for Třinec. These production lines did not overlap, and the estimated

41. Through the Friendship line, Czechoslovakia became the largest importer of crude from the USSR. The only other pipeline, the Adria, was shut off in 1991 with the beginning of civil war in the former Yugoslavia.

42. "Czechs become edgy as pipeline set to split," *East European Energy Report* January 15, 1993, p. 11; "Country's division will bring about higher crude oil prices," *ČTK Business News*, December 31, 1992, p. 14.

revenue from each of these single products was considered too small to justify large investments. Finally, the holding company structure of the big four also raised relative monitoring costs for long-term investors. Thus despite boasting flexible production lines, Poldi also had difficulties in finding foreign investors. The holding-company structure which all four companies adopted in 1990-92 allowed complicated networks of cross-subsidization between the main metallurgical and machinery subsidiaries to develop by which debts and receivables could be shared among business units. Investors' naturally wanted the iron and steel units to be financially independent, not wanting to absorb hidden liabilities.

Investors in the petrochemicals industry, in further contrast to those in iron and steel, faced lower relative monitoring costs. In the petrochemicals sector there were both domestic and foreign investors who faced strong incentives and who had the institutional capacity to make large-equity purchase. Large oil MNCs, if they acquired controlling shares in Chemopetrol of Kaučuk, would be guaranteed a large domestic market share. Additionally, the Czech gasoline retail business was booming, and several oil MNCs had already leased gasoline stations from the former monopoly Benzina. The refining parts of Chemopetrol and Kaučuk, however, accounted for 80% of total profits (the rest derived from the agrochemicals and rubber-plastic facilities). The actual petrochemical operations, on the other hand, were mostly loss-making. Thus the foreign oil MNCs were interested in only the refining and distribution parts of the enterprises.

The major domestic investor in the petrochemicals sector was the former chemicals trading monopoly Chemapol—one of the biggest Czech companies ranked by sales. Through Chemapol, prior to 1990, all chemical raw materials were imported, and all intermediate and finished goods were exported. Approximately one-half of Chemapol's total turnover in those years came from crude oil imports. In 1990, Chemapol's trade monopoly license was revoked, but in the two years following, the company continued to import 95% of all crude oil coming into the Czech lands. Chemapol's quasi-monopoly, however, was threatened by foreign participation in the local petrochemicals market, and by the proposed Ingolstadt pipeline. For defensive reasons—to prevent the erosion of its revenue sources—Chemapol faced strong incentives to invest in local producers.

Chemapol also possessed unique organizational features which made the company well-suited to monitor long-term industrial investments in the general chemicals sector. First, Chemapol had, over forty years, acquired a great deal of knowledge about the local chemical market. Unlike other trading houses—which were state enterprises—Chemapol was converted to joint-stock status in 1968. As an experiment in a new organizational form, the State Planning Commission and the Ministry for Chemicals gave shares in Chemapol to all the largest Czech chemical companies—including Chemopetrol, Kaučuk, Koramo, Paramo, Spolana, Sokolov, and Benzina—as well as the Czechoslovak Trade Bank. There was no need to privatize Chemapol; as the privatization of Chemapol's share owners proceeded, Chemapol was automatically privatized. Its supervisory board consisted of more-or-less permanent representatives from the largest petrochemical companies. Second, Chemapol's network of offices in Western Europe and in the rest of the world gave the company a large bank of information about non-COMECON export markets. Chemapol's monitoring costs were significantly lowered due to its specialization and expertise in the

chemicals industry, its long-standing connections with vital markets, and its inter-locking directorates with most of the local chemical producers.

What about the iron and steel monopoly trading houses? The two main iron and steel traders, Ferona (basic iron and steel) and Ferromet (high-grade steel), had neither Chemapol's incentives nor its institutional resources. After their own monopoly licenses were revoked in 1990, these companies were not forced to rely on their former clients for revenue. First, the big four all found it more cost-effective to establish in-house trade departments to handle raw material imports and intermediate or finished goods exports. Ferona found other trading partners quite easily. Ferona had also recently purchased the exclusive rights to sell in the Czech market Slovak steel from the East Slovak Ironworks. A joint venture with Austria's largest metals producer, Vöst-Alpine Stahl, enabled Ferona to "sell off" virtually all of its liabilities. Ferona also began to concentrate on lucrative local retail-steel sales (hand tools and other consumer-steel products). Ferromet, on the other hand, was involved in a damaging legal fight with its main former client Poldi over trademarks and selling practices. Neither Ferona nor Ferromet, finally, built Chemapol's network of official and unofficial contacts.

Commitments

Hypotheses 1 and 2 predict that, in the iron and steel industry, the government should be forced to adopt a divided commitment due to excludable policy externalities, while the market for investor control should not be competitive due to high monitoring costs. On the other hand, the opposite should be true for petrochemicals: unconsumed and non-excludable externalities should lead to a unified government commitment, while the presence of low-cost monitors should lead to a investor preference for control over liquidity.

Government. From the outset, the government was split over how to privatize and restructure the iron and steel industry. A study commissioned by the Federal Ministry for Economy in 1991 recommended that steel output in the CSFR should be reduced from the present level of 15.5 million tons (roughly one ton per person) to 9 million tons, and that employment be reduced from 153,000 persons to 45,000 by 2000.[43] The Czech Ministry of Industry argued for exempting the big four from voucher privatization altogether, citing the threat of economic social dislocations to steelworkers and miners who depended on the mills. The Czech Ministry for Privatization, on the other hand, opposed the exemption of any sector from the rapid search for private owners. For the next year the Privatization and Industry ministries battled over the control of iron and steel.

Except for a small part of Třinec, all of the iron and steel firms were eventually left out of the first wave of voucher privatization. But the inter-ministerial conflicts were mostly passed on from the CSFR government to the new Czech government in 1992. Iron and steel issues were not so much reflected in party differences as they were in disagreements between those ministries sympathetic to the unique issues surrounding iron and steel, and those opposed to special treatment. Against the postponement of privatization, against

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43. Sema Group and Berger & Partner, *Program restrukturalizace ČS. hutnictví*, Report to the Federal Ministry for Economy of the CSFR, Prague, June 1992.

subsidies, and against the restructuring of iron and steel enterprises under state ownership were the Ministry of Economy, the Finance Ministry, and the Ministry for Privatization (MSNMP). The FNM and MPO, on the other hand, were more supportive of special treatment for the iron and steel industry. The new government was, in this way, split over several issues. First, there was the question of what to do with the miners. Fearing a chain effect, the government, after substantial internal disagreements, continued the previous government's emergency aid to OKD to offset losses and to cover the large debts which the Moravian mills had run up. OKD was permitted, in a notable exception to the Economic Competition and Protection Act, to maintain its monopoly on the mining of iron ores. Second, the FNM and the Metals Division of the MPO outlined a modernization plan for the three Moravian mills involving credit guarantees for the construction of continuous casting (concast) mills and energy-saving "mini" mills. To this the MSNMP along with the Finance and Economy ministries were strongly opposed.[44] A third point of dissension was the sale and reorganization of Poldi: again, the Economy and Finance ministries along with the MSNMP opposed delays, while the MPO and FNM argued for special care. In the end, only Třinec entered the first voucher wave, while Vítkovice and Nová Huť sold small portions of their shares in the second wave. Poldi was sold in a public tender. In all companies except Poldi, however, the government continued to hold on average two-thirds of all shares.

Both the 1990-92 government of the CSFR and the coalition of the Czech government after 1992 were in strong agreement regarding the strategic nature of the petrochemicals industry. Unlike the iron and steel industry, for which the key ministries were unable to agree on any set of objectives, three principal goals were immediately set for the petrochemicals industry: (1) greater independence from crude oil sources in the former USSR; (2) minimal distress for downstream petrochemicals users; and (3) a reorganized Czech refining industry capable of competing with the largest refiners in Slovakia, Germany, and Austria. The government agreed to establish a state-owned subsidiary of Chemopetrol and Kaučuk—MERO—to build the Ingolstadt pipeline.[45] Additionally, the Ministry of Finance agreed to control petrochemical feedstock prices. Finally, the government also agreed to separate the refineries at Chemopetrol and Kaučuk from the other operations, and to hive them off into a new company, the Czech Refining Company (ČRS), thus creating a single, large refinery. The privatization program outlined for petrochemicals was designed to allow continuous supervision of the enterprises and all prospective private owners. With the exception of Spolana, all of the enterprises were partially sold in the second wave, the government keeping between 30% and 40% of shares in the companies.[46]

44. *Hospodářské noviny*, February 24, 1994, p. 2; *Hospodářské noviny*, January 25, 1994, p. 3; *Hospodářské noviny*, December 7, 1993, p. 2.

45. The Czech government later agreed to guarantee loans to MERO. Ministry of Finance of the C.R., *Informace o rozvojovných projektech k poskytnutí státních záruk, resp. využití účelových vládních úvěrů*, Report to the Council of Economic Ministers no. 589/93, Prague, October 20. 1993.

46. The government held a larger share in Sokolov, but only after the collapse of an acquisition deal with Dow Chemical in 1992.

[TABLE 4]

Investors. Iron and steel enterprises did not find many investors obviously interested in long-term control. The notable exceptions were Kaiser of the U.S., and Mannesman Demag of Germany; these companies were more interested in concast steel and high-grade steel joint-ventures than in actual acquisitions. But Kaiser's negotiations with Poldi and Nová Huť as well as Mannesman's discussions with Nová Huť all collapsed before any final decision could be reached, due to problems over past environmental liabilities and inter-firm indebtedness. Vítkovice, Nová Huť, and Třinec had, between 1991 and 1993, established several joint ventures with European and American companies for the production of special alloys or cast goods such as wheels, nuclear plant parts, valves, and machine tools. But neither these three companies nor Poldi could finalize investments in actual steel making with any partners. Instead, venture-capital companies, investment banks, "paper" companies, and portfolio investors showed greater interest.

Investments offered also typically involved complicated financing arrangements and escape clauses to allow investors "quick exit". Half of Poldi's steelworks, for example, was purchased by the French banking consortium Maison-Lazard in 1992 on the condition that Poldi would be reorganized then gradually sold to other investors. But within three months, Maison-Lazard was looking to unload its initial purchase. When the public tender was announced for Poldi's steel subsidiary shortly thereafter, venture capital companies showed the greatest interest.[47] The company was eventually sold to the highest bidder—a medium sized Czech handicraft company—which actually had no way of paying for the shares until after a loan of its own was approved.[48] In a second case, an American shell company known as the "Intercontinental Steel Corp."—a company with no capital—offered to buy the mini mill to be constructed at either the Nová Huť or Třinec site (the Cabinet was to decide where). But Intercontinental proposed a complex financing arrangement requiring government loan guarantees, and by which it would lease the plant for 15 years before committing to a final purchase.[49] Intercontinental's offer was ultimately rejected, and in the year since, no subsequent investment has been approved in any of the Moravian mills.

Immediately after the framework for petrochemicals privatization was announced, by contrast, the refining company formed from Chemopetrol and Kaučuk, ČRS, received bids for 49% control from four foreign oil companies—Agip-Petroli (Italy), Total (France), Royal Dutch-Shell (Netherlands/U.K.) and DuPont's Conoco subsidiary (U.S.). Initially they proposed separate investment schedules, but later pooled their plans as the "International Oil Consortium" (IOC). Chemapol was fiercely opposed to the IOC plan, and

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47. *Hospodářské noviny*, June 18, 1993, p. 1; Ministry of Industry and Trade of the C.R., *Restrukturalizace a privatizace Poldi Kladno, a.s.* Report to the Council of Economic Ministers, Prague, June 10, 1993; "Poldi Kladno, a.s.: zachrání hutě firma Bohemia Art?" *Ekonom* 37, 46 (1993): 50; "Bohemia Art, s.r.o.: koupím Poldi Kladno, zn. levně," *Ekonom* 37, 23 (1993): 35-6.

48. *Hospodářské noviny*, December 8, 1993, p. 6.

49. *Hospodářské noviny*, June 22, 1994, p. 2; "Nová Huť and Intercontinental Steel to build Kunčice mill," *Central European*, January 15, 1994, p. 19; *Rudé právo*, October 14, 1993, p. 8.

especially the privatization framework which called for hiving off the profitable refineries. For this, Chemapol was initially supported by Chemopetrol and Kaučuk management, who wanted the refineries kept part of the business in order to help the other divisions with their cash flows.[50]

Chemapol, moreover, had embarked upon a billion-dollar program of acquisitions in the chemicals industry. Through direct purchases, as well as the purchases of vouchers through its investment-company subsidiary, Expandia, Chemapol had bought controlling stakes in over 30 chemical, plastic, rubber, and pharmaceutical companies, most of which were privatized in the second wave of voucher-bidding, most of whom themselves owned shares in Chemapol. Table 5 shows that, in the main petrochemical companies, direct purchases, along with the shares in Expandia's portfolio, made Chemapol a shareholder with blocking control in several of these firms.

[TABLE 5]

Shortly after the IOC's proposal was made public, Chemapol announced it would organize a Czech consortium of investors consisting of Chemopetrol, Kaučuk, and local banks, who together would present a competing bid for the petrochemicals firms. That bid proposed that the enterprises be privatized in whole, rather than in parts, and that a large petrochemical holding company be formed under which would be brought Chemapol, Kaučuk, Koramo, Paramo, as well as the distribution company Benzina, and the pipeline operator Petrotrans—now renamed the Czech Product and Pipeline Company (ČEPRO). Once the basic privatization framework for the petrochemicals industry was completed, a protracted struggle began between consortia of foreign and domestic investors for control of the local industry.

Bargaining and Governance

How are steel and petrochemical firms governed in the Czech economy? Hypotheses 3 and 4 suggest different agency or governance structures for the iron and steel sector and for the petrochemicals sector. To repeat, the two relevant traits of governance are (1) contract-enforcement; and (2) state's influence.

Iron and Steel. The evidence from the iron and steel sector shows self-enforced contracts and a high level of discretionary state influence, or what has been termed "hierarchical" agency, thus bearing out hypotheses 3 and 4. The lack of competition among investors for long-term control of steel companies created an unmediated contract for which buyers (investors) and sellers (the state) were forced to obtain pre-commitments from each other in the form of hostages and issue-linkage. In the case of the joint-venture and buyout negotiations which did occur, enterprise management and the Metals Division of the MPO insisted on reciprocal agreements whereby the government and actual (Bohemia Art) or potential (Intercontinental, Kaiser) investors would make separate but concurrent investments in the firms, in order to provide a mutual safeguard against

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50. "Czech oil privatization: extended family feud," *Business Central Europe*, September 1994, pp. 28-9; *Rudé právo*, February 23, 1994, p. 13; *Hospodářské noviny*, October 20, 1993, p. 7.

unilateral termination.[51] Another common form of collateral was land: the government, in all cases, required that the land remain state-controlled, and that the investor rent (rather than own) the real estate upon which the factories were located. The threat of terminating the lease would amount to a substantial capital loss which the investor would, presumably, want to avoid. Finally, of course, no special state holding companies were established, thus forcing investors to rely upon decisions of the ministries, the FNM, and the cabinet.

The government also exercised extensive discretionary control over iron and steel company decisions. A divided government began to establish direct influence over these companies, usually without consulting other shareholders. In 1994 the MPO took back from the FNM control rights in all three Moravian mills. The FNM resisted, initially, these and other efforts by the MPO to retake control in FNM-held companies arguing that control was best left in the hands of those intent on selling the firms rather than those with intimate (usually outdated) knowledge of the industry. The MSNMP, too, objected to this reallocation of control to the MPO, which it claimed amounted to "re-nationalization", and began to demand a greater role in the iron and steel sector.

Government bureaus, then, increased rather than decreased their discretionary control over the iron and steel industry. Each relevant agency—the MPO, the FNM, and the MSNMP—decided matters in these enterprises regarding management changes, labor reductions, production, financing, and reorganization, all as part of normal bureaucratic activity, through government directives and memoranda. Boards of directors in these companies met on occasion, but had little power to implement any corporate changes without ministerial approval. The MPO, for example, vetoed management decisions to alter production lines when products from the three mills threatened to overlap. In the case of Poldi, the MPO, FNM, and MSNMP reformed their *ad hoc*, joint committee to deal with various problems which cropped up following the sale to Bohemia Art.

The combined result of self-enforcement and a high degree of state discretion has been hierarchical agency. The iron and steel industry has become effectively "tied" to the government, as boards of directors have been bypassed in favor of improvised contacts between management and government officials. Meanwhile, the companies themselves have become the centers of turf battles between government departments as these departments have continued to tighten their grip. Management changes and restructuring programs in each of the big four have been the subject of sometimes-bitter disputes between the Metals Division at the MPO, the FNM, and the MSNMP, as governmental authorities have used a complex balancing of factors—efficiency, public interest, regional employment—to justify state intervention and state-led governance of the enterprises.

Petrochemicals. Evidence from the petrochemicals sector shows shows that authority at the top of these firms is quite different from that at the top of iron and steel firms. In petrochemicals, contract-enforcement is delegated while state discretion is limited. The petrochemical industry is therefore a case of what was termed "parastatal" agency, and lends

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51. Ministry for Industry and Trade of the C.R., *Restrukturalizace hutního průmylsu severomoravského regionu—bankovní úvěry na výstavbu kontilití*, Report to the Cabinet no. 87/94, Prague, January 26, 1994; Ministry for Industry and Trade of the C.R., *Informace o přípravě projektu minihutě na výrobu plochých výrobků v severomoravském regionu*, Report to the Cabinet no. 15466/94, Prague, June 3, 1994.

further support for hypotheses 3 and 4. Over the course of negotiations between privatization authorities, the IOC, and the Czech consortium members, oil privatization issues became rapidly politicized. As they came close to making a decision in 1994, government officials were accused, by those who favored the "Czech way", of "selling the family silver" and giving away vital resources to foreigners. At the same time, the Ministry of the Interior attacked Chemapol as a "pawn of the Russian oil Mafia," and as an organization replete with former Czechoslovak secret police agents and Soviet KGB collaborators. Chemopetrol and Kaučuk, who both initially supported Chemapol, now openly lobbied to exclude Chemapol from petrochemicals privatization. Meanwhile, the IOC and the government were deadlocked over several critical issues regarding the sale of ČRS, including: market value of the refineries, past liabilities and unpaid receivables, the division of ownership, the distribution of profits, feedstock prices for downstream users, payments to the Ingolstadt project, compliance with environmental regulations, and the issue of state-guaranteed credit.

In 1994, just as the privatization negotiations threatened to derail, the MPO and MSNMP together set up an independent 100% FNM-owned holding company, Unipetrol, which was: (1) to act as a mediator between the IOC and the Czech state; (2) to consolidate state's equity in state-owned petroleum companies—ČRS, ČEPRO, Benzina, and MERO; (3) to settle, monitor, and enforce any purchase contract for the refineries reached by investors and the government, and (4) possibly, to engineer further sales of the large petrochemical companies with large state shares—Chemopetrol and Kaučuk minus their refineries, as well as Paramo, Spolana and Sokolov. Unipetrol's board was deliberately chosen from among industry experts and officials not previously involved with the petroleum privatization decisions.[52] Thus the government, at once, created a corporate giant and an intermediate, autonomous organization with delegated authority over a specific set of agents, and with sole powers to negotiate with the IOC. In July, 1995, the full Cabinet finally approved Unipetrol's decision to sell 49% of ČRS to the international investors.

Three mechanisms of third-party enforcement were put in place through Unipetrol. The Czech government and the IOC, for example, could not agree on environmental costs. Under the terms of the government-IOC agreement, Unipetrol was to indemnify the IOC against any costs arising from upgrading the sites according to standards set by local environmental legislation. The cost of any further upgrading was to be borne by the IOC itself. Second, the Czech side and the IOC could not solve the problem of old customer debts—"phantom" assets—on the books of the refineries. Unipetrol agreed to take over any receivables not collected for a period of six months after the final agreement; it would then have two-and-one-half years to secure payment for the remainder before reimbursing the IOC. Finally, the IOC and the government could not settle the issue of future control: the IOC wanted to be able to increase its stake in ČRS unilaterally. Ultimately it was agreed that the IOC could not increase its stake unless Unipetrol were to sell it additional shares, approve a capital increase, and/or forgo its entitlement. In the iron and steel case,

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52. *Mladá fronta dnes*, December 9, 1994, p. 14; "Landmark deal secures future for Czech oil," *Financial Times*, July 15, 1995, p. 11.

such issues were solved by hostages and issue-linkages to safeguard both state and private parties' investments. In petrochemicals, an intermediate party established a mechanism for continuous, mutual monitoring, to enable state and private parties to reveal information to one another regarding their intentions.[53]

On the question of state discretion, the government's influence in the petrochemicals industries was more limited. Chemopetrol, Kaučuk, Paramo, Sokolov, and Spolana were among the 43 companies for which voting rights were transferred to the MPO. The MPO's role, however, was minimal; on most questions—including changes in capital structure, investments, reorganization, labor issues, or management replacements —MPO representatives deferred to the other shareholders. Unlike the iron and steel case, privatization and ministerial commissions did not circumvent supervisory or executive boards, nor did they exercise veto over decisions already reached.[54] Czech politicians further tied their hands through a system of formal procedures and decision-making rules set up for Unipetrol. Unipetrol was established as an independent corporation with joint-stock status (though state-owned) in order to isolate decision making from outside interference, particularly from local, vested petrochemical interests, but also the influence of the ministries and of the Parliament in privatization or corporate decisions.

Delegated enforcement and limited discretion define parastatal agency. In the case of the petrochemicals sector, a holding company was given full control over the companies in its portfolio. In contrast to the iron and steel enterprises, the petrochemical companies are no longer bound to governmental directive. By isolating the state's equity in an autonomous organization, the government avoided the state-led solution of the steel industry and accelerated the withdrawal of the ministries and property agencies from intervention in the industry.

VI. CONCLUSION: THE POLITICS OF GOVERNANCE

In an efficient market, enterprises are operated in the interests of their share owners; owners employ imprecise, indirect instruments to monitor, reward, and sanction those who manage their assets. Efficiency in modern capitalism, therefore, depends upon the agency relationship. Shareholders of large corporations are normally heterogenous in several senses, but it is nonetheless safe to say that, in general, private shareholders will want to maximize the tradeable values of their shares. In PCEs corporations that are jointly held by state and private parties, however, face a slightly different multiple-principal problem in that the "state" may use its fiduciary role for political purposes.

The empirical discussion of this paper focuses on a specific puzzle in the Czech

53. See Charles Sabel, "Learning by Monitoring: the Institutions of Economic Development," in Neil Smelser and Richard Swedberg, eds., *The Handbook of Economic Sociology* (Princeton, N.J.: Princeton University Press, 1993).

54. Ministry of Industry and Trade, C.R., *Speciální projekty: u organizací, u kterých přechází výkon akcionářských práv z FNM na MPO ČR* (Instructions for MPO representatives serving on supervisory and executive boards), Prague, May, 1994; "Komu České rafinerie?" *Ekonom* 38, 37 (1994): 15-7.

economy. Why did two industries—highly similar in terms of economic characteristics—exhibit extremely different corporate governance structures? The iron and steel industry, on one hand, presents a case of continuing ministerial intervention and hierarchical control, despite nominal privatization. By contrast, the petrochemicals sector shows the Czech government pursuing an "entrepreneurial" strategy towards industries in that sector, having placed full authority over state's shares in a separate, independent holding company, and having committed itself to relinquishing control. In the steel industry, politicians have continually resisted letting go the instruments of centralized control over assets; in petrochemicals, politicians have tied their hands. How can we account for this difference in the face of structural and economic similarities?

The main argument of this paper is that the allocation of control is a policy choice, and that the design of governance structures reflects the heavy constraints which politicians as well as investors face. In the iron and steel industry, highly excludable policy externalities (for steelworkers, miners, and the Northern Moravian region) divided the government's commitment to privatize the industry. On the other hand, significant monitoring costs for the firms in the industry led to the presence of liquidity-preferring investors. Without strong competition in the market for acquisitions, liquidity-preferring investors and a divided government settled on simpler, self-enforced purchase contracts for firms in the industry. But the ministries of a divided government had little incentive to relinquish their discretion over the industry. In the petrochemicals sector, non-excludable externalities due to the imperatives of oil security overshadowed the excludable effects, and allowed a unified governmental commitment. Additionally, the number of prospective low-cost monitors was significant. The Czech government, however, could not credibly commit to all the terms of privatization which control-preferring investors wanted, and thus delegated contracting powers to a holding corporation. A unified government, too, managed to restrain ministerial discretion in the holding company, or in the firms in the holding.

This discussion has been limited to explaining the emerging forms of corporate governance in PCEs. The implications of the argument for economic performance, however, are equally important. In PCEs one of the main obstacles to enterprise restructuring is the lack of clearly defined and enforced property rights. Proscribing arbitrary interventions and establishing exclusive property rights will take time. In spite of the ambiguous nature of what is "public" and what is "private", the experience of the high-growth economies has shown that development requires a stable equilibrium between state action and private entrepreneurship. In PCEs a mere transfer of title to assets does not ensure this equilibrium. Rather, it requires deliberate and concerted efforts by public and private parties to understand the complex meaning of "ownership" in a free market. Dismantling the institutional structures of the command economy has proven easier than curbing the ability of post-Communist states to interfere in markets. Accomplishing both will take significant steps toward economic recovery.

Figure 1: Four Governance Configurations with Mixed Ownership

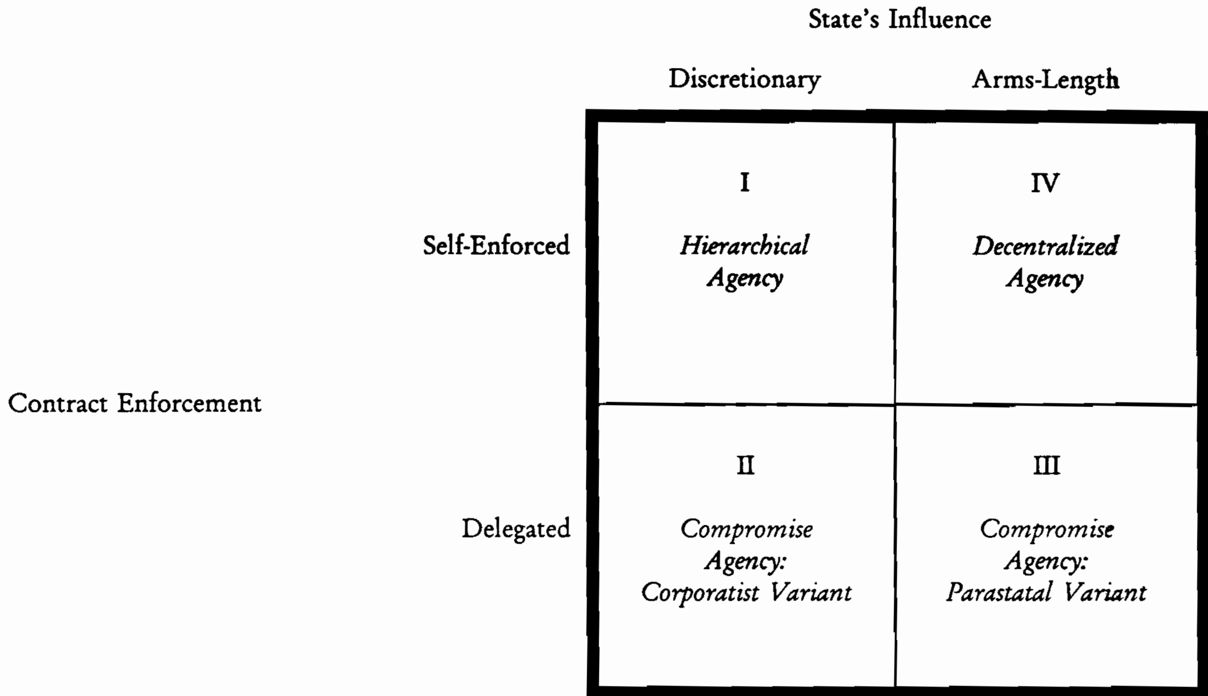

Figure 2: Governance Formation in PCEs

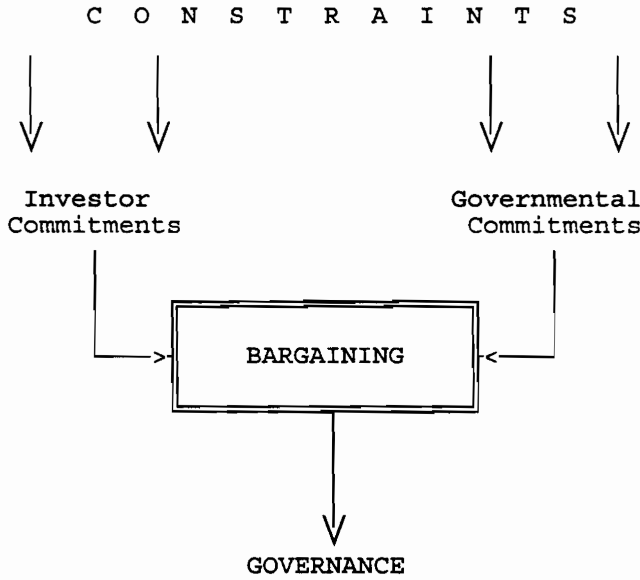

Table 1: Policy Contexts and Relevant Externalities

Potential Externality	Political Marketplace	Excludability of Relevant Policy Externalities	
Private	Competitive	Highly Excludable	^
Public	Competitive	Moderately Excludable ("privatized")	Increasing Excludability
Private	Non-Competitive	Moderately Non-Excludable ("unconsumed")	
Public	Non-Competitive	Highly Non-Excludable	

Table 2: Development of Two Dimensions of the Agency Relationship

CONSTRAINTS --------------->	COMMITMENTS --------------->	GOVERNANCE
Policy Context	**Government**	**State's Influence**
Excludable Externalities	Divided	Discretionary
Non-Excludable Externalities	Unified	Arms-Length
Monitoring Costs	**Investor Preference**	**Contract Enforcement**
High	Liquidity	Self-Enforced
Low	Control	Delegated

Figure 3: Integrating the Independent and Dependent Variables (refer to Figure 1 and Table 2)

Investor Competition for Control	Government Unity: Divided	Government Unity: Unified
Low (Liquidity Preference)	I *Hierarchical Agency*	IV *Decentralized Agency*
High (Control Preference)	II *Compromise Agency: Corporatist Variant*	III *Compromise Agency: Parastatal Variant*

Table 3: Industrial Profiles

Indicator	Steel[a]	Petrochemicals[b]
4-Firm Ratio (according to sales) 1992	100	98.3
1-Firm Ratio (according to production) 1990	67	66
Ave. Annual Growth in Value Added 1985-1990	-5.24	-4.43
Ave. Value Added per Employee 1990 (1970=100)	198	192
Ave. Value Added per Employee 1990 (1000 Kč)	14.6	15.9
Share of Wages in Value Added 1990	27.8	30.1
Physical Capital per Employee 1989 (1000 Kč)	770	830
Profits per Employee 1988 (1000 Kč)	73.1	65.5
Change in Output (by volume) 1990-1992	-23.4	-29.9
Change in Profit 1992-1993	-55.1	-48.4
Share of Total Industrial Investment 1989	5.0	6.3
Share of Total Industrial Value Added 1990	3.95	5.1
Share of Total Industrial Labor 1990	5.9	3.2
Ratio of Physical Depreciation to Sales 1992	3.78	3.90
Ratio of Secondary Indebtedness to Total Debt 1992	74.2	80.3
Ratio of Total Liabilities to Total Assets 1992	75.7	58.5
Ratio of Inventories to Property Value 1992	30.4	26.1

Figures in percentages except where specified. All figures refer to industries in the Czech Republic.

a. Sectoral classifications: NACE=27; ISIC=371.
b. Sectoral classifications: NACE=23; ISIC=353.

Sources: Czech Statistical Office, *Souhrny za nefinanční podniky v členění podle OKEČ*, Prague, 1994 [financial, labor, and wage databases]; Ministry of Industry and Trade of the C.R., *Analýza ekonomiky ČR a organizací MPO v roce 1993*, Division for Economic Analysis Report no. 1317/94, Prague, 1994; Alena Zemplinerová, "Evolution and Efficiency of Concentration: Manufacturing Industries in the Czech Economy, 1989-1992," Working Paper 52, CERGE-EI, Charles University and the Czech Academy of Sciences, Prague, April 1994; String, s.r.o., *Sektorové trendy v ekonomice ČR* (Prague: String, 1993); Alena Buchtíková and Vladislav Flek, "Vývoj dekoncentrace Československého průmyslu," *Integrativní studia národního hospodářství České republiky* 3 (1993): 46-53; Federal Statistical Office of the CSFR, *Statistická ročenka 1990*; *Statistická ročenka 1991* (Prague: SEVT, 1991; 1992) [statistical yearbooks]; Marie Bohatá, "Pohled na výkonnost některých dnešních průmyslových podniků," *Politická ekonomie* 1 (1991); Miroslav Kolanda and Václav Kubišta, *Náklady, výkony, a chování podniků ČS z pracovatelského průmyslu a světových trzích v 80 letech*, (Prague: Prognostický Ústav/ČSAV, 1990).

Table 4: Privatization Projects in the Steel and Petrochemicals Sectors
(percentages of share capital)

Firm	1st-Wave Vouchers	2nd-Wave Vouchers	Direct Sale	Free Transfer[a]	FNM
Vítkovice	0	24	0	9	67
Nová Huť	0	20	0	11	69
Třinec	15	17	0	3.5	64.5
Poldi	0	0	56.1	9	34.9
Chemopetrol	0	36	15	6	36
Kaučuk	0	26.5	25	8.5	40
Koramo	0	0	78	4	12
Paramo	0	23	32	5	34
Spolana	46.1	10	3.4	3.8	36.7
Sokolov[b]	0	10	18.5	3	68.5

a. Includes required transfers to public restitution, investment, and foundation funds, as well as shares reserved for employees and municipalities.
b. Revised project figures. Original project: 51% direct sale, without vouchers.

Source: Ministry for Privatization of the C.R.

Table 5 : Ownership Structure of the Largest Petrochemicals Firms, 1994
(percentages of share capital)

	Chemopetrol	Kaučuk	Koramo	Paramo	Spolana	Sokolov
Total Vouchers (2 waves)	36	26.5	0	23	56.1	10
Of which:						
All Investment Funds	31	22	0	n.a.	47.1	n.a.
Expandia	2.8	7.4	0	n.a.	4.0	n.a.
Chemapol Group Direct Acquisitions	0	25	52	5	3.4	18.5
Total Chemapol Holdings	2.8	32.4	52	>5	7.4	>18.5
Ownership in Chemapol	12.5	10*	5*	5*	2.5	2*
FNM	36	40	12	34	36.7	68.5

Sources: Company annual reports.

* estimates.

Abbreviations

COMECON	Council for Mutual Economic Assistance
CR	Czech Republic
CSFR	Czech and Slovak Federal Republic
ČEPRO	Czech Product and Pipeline Company *(České Produktovody a Ropovody)*
ČRS	Czech Refining Company *(Česká Rafinerská Společnost)*
FNM	National Property Fund *(Fond Národního Majetku)*
IOC	International Oil Consortium
KOVO	Metalworkers Union
MERO	Central European Pipeline Company *(Mitteleuropäische Rohölleitung)*
MPO	Ministry of Industry and Trade *(Ministerstvo Průmyslu a Obchodu)*
MSNMP	Ministry for National Property Administration and Privatization *(Ministerstvo pro Správu Národního Majetku a jeho Privatizace)*
OKD	Ostrava-Karvina Mining Company *(Ostravsko-Karvinské Doly)*
OSHŽ	Iron and Steel Federation *(Odvětvový Svaz Hutnictví Železa)*
OSCh	Chemical Trade Union *(Odborový Svaz Chemie)*
PCE	post-Communist economy
SChP	Chemical Industry Association *(Sdružení Chemického Průmyslu)*
SOE	state-owned enterprise
VHJ	economic production unit *(výrobní hospodářská jednotka)*

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