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DEPARTAMENTO DE ECONOMIA

# Industrial networks and institutional building in Post-Socialism

## firm and market governance in the Czech Republic

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**Building Governance Institutions in Post-Socialism:**
**Industrial Networks in the Czech Republic**

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**INTRODUCTION**

The Czech Republic is often hailed as the crowning success of an autonomous state apparatus able to liberalize and privatize the economy rapidly. Czech reformers appeared to take advantage of optimal starting conditions[1] and adhere to standard approaches (both in their neo-liberal and statist varieties) by creating an insulated, coherent "change team" to enforce strict financial constraints, establish a clear legal framework for market transactions, and transfer ownership and creditor rights from state to private hands. Yet two major developments that contradict the effectiveness of this approach call for a reconsideration of the role of the state in and the organizational dimensions of industrial restructuring in transition. Despite the delineation of legal rights and incentive structures, firms and banks became deadlocked in conflicts about reorganizing production and resolving debt burdens. Where restructuring has advanced, ownership remains poorly defined, and the state is an active partner with banks and groups of producers to forge new institutions for negotiated solutions.

This paper examines the emergence of a new corporate governance arrangement for the restructuring of large industrial firms in the Czech Republic (CR). We argue that this arrangement depended less on the clarity of ownership or state boundaries, and moreso on existing intra-network struggles over asset control and restructuring strategies. Because of the inherited financial and production links among certain producers and banks, the re-ordering of property rights and recombining of assets developed under incomplete contracting. Efforts by the CR government to maintain autonomy via state imposed restructuring and pure ownership

[1] The optimal starting conditions are viewed as Czechoslovakia's relatively centralized state, high state owneship, low inflation, low unemployment, and negligible budget deficits and foreign debt. See Svejanr 1993, Dyba and Svejnar 1994.

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solutions only encouraged stalemate. Through a case study of large industrial firms, we find that the Czechs were able to limit confllicts and bridge the incomplete contracts by a quasi-institutional structure that we call *intricate montioring based restructuring* (*IMBR*). In this structure, the government became both a monitor and partner to the particular banks and network of producers, and internal holdups and external stalemates were resolved simultaneously through deliberation.

The current debate over East-Central Europe has been dominated by two schools of institutional development. The neo-liberal approach argues for the immediate delineation of ownership rights, the establishment of independent banks, and a legal order for markets.[2] As shareholders discipline managers, restructuring conflicts among firms and banks can be resolved buy-outs, spin-offs, bankruptcy, or switching suppliers. Statists argue that markets remain too weak for such coordination.[2] Only the state, buffered from societal interests, has the cohesiveness, resources and property rights to impose proper incentives for asset use and the strategic finance for bank-led restructuring of industry.

Despite their apparent differences these approaches share the common assumption that communist economies (CEs) were strict hierarchies of atomized firms commanded by the state. During transition the state can then define on its own the new rules and rights of market governance. In turn, restructuring conflicts are resolved by strategic state subsidies or incentive structures tailored to autonomous firms. These apparently plausible views, however, overlook a key insight of recent research on CEs and the current transformation -- that CEs were less strict

[2] The most noted works in this vein applied to East-Central Europe are Amsden, Kochanowicz, and Taylor 1994; Kochanowicz, 1994; Komarek 1993; Stanszkis 1991. For a critical review of this school see Moon and Prasad 1994 and applied to East-Central Europe, Stark and Bruszt 1994.

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hierachies or atomized agents than a complex of vertical and horizontal networks, in which firms, plants and banks largely remain embedded.[3] For instance, due to the peculiarities of Czechoslovak industrialization and planning, de facto, if not de jure, control rights over assets devolved from the state center to meso-level manufacturing associations (VHJs). Within VHJs, distinct, autarkic groups of plants and firms developed broad production capabilities and tight financial and production links among themselves. In turn, economic actors are not autonomous firms but members of a distinct network.

A network-based argument contains two main points about the resolution of conflicts and the role of the government. First, the implicit overlapping control of assets is both a source of the continued flow of resources for product development as well as a source of conflict among the parties.[4] On the one hand, the reproduction of tight technical and financial links demands cooperation between network actors over the division of risk and control and the creation of new production strategies. On the other hand, the dispersed authority within the network that permits members to probe new markets also fosters new and often conflicting views of recombining assets. As no member has the social or financial capital to risk full independence or acquisition of another, probing undermines the writing of complete contracts -- typical of state imposed or pure ownership solutions. Second, an alternative solution is an organizational form that resembles incomplete contracts and is supported by third party mediation, namely government agencies. In this form, the government resolves conflicts among network producers and external financial partners by nurturing compromises over initially broad

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[3] See Stark 1986; Stark and Bruszt 1994; McDermott 1996; Dabrowski, Federowicz, Levitas 1992; Grabher and Stark 1996.
[4] See McDermott 1996; Mlcoch 1983; Hrncir 1989.

criteria for restructuring steps and asset control. These parties and the government clarify and revise the criteria over time in frequent negotiations. The government, as seller of and inherent party to the assets, uses its public authority to provide social and financial guarantees to ensure multi-lateral risk-sharing, monitoring, and resource flows.

Section I provides background information about the Czech government's privatization designs and their affect on key economic actors: the main commercial banks, the new investment privatization companies (IPCs) and the class of large industrial firms that we call "N-firms" (because of their network properties). Section II outlines the conceptual framework to analyze the internal holdups and their solution through a decentralized internal organization, monitored by the external agents (what we call intricate monitoring based restructuring). The section concludes by showing how the dual nature of privatization -- the delineation of property rights and an implicit guarantee of the perservation of asset value -- compels the government to appear as a key external monitor.

Section III presents our case study of the holding company Skoda Plzen, an N-firm. It examines in greater detail how the internal and external holdup problems were resolved not through state imposed or pure ownership solutions. Rather, the state delegated restructuring authority to Skoda management and the main banks and helped create a forum for frequent negotiations among the state and these agents. This process lasted over two years. What emerged was a framework (IMBR) that balances the interests of the central management of the holding and its subsidiaries through mutual and continuous monitoring among the holding center, subsidiaries, banks, and the government. With such a balance, the holdup problems that

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may impede restructuring became solvable. What keeps this delicate balance intact are the banks' two-level debt finance and the government's role as a reliable partner and mediator. The latter provided a window of opportunity for the holding center, subsidiaries, and the banks to learn to be independent but accommodate the needs of one another.

Before we proceed, there are a few notes on terminology and methodology. First, this paper focusses on the Czech Republic (CR). Although prior to 1993 the CR was part of the Czecho-Slovak Federated Republic (CSFR), we refer to government policy and actions in the beginning as those of both the CR and CSFR. The reason is that CR political leaders were the principal architects of CSFR reform. Although Slovakia had some disputes about reform and later alterred it, the Czech political leaders both at the CR and CSFR level forcefully implemented it. Second, when we refer to the Czech "government" we mean principally the small group of elite policymakers that designed and implemented reform plans and controlled relevant ministries and agencies. They formalized this in 1992-3 be creating the Council of Economic Ministers, which included the prime minister. Third, primary empirical research was conducted by McDermott from September 1993 to March 1995 through numerous structured and open interviews with firm, bank, and IPC managers and ministry officials. Supporting primary data comes from firm, bank, IPC, and ministry internal documents and annual reports. Secondary data comes from the Czech Statistical Office as well as the sources cited.

We focus on N-firms and Skoda Plzen for the following reasons. First, as we will see in Section I, the privatization of N-firms was based on a combination vouchers and FDI. The largest forms of N-firms, commonly known in the CR as holding companies, have all experienced a similar problem of hold-ups leading to failed JVs. The state then tried to break-

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up N-firms and create unitary owners. These failures led to negotiated privatizations and restructurings, where the state continues to retain significant equity stakes. For instance, as of January 1995, the state held over 70% equity in iron and steel, 47% in banks, and 40% in engineering.[5] Second, Skoda Plzen is considered the flagship of Czech industry. It was the first case to force the government and banks to experiment with alternative corporate governance arrangements. Since then, such government backed arrangements for N-firms have become widespread: Poldi Steel, the Vitkovice and Nova Hut steel works, CKD Praha in engineering, Aero Aircrafts, the truck producers Tatra, Aiva, and Liaz, the revised agreement between Skoda Mlada Boleslav and Volkswagen, and the Chemapol Group in chemo-petrolium production.[6] Add to this the approximately 40 heavy manufacturing companies, whose management has returned to the Czech Ministry of Industry.

## I. BACKGROUND

This section breifly presents the main facts on Czech privatization, the participating actors, and the type of firms the paper analyzes.[7] Following the November 1989 revolution, the new government, led by the Civic Forum coalition, took advantage of the country's relatively favorable starting conditions to create optimal conditions for the rapid transfer of ownership and the restructuring of industries.[8] With its low external debt, monetary overhang and budget deficit, the government enacted standard macrostabilization policies, such as fixed exchange

[5] See Pistor and Turkewitz 1995; Coffee 1995.

[6] On steel and chemicals, see Desai 1995. We do not discuss an alternative government backed governance order emergeing from the fragmentation of VHJ networks. For that, see Ch 5, McDermott, forthcoming.

[7] For more detailed background information on the Czech Republic, see the OECD Report 1996.

[8] See World Bank Development Report on Transition 1996 for comparisons with others.

rate regime, restrictive monetary and conservative fiscal policy. There were no opposition groups powerful enough to challenge the government policies, evident in the ease with which the government dissolved the workers councils and passed its reform package in September 1990. In contrast to Poland and Hungary, the lack of partial reforms in the 1980s also left the state control of assets intact, relieving the government of the need to reclaim property prior to privatization[9].

There were, however, two opposing views on the specific method of privatization. The then CSFR Finance Minister, Vaclav Klaus, argued against restructuring prior to privatization for fear of protracted government intervention. He advocated rapid voucher privatization -- a give-away scheme whereby each adult citizen would receive vouchers to be redeemed in a "stock market" to acquire actual shares in companies. The Minister of Industry, Jan Vrba, argued that Czech firms urgently needed new capital and technology to compete in the world markets. Skeptical about the ability of vouchers owners to provide them, Vrba advocated a government policy to attract foreign investment through direct sales or joint ventures.

A compromise combined the two approaches. First, voucher privatization would be the default method, but projects with foreign participation and concrete investment plans would be given priority. Second, to prevent asset-stripping by managers and ensure the speed of privatization, the review and implementation of privatization projects would have strict deadlines, be rule-based and be managed by an insulated change team -- a small group of Klaus's allies in cooperation with Vrba.[10] As an illustration of this principle, the newly created

[9] Early literature stress the importance of establishing this control, see Blanchard et al. (1991).

[10] For privatization, Klaus's allies were in the Ministry of Finance, the Ministry of Privatization, and Fund for National Propert (FNP). For details of the rule-based order and change-team, see Mann (1993), Shafik (1993), and Kotrba and Svejnar (1994).

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state agency to hold the assets approved for privatization (FNP) cut off ministries and parliament from meddling in firms and privatization revenues.

In short, Czech privatization was hailed as an efficient way of transferring ownership and creating conditions for private actors to regorganize industries.[11] The first of the two waves of privatization was the largest, beginning in May 1992 and ending in December 1992. About 63.5% of assets were offerred for vouchers, with the rest held in the FNP mostly for future sale to foreign investors. For the sake of its own credibility and that of the private property system, the government also took steps to ensure that the privatized assets retain their value but limit its own intervention into firms. To these ends, the government provided not only an apparatus and legal provisions to protect the privatization process but also, along with banking reform, incentives for the commercial banks, investment privatization funds, and foreign investors to become the agents of restructuring and corporate governance. We now turn to these actors and their interactions with government policy.

**A. Banks**

Czech industrial firms and the main banks continue to be tightly financially linked. Due to organizational experiments in the 1970s and 1980s, Czechoslovak industrial firms became financially dependent not on the state budget, but particularly on state commercial banks. By 1990, bank loans financing 25.3% of investment and 40.8% of operating capital of the firms. As late as 1992, the CSFR continued to have the highest bank-debt to GDP ratio in the region: 0.70 (Poland's and Hungary's were respectively 0.46 and 0.30). Following the collapse of the trading arrangement among socialist countries (CMEA) and the restrictive monetary policies,

[11] See Shafik, N(1993), "Making a Market, Mass Privatization in the Czech and Slovak Republics," *World Bank Policy Research Paper No: 1321.*

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firms increasingly turned to inter-firm and bank debt to cover operating costs. The average debt-equity ratio rose from 30% to 50% for 1990-92 in industrial manufacturing. By 1993, it reached 92% in the engineering sector, with bank debt accounting for over 50% of the debt. Total arrears of industrial firms increased by 250% in 1991 and 100% in 1992, reaching 25% of GDP. In 1992, 43% of all CSFR firms and 70% of the members of the Czech Union of Industry were in default; and the engineering sector's average interest burden reached 1.66. At the same time, industrial firms, particualrly in engineering, accounted for the bulk of outstanding bank loans and classified risk loans, while the main commercial banks were still highly dependent on interest-income (95% of total income in 1992-93). See Table 1.

By 1990, five univeral Czech banks were carved out of the former State Bank: Komercni Banka (KB) and Investicni Banka (IB) were the leading commercial banks and the Czech Savings Bank held 68% of household deposits. Although the government opened the banking sector to foreign and domestic competition, banking remained highly concentrated. As of November 1994, the five banks plus KOB, a state clearing house for a small class of old loans, accounted over 80% of loans and deposits.

During this time, the government used a two-pronged strategy to harden the budget constraints of banks and strengthen their financial position. The aim was to turn the new commercial banks into aggressive, independent agents of restructuring. First, the banks received full creditor rights and over 50% of their equity would be privatized in the first wave of vouchers. Moreover, the banks were required by law to meet standards of the Basil Banking Accords and increase their capital adequacy ratios to 6.25% by the end of 1993, and 8% by the end of 1996 (this ratio was 1.25% and 1.5% in 1990 for IB and KB). Both the central bank and

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Table 1

**Stratification By Sector of Total and Risky Loans for Non-financial Institutions, Czech Republic, 1992-94**
(in Millions Kc.)

| | 12/31/1992 | | 12/31/1993 | | 9/30/1994 | |
|---|---|---|---|---|---|---|
| | Total Loans | % of NonFin | Total Loans | % of NonFin | Total Loans | Share% NonFin |
| NonFin. Inst'ns | 484,085 | -- | 520,563 | -- | 567,609 | -- |
| Manufa | 186,741 | 38.6% | 198,033 | 38.0% | 215,748 | 38.0% |
| Chem | 18,668 | 3.9% | 20,812 | 4.0% | 20,278 | 3.6% |
| Steel & Engine. | 82,556 | 17.1% | 84,064 | 16.2% | 85,659 | 15.1% |
| Electr. | 16,615 | 3.4% | 15,119 | 2.9% | 15,743 | 2.8% |
| | Risk Loans | % of NonFin | Risk Loans | % of NonFin | Risk Loans | Share% NonFin |
| NonFin. Inst'ns | 103,942 | -- | 142,117 | -- | 222,404 | -- |
| Manufa. | 52,238 | 50.3% | 61,523 | 43.3% | 81,839 | 36.8% |
| Chem | 3,281 | 3.2% | 2,315 | 1.6% | 2,985 | 1.3% |
| Steel & Engine. | 28,880 | 27.8% | 35,123 | 24.7% | 41,424 | 18.6% |
| Electr. | 7,799 | 7.5% | 8,386 | 5.9% | 8,832 | 4.0% |

Source: Czech National Bank

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international auditors would monitor this. Thus, in addition to new competition, the banks were under pressure to improve their capital base, cease soft loans, and clean up their balance sheets.

Second, as corporate debt rose, the government was increasingly concerned about transferring worthless equity to the public and destabilizing the financial system. In rejecting mass write-offs, the government created incentives for the banks to rid themselves of problem debtors and initiate bankruptcies and restructuring. One set of measures focussed on partial debt relief and recapitalization during 1991-92. The FNP provided limited funds for a partial write-off and KOB purchases of old loans. The FNP also provided a direct injection into the banks and then bonds to increase lending capital. These actions were close-ended, as they were rule-based and exhausted virtually all FNP discretionary privatization revenues. The second set of measures focussed on bankruptcy. In 1991-2 the government ammended the law to remove conflict of interests for theft of assets, provide a three month workout period, and strengthen the position of senior creditors (i.e., banks). In 1992-3, the KOB set aside funds to partially cover bankruptcy losses that may be incurred by the banks.

The reaction of the banks to these policies is telling. On the one hand, despite pressure to clean their portfolios and incentives to cut-off problem firms, the banks instead chose to hang onto industrial firms. They spread FNP writeoffs and sales to KOB broadly over their portfolios.[12] Moreover, the virtual absence of bankruptcies since the introduction of the new law and the explicit assistance from KOB, indicates that bankruptcies do not appear to be an effective strategy for the commercial banks. On the other hand, the banks refrained from initiating restructuring, but elected to reduce lending and to bolster their reserves from increased

[12] See Hrncir (1992) and Kerous (1993).

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lending rates. Indeed, internal documents at KB explicitly say that the internal production synergies and the lack of transparency within large engineering firms created high risks for the bank to breakup the firms or finance their restructuring. In 1993 the FNP took back their bonds, since there were no significant increases in lending.

Because of their tight financial links to the industrial firms, the main banks were torn between cleaning their balance sheets and maintaining a future customer base. Heavily dependent on industrial firms, they could not simply sever their links to them and let them perish. Yet with their own weak financial standing and without appropriate monitoring arrangements, the banks were reluctant to lead restructuring. Rather, the banks positioned themselves as the only senior creditors, protecting themselves and their clients from intervention by other creditors, and bought time until an equity partner in the firms could help share the risks of restructuring. This may not be surprising, as West German banks, who definitely had the requisite expertise and capital, were similarly reluctant to take over the restructuring of the ailing East German enterprises.[13]

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### B. Investment Privatization Companies

The rapid emergence of IPCs (*Investment Privatization Companies*) and their concentrated shareholdings fosterred the view that IPCs, particularly bank-owned IPCs, would perform the corporate governance and restructuring tasks that dispersed shaeholding would undermine. IPCs collected vouchers from the public to convert them into shares and manage the equivalent of mutual funds. The 343 IPCs collected about 72% of all voucher points, of which the 13 largest IPCs held 77%. X of the 13 are controlled by the big five banks and the Czech

[13] See Deeg (1994) and Griffin (1993).

Insurance Company (CIC). Although subject to diversification laws, the 3-5 largest IPCs of a firm could control virtually all coporate boards.[14] However, during 1992-95 these IPCs did not use this control to initiate restructuring of industrial firms.[15] The underlying reason can be found in dual strategy by the main banks to (1) protect themselve and their newly established equity links to firms from corporate raiders and (2) gain low risk revenues from trading.

First, the main banks and CIC obtained through their IPCs significant cross holdings in one another. Second, IPCs organized their funds as unit trusts and close-end companies with long term, management contracts for the IPC. Third, with their broad and diversified portfolios, the main IPCs were organized to prevent managerial abuse, block risky projects by other owners, and focus on low cost arbitrage opportunities between the Prague Bourse and the over-the-counter market.

The first two actions effectively block attempts by existing or predatory shareholders from influencing the management strategy.[16] This intransparency led to an extremely thin equity market, hinderring thus the stock market to monitor IPCs and firms and provide restructuring capital to firms. With IPCs legally prohibited from investing directly into the operation of a firm, the onus for restructuring finance fell back onto the shoulders of the main banks. As discussed in the previous section, the main banks were already reluctant to bear the risks of industrial restructuring alone. To make their IPCs into effective monitoring arms to reduce such risk, the banks would have to make substantial investments into the reorganization and personnel of IPCs and mechanisms of IPC cooperation. The evidence to shows that the

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[14] See Marcincin et al. (1994).

[15] This conclusion is based on the below arguments. But for detailed critical analyses of IPC behavior on corporate boards see Brom and Orenstein (1994), Pistor and Turkowtiz (1995), and Coffee (1995).

[16] See Coffee (1995).

banks were unwilling to take on these added burdens, but preferred to use their IPCs to gain low risk arbitrage revenues and block project that might further distress the financial stability of industrial firms. Only in late 1995 was their some movement. A few used a legal loophole to change their status to avoid limitations on shareholdings and diversification. Two unprotected funds of KB's IPC were raided by a non-bank IPC.

**C. N-firms**

Czech industrial firms siezed government policy to combine the privatization methods of vouchers and FDI. About 22% and 46% of equity in the steel and chemical sectors, respectively, was also privatized through vouchers. Of the 88% of engineering equity in the first wave, 57.3% was in voucher privatization. For each of these sectors, virtually all of the remaining shares was left in the FNP for future sale. Half of the engineering firms had at least 25% of equity in the FNP for future sale. This section presents the development of a dominant class of these industrial firms.

Czechoslovak planning experiments utilized meso-level "associations" (VHJs) to organize and finance production along industrial branch lines. As member units possessed de facto, if not de jure control rights over assets, a VHJ became a distinct network of vertically and horizontally linked upstream and downstream producers. In turn, VHJs possessed two key traits. **First, a VHJ had the capabilities (in both end-products and components) to produce in short batches, frequently changing specifications, and thus putting out a wide range of differentiated products.** Shortages and unreliable outside deliveries under planning had driven units to develop unusually large side-production capabilities, for both the production of needed

Table 2. Number of Branches/Product Groups Covered by an Engineering VHJ

| Name of VHJ | Number of Different Branches/ Product Groups (3-digit SIC) | | | | | |
|---|---|---|---|---|---|---|
| | 1965 | | 1970 | | 1973 | |
| | Total | Those with vol. > 100 mill Kcs | Total | Those with vol. >100 mill Kcs | Total | Those with vol > 100 mill Kcs |
| CKD Praha | 52 | 13 | 62 | 13 | 65 | 13 |
| Chepos Brno | 53 | 9 | 56 | 10 | 58 | 11 |
| Ivtas Chrudim | 38 | 4 | 46 | 7 | 49 | 9 |
| Sigma Olom. | 34 | 3 | 41 | 6 | 43 | 6 |
| Vzduchotech. | 12 | 1 | 13 | 1 | 15 | 2 |
| TST Praha | 61 | 7 | 66 | 11 | 69 | 13 |
| Skoda Plzen | 45 | 8 | 60 | 13 | 62 | 13 |
| ZSE | 66 | 8 | 60 | 12 | 62 | 13 |
| Tesla | 55 | 9 | 59 | 11 | 66 | 13 |
| ZPA | 31 | 3 | 34 | 5 | 40 | 4 |
| ZES | 33 | 2 | 34 | 2 | 38 | 5 |
| CKD Dukla | 10 | 1 | 11 | 3 | 12 | 3 |
| CS Vagonky | 14 | 2 | 14 | 3 | 15 | 4 |
| CAZ Praha | 88 | 13 | 90 | 13 | 94 | 13 |
| Zbrojovka | 34 | 6 | 42 | 8 | 46 | 8 |
| ZVS | 69 | 5 | 74 | 8 | 80 | 12 |
| Prago-Union | 64 | 5 | 74 | 8 | 82 | 9 |
| AERO Praha | 38 | 2 | 40 | 2 | 47 | 3 |
| ZTS Martin | 66 | 7 | 71 | 11 | 78 | 12 |
| Strojsmalt | -- | -- | 56 | 7 | 66 | 8 |
| Elitex | 11 | 1 | 15 | 2 | 16 | 3 |
| Chirana | 11 | 1 | 13 | 2 | 14 | 2 |
| ZVL | 45 | -- | 49 | 5 | 53 | 6 |
| VSS | 14 | -- | 15 | -- | 15 | 1 |

Source: Vacha, 1978, p.25

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components and to adapt inputs for production compatibility (i.e., forced substitution).[17] Also, because of planned efforts to capture both economies of scale and scope, groups produced a wide range of end-products within a certain class in relatively small batches and with incremental modifications on a given product generation.[18] For instance, Table 2 shows the rapid growth in the number of product groups per VHJ. The small volumes for the majority of product groups are indicative of small-batch production. **Second, member units created tight technical and financial links among themselves, often sharing product and process development capabilities.** To meet the exigencies of shortage and the planned scope of production, VHJs tended to internalize production and jointly develop key components and materials along narrow technical specifications.

Upon the dissolution of VHJs and the advent of reforms, many of these industrial groups elected to privatize themsleves as joint-stock holding companies through a combination of vouchers and foreign partnerships. These companies are the hubs of of Czech industry: Skoda Plzen and CKD Praha in engineering, Tatra and Liaz in trucks, Aero in aircrafts, Chemapol in chemo-petrols, Poldi in high-end steel, Vitkovice, Trinecke Zelezarny and Nova Hut in mid- and low-end steel. A sample is given in Table 3. We call them N-firms because of there inherited network characteristics. The holding structure had two aims. One was to allow a diffusion of authority over production and finances, while the holding preserved group integrity by providing financial protection, foreign trade, and R&D resources each unit lacked on its own. The other was that as units formulated restructuring strategies and pursued foreign partners for investment and markets, managers would decide over the reorganization of the

[17] See Stark (1986).

[18] Mc Dermott (1996) Ch.2.

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holding, such as spin-offs, joint-ventures, closures, control rights, liabilities, the direction of investment.

The creation of the holding, however, fosterred two strategies that generated conflicts over these decisions. First, in the face of a decline in liquidity, a concentrated industrial structure, and the narrow technical specifications for key inputs, **units continued mutual sub-contracting and deepened exisiting production and financial links among themselves**. This severely constrained unit autonomy and joint-decisions over restructuring. For instance, Diagram 1 shows production flows for CKD Praha. The common use of such upstream and downstream units as Kompressory, Elektrotechnika, Slevarny, and DIZ for various programs created conflicts over the division of assets for JVs. Without subsidizing insolvent units, like Trakce and Hradec Kralove, both transport and engine production would shut down and further distress other units. Moreover, the experiences of "self-liberated" units from Skoda Plzen, Aero and CKD Praha were stark reminders that production conflicts can ususally be resolved by one of the parties abandoning the other. These relatively profitable and modernized units quickly lost ties with holding members, failed to connect with foreign partners, and languished alone in insolvency. Indeed, statistical analysis of privatization shows a very small number of industrial spin-offs, the bulk of which performed worse than their former parents.[19]

Second, as a method of self-restructuring to gain new markets and cash flow, units, individually or in small groups, used a **probing strategy** -- adapting broad production capabilities to pursue a number of new and existing production areas in short batches. As units probed, they began to experiment with different organizational, investment, and product

[19] See Kotrba, 1994; Lizal, Singer and Svejnar, 1994.

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Table 3-- A Sample of Czech Holdings and Their Privatization Strategies

| Firm/Sector | Empl., (% of CR Ind'y); Org'n, 1991 | Original Priv'n Project * and Strategy | Main Foriegn Partnerships | Status -- 1994-5** |
|---|---|---|---|---|
| Skoda Plzen/ Engineering | 34231, (2.3%) 25 plants to be corporate subs; final legal structure to be determined with JVs | 48.5% - 1w, vch., 42.1% - FNP/FI, 5% - Plzen Create prod'n groups from plants; new groups and plants to be subs; create JVs with groups, eg, energy, transport, machinery. | JVs: Energo and Transport w/ Siemens -- failed, 1992 | Gov't negotiated restruc. via 1992 tender w/ Mr. M 20%), IB/KB (17%); MPO sits on board; lasts 2-3yrs., restric'n on equity resale (See Sec. III) |
| CKD Praha/ Engineering | 21776 (1.5%) Holding of 18 subs (a.s.)^ w/ internal agreement on finances, transfers, prod'n | 49.2% - 1w, vch., 41.6% - FNP/FI Form divisions w/ subs; pursue JVs; consolidate motor and metal prod'n | JVs: Transport (3 subs) w/ AEG, -- Failed 1993; Kompres. w/ DBB, Failed '93-4 | Same via 1994 tender for 51% to CR firm INPRO; KB/IB to finance; govt sits on board 1yr. and guarantees restruc. loan; restric'n on equity resale |
| Aero/ Aircraft | 19820 (1.4%) Holding of 11 subs (a.s.)^ | 49% - 1w, vch, 48% - FNP (of wh: 20% - 2w, vch, 24% - FI) Create recreational and military div'ns, and Ltds. from sub plants; Seek JVs or partial buyouts of subs and Ltds. | JVs: Let-Fairchild; Motorlet-P&W; VZLU-Hamilton Std. -- All Fail by '93 | 3 attempts by gov't on debt and equity fail by 12/93. 1994 plan: FNM to retain 60% in holding; 3 groups created; IB, CSOB, KB and govt's KOB** do swaps in some subs for partial equity; MPO reps FNM and KOB in firms. |
| Poldi Kladno/ High grade steel | 16471 (1.2%) Holding w/ 19 subs (a.s.)^; 2 main steel subs: Poldi I & II | 97% - FNM; plan a JV for Poldi I&II; sell, swap, or JV for other subs to gain cash; retain minimum blocking stake in key others | JV: Poldi I&II w/ consortium via Maison Lazard; Fails: 5/93 | Gov't neg'n of restruc. via 1993 tender - 51-66% of Poldi I&II to CR firm BA; FNM retains 97% of holding & run w/ KB; BA-govt/KB fight over control and debts; shut-downs; govt/KB sue BA |
| Tatra Kopriv./ Heavy Trucks | 14685 (1.0%) Holding w/ 7 subs | 97% - 1w. vouchers; plan JVs in assembly and parts; focus on modular vehicle design and engine | JVs: IVECO for assembly; Detroit Diesel for engine; Both fail by '93 | Crisis and no JVs lead gov't to press bank IPCs - create manager-owner from Chrysler for 15% equity in '93, fails in '94; MPO creates dept for firm |
| Liaz/ Medium Trucks | 8606 (0.6%) 9 plants to be corporate subs in Liaz Holding | 42.9% - 1w. vouch., 51.1% - FNP/FI; upgrade engine, focus on modular vehicle design; JVs for each area of prod'n; | JVs: Simultan. in all; first mover w/ Mercedes; Fails - 12/93 | MPO runs restruc. of Liaz w/ Tatra & Avia; seek FI for all; Prep. sale to Skoda Plzen; Bring in IB, KB and KOB to finance. |

Notes: ^ a.s.= akciova spolecnost (joint-stock company); Ltd. = limited liability co. (closely held shares)
* 1w, vch = 1st wave, vouchers; 2w, vch = 2nd wave vouchers; shares for FNP and FI connote

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shares held in FNP for various uses and FI for future sale to potential foreign investor (e.g., shares received via JV as investment increases over time); % of shares not noted are those left, by law, to a fund for restitution compensation.

* Note that these projects soon changed because of failures in 1st wave and policy changes by government: 6.9% of equity for Skoda Plzen was unsold and returned to FNP (see Section III for details). CKD orginally earmarked 28% for vouchers and about 65% in FNP for FI. After only selling 25% in 1st wave and pressure from both subsidiaries and MPO, the project was changed. An average of 20% of equity of CKD subsidiaries would be sold in 2nd wave, thus lowering equity capital of CKD Holding. This still left over 10% of CKD Holding equity unsold, leaving the FNP with over 51%.
Ae[illegible] sold only 35% of shares in 1st round; FNM retained over 60%.

** KOB = Consolidation Bank, state clearing house bank for bad debts; originally (1991) had 1 year restricted charter; in 1992 charter revised with unlimited life-span and full lending operations (guaranteed by state budget); see Chapter 3.

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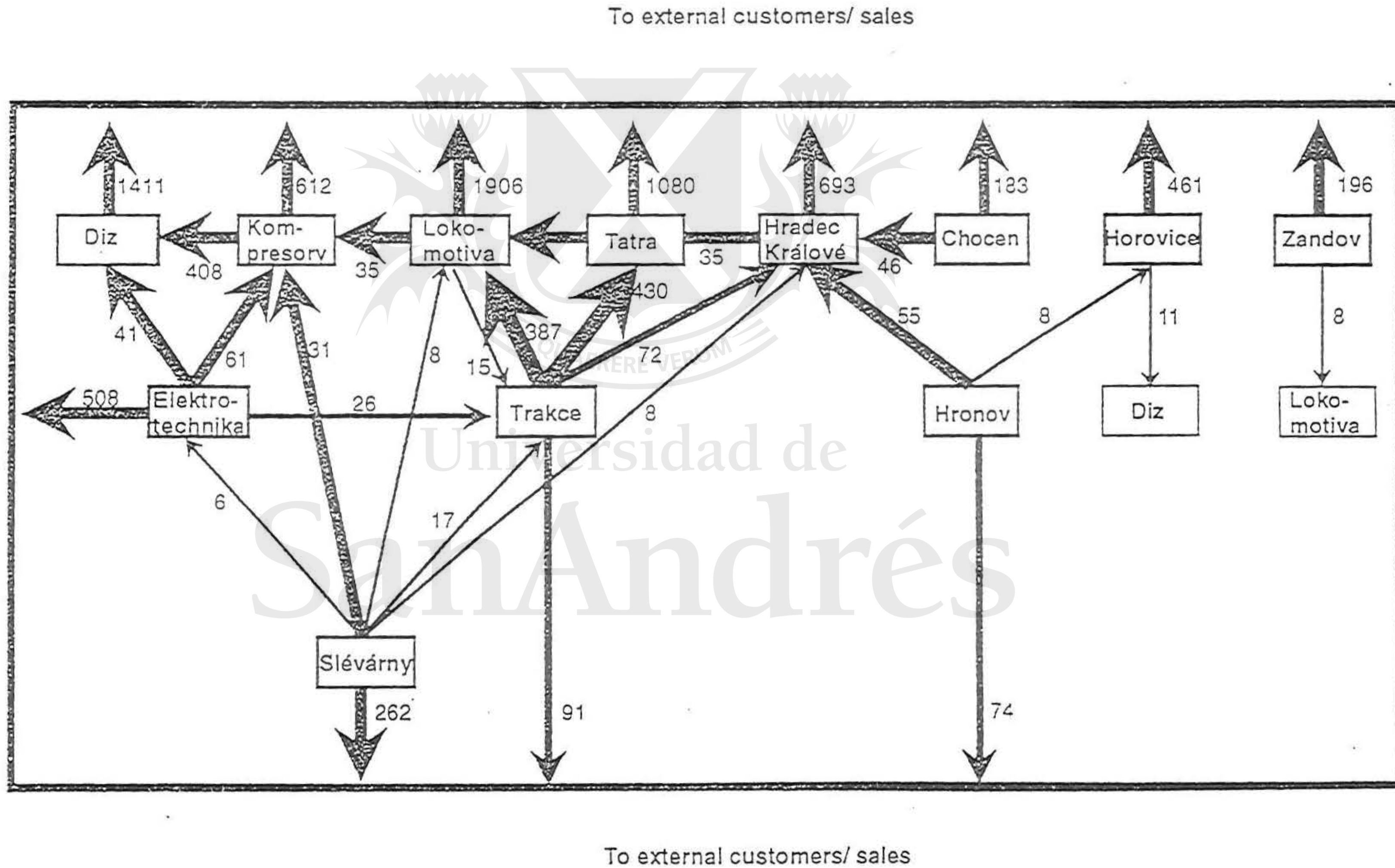
Figure 1

Internal production and supply links among subsidiaries of CKD Praha (sales data in million Kcs, 1990)



development strategies. With tight production links among units, probing demands cooperation. Yet because units were unsure about which particular product would become their future specialization, they were reluctant to fully commit resources to or eliminate any one area. **Subsequently, simultaneous probing among many units and across production programs, reinforced internal N-firm conflicts over restructuring and dividing asset control and liabilities.**

These conflicts would severely hinder the formation of joint-ventures with foreign partners. JVs became the main conduit of FDI, since Czech managers wanted to sustain the probing activities with new capital and foreign partners wanted only a subset of the units in an N-firm. In turn, foreignors sought independent commitments to isolate the JV from the rest of the N-firm. Because internal interdependencies, N-firm management saw such commitments as a threat to non-JV units and the holding itself. Unable to reach an accord, N-firm JVs collapsed in 1992-93, and only a relatively small share of FDI enterred the industrial sectors.[20]

As of early 1995, the share of industrial firm equity held in the FNP was largely unchanged, and the government had become well-engaged in corporate restructuring. Since N-firms constitute the backbone of these industries and were the most visible recipients of this reversal of policy, we believe that the conflicts created by reproduction of economic links and probing lay at the heart of the problem. In the next section, we present an analytical framework

[20] The most notable failures of JVs were Skoda Plzen with Siemens, CKD Praha with AEG and Borsig-Babcock, Aero with Rockwell, Poldi with a steel consortium led by Maison Lazard, Tatra with Iveco, Avia and Liaz with Mercedes, Chemapol with Dow Chemicals, and TOS Kurim with Thomas Mantzen. As of December 1994, engineering accounted for only 2.5% of total FDI in the CR, although it accounts for 24%, 30%, and 32% of industrial production, employment, and value added in the CR. Moreover, significant FDI is concentrated in only a few deals. The four largest cases accounted for over 45% of total FDI in the CR.

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for understanding the resolution of these conflicts and the role of the state in fostering cooperation. We then illustrate our points in a case study of the restructuring of Skoda Plzen.

## II. Analytical Framework

The inherited network assets are both sources of needed resources and blockage in the restructuring of N-firms. We develop analytical framework for this dilemma from the inside out. We first examine the problems that probing within a network creates for standard contractual and statist solutions to N-firm restructuring. We then suggest an organization of the firm to initiate and successfully execute probes. Finally we show how the of the internal organization shapes the emergence of a peculiar governance arrangement among the N-firm's external actors, including the government.

From recent work in product development (Piore et al, 1995), one can view probing as an "interpretative process" requiring constant communication and cooperation among the many tightly linked units of an N-firm. Managing this process (ie, defining and assigning subtasks, and then re-integrating the inputs from different sources) may easily run into problems even without considering the financial conflicts among the participants. It is then difficult to judge the contribution of each participant and its fair share of the eventual financial reward. In turn, writing ex-ante contracts to determine the effort-reward allocation for all contingencies is almost impossible. Cooperation among probing units will therefore be based on incomplete contracts.

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The incompleteness of the contracts, however, creates a problem of underinvestment.[21] Each unit participating in a probe must undertake some irreversible and specific investment (i.e., purchasing new machinery or dropping an established product line) to carry it one step ahead. In the absence of explicit contractual guarantees, other units may take advantage of the one that sinks its money into a specific investment. In turn, the units would be non-commital to avoid possible holdups. Moreover, past relationships do not necessarily mediate hold-ups in this situation, since probing is as much about reconfiguring old relationships as it is about exploiting them. **The impediments to internal restructuring of N-firms thus have less to do with resistance to reforms from existing stakeholders and more to do with the peculiarities of the product development process that lead to incomplete contracts and underinvestment.**

The literature on governance structures and development offer two solutions. First, the work on the trading of property rights suggests that this underinvestment problem can be solved without attention to the internal organization of the firm. Grossman and Hart (1986) identify dispersed control rights of interlinked assets as the main source of the underinvestment problem. Therefore, a partial remedy could be provided by joining their ownership (control requires ownership when the contracts are incomplete). Starting with atomization (ie, breaking the firm into its smallest possible productive units and privatizing them), subsequent takeovers can redistribute control rights to minimize the number of holdups, but not completely resolve them.

[21] Incomplete contracts leading to underinvestment by the contracting parties have been suggested in differe contexts by Williamson (1985), Klein, Crawford, and Alchian (1978), Grout (1984), and more recently by Hart and Moore (1988).

There are two objections to this view. First, the network characteristics of assets create delays in reaching this second-best solution even when markets are perfect and frictionless.[22] Second, perhaps more importantly, atomization and subsequent consolidation still fails to address the coordination problems within or between the new firms. After buying out several units to engage them in a probe, the unitary owner must still ensure the cooperation of the agents in different units. Unitary ownership does not imply total control. Thus if the N-firm is partitioned into only a few blocks, each one will still be too big for a simple solution of internal holdups. If it is partioned into too many blocks, many probes will still be subject to incomplete contracting among them.

A second solution is for the state to create an industrial policy and directly subsidize investment into new technology.[23] This view assumes that a firm already knows which products to pursue and how best to develop them. In contrast, each product of an N-firm involves severeal units, and each unit is involved in several products. For each unit there is then no single product it can focus on and develop independently of others. The choice of the new technology must optimize over all the products the unit could be involved with. In this sense, each unit will tend to hold back technological modifications until its role in each product line is cleared. An organizational structure that helps generate and coordinate probes still reamins prior to the choice of technology or targeted subsidies.

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[22] First, there will be glitches in the trading of assets because of their netweork properties: there will be many bidders for each asset who are trying to include it in their own probes. As the unsuccessful bidders will face difficulties in pursuing their probes, we will have a bargaining with externalities which involves delays even in the absence of any frictions or transaction costs (Jehiel and Moldavanu 1995). Second, the changing pattern of the probes creates incentives for the parties to wait before engaging in abidding war. Hayri (1994) illustrates that even when one probe in isolation may be extermely profitable, the existence of several others delays immediate pursuance of any of them.

[23] See Amsden et al. (1994) for a defense of government led corporate restructuring in East Europe.

The restructuring of N-firms is thus tantamount to building an organizational and broader institutional structure that supplements the incompleteness of the contracts governing probes. Such structures themselves, however, cannot be simple contractual entities: the very characteristics of probing that rule out complete contracts would also rule out writing complete contracts about how to administer them. The rest of this paper attempts to justify this view and examine its ramifications for N-firm governance. But it is noteworthy that this view is increasingly shared in recent research on Italian, German, and Japanese subcontracting networks. As one close observer of Japan remarks: "In a contractual regime the parties are presumed to be independent entities to perform as agreed if the others keep their promises, too. But [in the Japanese case] the agreed rules do not fix the parties' actions but rather define how they will act to revise their joint goals (and their standards for evaluating goals)... Because the behavior of one party can influence the goals of the others, it is meaningless for either to define, let alone measure, a partner's performance in reference to an anterior agreement."[24] In turn, this research suggests that the problems of incomplete contracts are mitigated by forums in which internal and external parties to a network deliberate the use of dispersed control rights and their joint goals and possibilities.[25] Let us first consider this view within the N-firm.

First, under incomplete contracts, units fail to cooperate on the choice and development of a probe in anticipation or as a result of the following: a unit is exploited and undercompensated for its contributions; the relatively long and uncertain development process hinders an exchange of control rights for financial compensation; a unit can not provide credible

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[24] For this quote, see Sabel (1993), p. 22. For other work on Japan, Italy, and Germany, see: Locke (1995), Herrigel (1995), Aoki (1988), Grabher (1992), Piore et al. (1994), Granovetter (1994).

[25] See also Goldberg (1976) for similar arguments about the regulation of utilities.

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guarantees to avoid these problems in the future. In short, network assets cause the ordering of control rights and the value creation (i.e., probes) to be simultaneous. Thus the administration of probes would require a means of facilitating regular information flows, initiative and consenus among units, as well as an entity with the powers and credibility to coordinate this process and adjudicate internal conflicts. If this adjudicator is outside the N-firm, it would have to rely on the goodwill of the units to provide information or a court system to ensure compliance. But while the former promotes malfeseance and adverse selection, the latter creates rigidities that stifle probes. Therefore, the adjudicator must be linked to the N-firm and must obtain information through the normal course of its operations. As the adjudicator is part of the N-firm, the enforcement problem could then be solved by giving it the discretion to punish and compensate units by diverting the cash flows.

The natural candidate to act as an internal adjudicator is the center of the N-firm holding company. It already has certain coordination tasks, such as marketing and accounting, which allows it to gain access to requisite information. But the problem with the center, or any internal adjudicator, is that it may abuse the adjudication process and its discretionary powers to exploit the units, as had been the case under central planning. Even if the center has no intention of engaging in such behavior, it lacks a prior reputation for fairness and reliability that could mitigate the fears of the units.

The internal adjudicator must therefore act via a forum of member units and possibly external agents. The regular meetings between the parties initiated under the auspices of this forum would partly rectify the lack of trust and aid the parties to spot emerging disputes and remedy them with small interventions, before they turn into full-blown conflicts. These

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frequent corrections to the course of a probe still require the center to yield some discretionary powers, which consist of reassigning control rights among the units. As this has to be done on a continuous basis, with its limits determined by the monitoring of the forum, we cannot expect to see clearly stated property rights among the units and between the units and the center. Trying to clarify revenue and control rights ex ante would only limit the flexibility of this forum and be futile. **Therefore, the internal structure of an N-firm to resolve holdups is a forum, which is led by a center with discretionary powers, and in which revenue and control rights are frequently exchanged.**

The question remains under what conditions external agents will invest in the N-firm while both monitoring the center and empowering the units. The answer can be found in how the government handles the duality of privatization. As pointed out in the Section I, the Czechs designed privatization to rapidly transfer ownership and create incentives for private agents to restructure assets. Privatization thus has dual components: (i) technical delineation of property rights and (ii) an implicit guarantee by the state (i.e., the seller) that the assets are viable and have value. Otherwise, the assets will become worthless as fast as they are transferred, returning to government hands through bailouts. Yet in insulating themselves to mainatain an arms-length stance to economic actors, Czech policymakers dichotomized the two components by creating incentives for complete contract solutions to potential holdups (i.e., takeovers, bankruptcy). Such solutions run counter to the restructuring of N-firms since network assets cause the two components to be simultaneous. N-firms had initially relied on the main banks or foreign investors via JVs to become their external partners. As we mentioned above and will see in detail below, the tight links and probing among units prohibited a clear division of assets

and financial returns. In turn, an external partner would have to commit resources under an incomplete contract between itself and the N-firm -- a very risky venture without thrid party guarantees. As the standoff among the external agents continued, the N-firms lost key personnel, assets fell into disrepair, and other problems associated with control by "insiders" appeared.[26] At this point, the government may provide an impetus to break the deadlock, by bridging the incomplete contracts and merge the two components of privatization. In doing so, the government extends the forum for administering incomplete contracts beyond the boundaries of the N-firm to include itself, private external actors, and the center. The government here goes beyond the role of "first-mover", as in leading debt writeoffs,[27] since it must become: (1) a mediator to forge compromises and (2) a financial partner to show its commitment to the other parties.

Delegation includes these roles and is distinct from pure ownership and state imposed solutions in two ways. First, the private parties receive partial control rights and restructuring authority, and the government holds them accountable for their actions. Linking the delegation of authority with general agreements on compensation and risk sharing forces the private parties to demonstrate concrete results and difficulties in meeting them. In doing so, they reveal information to one another as well as points of further negotiation and problem solving. The private parties and the government monitor one another as well as trade control rights and risk.

Second, although the delegation agreement has blurred property rights, it is no way under the complete discretion of the government. To maintain its own bargaining credibility, the government both allows the private parties to improvise on the agreement and makes itself

[26] See Frydman and Rapacznyski (1993), among others, for the problems of insider control.

[27] As identified by van Wijnbergen (1993) in Polish corporate debt relief negotiations.

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more accountable. As a partner and mediator, the government is subjected to continual scrutiny by the delegees, in order that they be treated fairly -- together and separately.

**As both mediator and partner, the government delegates restructuring authority to an N-firm's internal and external parties, whose joint efforts create the internal forum for the administration of incomplete contracts. This internal forum is linked to the monitoring triangle of government-banks-center. We call this transitory corporate governance structure *intricate monitoring based restructuring (IMBR).*** The next section will now illustrate the main points of our analytical framework and present the details of IMBR in our case study.

## III. CASE STUDY

Our case, Skoda Plzen, was established in the late 1800s. In 1958, it became the directorate of the Skoda Plzen VHJ, which gradually integrated various engineering plants and firms in the region. During he 1960s and 1970s, its main areas of production expanded to include electric locomotives, steam turbines, various generators, mining excavators, rolling mills, heavy machine tools and presses, transformers, trolley buses, cigarette production machines, as well as nuclear power plant systems for the whole CMEA. In 1989, Skoda's production profile accounted for 91 different product groups across more than 20 plants. By 1991, Skoda accounted for a considerable share in employment, output, sales, and export in the country. For instance, it accounted for 2% of employees, 1.4% of output, and 1.9% of exports in Bohemia; and 30.5% of employees, 23.2% of output, and 30.2% of exports in its region (*kraj*).

Similar to other manufacturing companies, the break-up of the CMEA, the fall in domestic demand, and the sharp rise in interest rates hit Skoda hard. By 1991, exports to the CMEA had fallen from late 1980s levels of 75% to 14% of all Skoda exports. Outstanding bank loans (mostly from IB and KB) had risen to 6.6 bil Kc, about 70% of annual sales and 93% of equity capital. During 1992, sales fell by 22%, exports by 44%, and by 31.3%. As payables grew and cash flow dwindled, banks were unwilling to lend any additional loans and outside suppliers began to withhold goods.

According to its original 1991 privatization project, Skoda put 48.5% of its equity into voucher privatization, and left 42.1% in the FNP for future sale to foreign partners via JVs. (See Table X) As noted in Section II, Skoda set out to create JVs with western firms, notably a double JV between Siemens and its Energo and Transport programs, which represented almost half of Skoda's output and sales. Similar to other N-firms, Skoda's potential JV would include only selected units. As Siemens invested new capital into the JV, Skoda would cede majority control of the relevant units. Due to financial and production links between JV and non-JV units, the partnership assumed the form of a JV rather than takeover: a framework in which both parties observe and learn about how to use and invest into their mutual capabilities to develop new products. On the one hand, Skoda managers wanted assurances that JV units would continue to contribute to certain debt-reduction and product development plans, which were vital to the restructuring of non-JV units. On the other hand, Siemens refused to commit to open-ended production and financial commitments and wanted clearer boundaries drawn around the JV units. To mitigate these differences, Skoda and Siemens turned the JV into an incomplete contract, in which the relations between JV and non-JV units and the finances would

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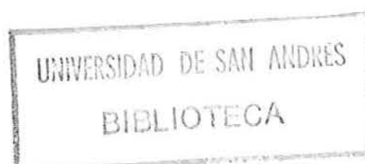
be specified over time. They then sought the aid of a third party to ensure one another's interests. The main banks were unhelpful since they had no ownership authority over Skoda assets and were already reluctant to make long-term financial commitments. The government, though, continued to possess, at least partially, the authority and resources to fulfill Skoda's privatization. In turn, the JV hinged on the government's willingness to absorb some of the liabilities and act as a guarantor of mutual commitments.

The first set of complications in the JV centered around Skoda's concern that Siemens' production strategies would jeopardize the development and cash-flow of other units. The Energo and Transport group had collaborated with other units on several projects, creating interdependencies in component production and in the sharing of debts and profits. If Siemens wanted a majority share in a JV with Energo, it had then to take over many of Energo's existing production and financial obligations toward other units. For instance, if it was to cancel or decrease already agreed to purchases by Energo, Siemens would have to compensate the affected units for their losses. Siemens had refused this and the absorption of the existing debts, assuming that the government or Skoda would cover these obligations. Skoda management also feared that ceding full control to Siemens of operations that generated substantial liquidity through exports restricted the cross-subsidization between units, deemed necessary at the time.

The second source of conflict appeared in future development strategies for these groups -- nuclear plant production for Energy and the locomotive production for Transport. In both areas, Skoda management saw the modernization, servicing, and component production for existing products already in use throughout the former CMEA countries as critical for the development of existing production capabilities and cash flow. Energy units had begun to focus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on the production of improved turbines, fuel containers, and other parts for its plants in Eastern Europe. Siemens could help develop Skoda's turbine and nuclear equipment programs. Yet it appeared intent on replacing the current turbine production with its own and gaining through the JV the lucrative contracts for the unfinished construction of two nuclear plants in the Czech Republic and the modernization of eastern plants. In Transport, Skoda had begun to renew relations in Russia and the Ukraine, where it already had 3000 locomotives in operation, for sales of locomotives through third party financing and barter deals. Skoda planned JVs with the Russians and Ukrainians to produce engine parts and to recoup large uncollected receivables. Siemens however wanted to shift more of its own production into Transport and orient Transport toward simple wagon production.

To alleviate these tensions, the Minister of Industry, Jan Vrba, positioned his ministry in the negotiations to coax compromises from each side and provide guarantees for liabilities and technological development.[28] Although he managed to have letters of intent signed by all parties in January 1992, both Siemens and Skoda argued that the government's participation in the resolution of inherited liabilities was essential for the final agreement expected in March. When the government's commitment was tested, it waivered, notably in assistance with a 1.2 bill Kc receivable from the state railway company and a 1.9 bill Kc debt in Energo's nuclear

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[28] Vrba attempted to emulate the successful model for the Skoda Mlada Boleslav-VW JV. Similar to Skoda Plzen, Skoda MB had considerable debts, most of which VW was unwilling to assume. The Czechs created a shell company, Prisko, which held the old debts of Skoda MB and the shares in the JV. Prisko had an initial 70% stake in the JV from the Skoda MB assets included in the JV. As VW made investments into the JV over the next 6 years, Prisko's stake would fall to 30% and VW's would rise to 70%. The equity of Prisko would then be sold on the market and be used to pay off the old debts. The catch was that the FNP would continue to hold the equity of Prisko. The Klaus government, elected in June 1992, wanted nothing to do with the government continuing to hold significant stakes in Czech companies, and thus be responsible for its corporate governance. This view eventually back fired for the Klaus government. Realizing that the new government was an absent shareholder, VW failed to meet its investment schedule and reneged on the planned investment for Skoda MB in September 1993. The government then reversed its policy. It renegotiated the terms of the JV with VW, and took an active role in managing the JV and supporting the regional sub-contracting networks.

program.[29] The Klausians had increased their political strength, and rejected any protracted government involvement in the JV. Upon their victory in the June 1992 elections, Vrba was ousted. The JV talks officially collapsed soon after. During the summer of 1992, Skoda grew openly hostile to the government. It created a smaller management board without any government members. Then on September 17, it shut down three major units for a week. Two weeks later, the government dismissed the management board and announced that it would sell a further 37% of Skoda in a public tender.

A JV between an N-firm and a foreign partner required mutual financial and organizational linkages between the JV and non-JV units -- essentially an incomplete contract supported by government guarantees and medium-term participation. The Klausians refused to take such actions. Instead, they would first seek a pure ownership solution with the equity remaining in the FNP. What follows is an examination of how the failings of this solution gave rise to IMBR.

**A. Delegation and Monitoring -- The Emerging Structure of IMBR**

Only 41.6% of Skoda's shares were sold in the first wave of vouchers, leaving 6.9% unsold. (See Table 3) Three investment privatization companies emerged as the main shareholders of Skoda with 6.8%, 4.4% and 2.5% of the shares. As mentioned in Section I.C, IPCs remained passive throughout what follows. Through the tender, the government aimed to create powerful owners who would invest in, break up Skoda, and use JVs or other means to

[29] Skoda had finished production of 60 locomotives for CSD, the state railway company, which had refused payment for them in early 1992 due to budget cut backs. Energo also had an outstanding debt from the previously state mandated development of nuclear plant technology. The terms of the finance were dictated by the former government. Skoda argued that this debt was then the responsibility of the new government. In addition, Siemens needed environmental indemnities on existing environmental damage, which only the government could grant as the holder of Skoda equity.

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provide additional financing. Creating unitary owners with incentive contracts would, in theory, force the new owners and the units to settle restructuring disputes on their own. It would also cut the remaning formal links between the government and the firm.

As interest in the tender was rather limited, the main candidates were: Mr. M, a former Skoda manager without additional funds; and the KB-IB consortium, the principal Skoda creditors with whom government had been holding discussions. These banks, for reasons mentioned in Section I.B, were not keen on undertaking the full restructuring of Skoda on their own. The government proposed allocating 20% to Mr. M and 14-17% to the consortium. As incentives, government would finance the locomotive and nuclear debts, and deduct some of the banks' expenses from their share price (hence the number of their shares). The banks and Mr. M would receive seats on the board, with Mr. M as the director and chairman. More specifically, the agreement required Mr. M to

- create legally independent units out of the existing units,
- clarify the financial accounts of each,
- renew negotiations with potential JV partners,
- make concrete steps toward recouping uncollected receivables in Russia;

the banks to

- grant Skoda a six month moratorium on debt service,
- decrease penalties on arrears,
- lengthen payment periods and decrease the interest rates of outstanding debts,
- delimit debts among units;

and the government to

- pay for the locomotives ordered by the state railway company
- take over the debts incurred to develop the nuclear program.

Soon after the agreement was concluded, three points of conflict emerged. First, the JV talks resumed and immediately collapsed, as there were no new provisions to mitigate the above mentioned conflicts between Skoda and Siemens. In need of new funds to start restructuring,

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Mr. M turned to the government and banks, which initially rejected his plea. Only after the Ministry of Finance's persuasion did the banks agree to underwrite and purchase 1 bil Kc of Skoda bonds at a relatively low interest rate in December 1992.[30] Second, the banks and Mr. M rejected the government's ultimatum to atomize Skoda.[31]

Third, and most serious, was the refusal by the government in December 1992 and again in January 1993 to finance the nuclear and locomotive debts. The key reason was Mr. M's reorganization plan, according to which each unit would be a limited liability company (subsidiary), with the center of the holding company owning 100% of their equity, buildings, and property. In addition to dividends and a fee for the use of the Skoda trade mark, *the units would also have to pay rent to the center*. The government argued that without an imminent JV or atomization, Skoda's center would have unwarranted control over the subsidiaries: the rents would help preserve the old hierarchy; the units could not easily receive outside funding without owning their own property; cross-collateralization of assets among subsidiaries would continue and block a future break-up of Skoda.

The parties as such found themselves in an three way stalemate, yet no one left the table. The agreement (and note not an official contract) was again revised: two government officials

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[30] For the 1 bill Kc bond, KB bought 454 mill Kc, IB bought 400 mill Kc, and the Czech Savings bank bough the remaining 146 mill Kc. 500 mill Kc and 1.4 bill Kc of Skoda outstanding loans were payable to IB and KB respectively. Their restructuring of the loan maturities, interest rates, six month payment moratorium, and dissolution of outstanding penalties cost IB and KB over 110 mill Kc and over 550 mill Kc respectively. 400 mill Kc of the KB loss is still in dispute since it was related to the sale of the CSD locomotives, the full payment for which by the government still has yet to resolved.

[31] The government already believed that Skoda, along with other N-firms, had to be "atomized" to facilitate bankruptcies. It was restrained from doing so, however, for two reasons. First, such a move could have created a reputation of disregard of ownership rights (new owners created via voucher privatization also opposed atomization). Second, managing the ensuing the chaos would bring great financial burdens. If cross-subsidies were as problematic as the government thought they were, several spinoffs would quickly find themselves in default after atomization. Since this could set off a domino effect, the government would be dragged into bailing out the banks and/or some of the spinoffs. The rapid insolvencies of several potentially strong former units of Aero and CKD holdings were ominous examples of such a process.

would sit on the board of Skoda for at least 12 months; the government ordered a review of Skoda for June 1993, at which point it would officially decide the recipients and size of the equity stakes. In the meantime, the parties would negotiate the price of shares and debt relief, as the banks demonstrated their debt restructuring and Mr. M demonstrated adequate decentralization within Skoda. From June until the end of 1994, the parties continued their negotiations over restructuring progress as well as the terms of payment, share transfer and government debt contributions. The government eventually guaranteed the nuclear debts in early 1994 and partially paid for the locomotives in mid-1994. The banks and Mr. M received their shares in early 1995, with moratoriums on the resale of shares and the bankruptcy of Skoda.[32]

The government was unable to delineate ownership rights, set incentives, and walk away. The reasons could be found in the intertwined internal and external holdup problems that had plagued the banks and N-firms from the beginning. First, the banks received a potential monitoring partner, in Mr. M, but not a financial partner. As Skoda was already highly dependent on KB and IB for operating capital, these banks would have to bear the brunt of Skoda's borrowing needs. Second, because Skoda's network assets prevented immediate transparency, the banks were unable to assess both the ex ante risks of lending requirements and the actions of Mr. M and the subsidiaries, and thus feared being pulled into long-term lending obligations with little recourse. Without clear financial support, Mr. M in turn had no reason to submit to the constraints of the tender. This put the banks and Skoda right back where they

[32] Mr. M received a two year moratorium on the resale of his shares to a third party for more than the purchase price. IB received a 5 year moratorium on the resale of its shares and on any bankruptcy actions taken on its part against Skoda. Any profits made by the banks from the liquidation of any Skoda assets would have to be ceded to the CR government.

started -- uncertain of either's intentions. Similar to the collapse of JVs, the stalemate reappeared without clear government commitment to sharing both the financial risks and monitoring. Third, the government's public commitment to privatization had tied its political health to ensuring both the reassignment of property rights and the value of assets. Any further actions of force against the banks and Skoda or inattention to the stalemate, would have threatened both components of privatization. In turn, the government gradually re-engaged the two parties to resolve their disputes, and the failed tender took on a new life of its own.

The tender turned into an informal, implicit contract, whereby the government used the vague clauses of the deal to monitor the progress of the parties in their restructuring obligations. The ensuing pattern of frequent negotiation set the foundations of the forums for administration of incomplete contracts, ie, IMBR. These forums comprise two monitoring triangles: In the "external" monitoring triangle the government, banks, and Mr. M exchanged information and control rights in deliberating each other's contribution to debt restructuring, and progress with decentralization and financial transparency. The government delegated to Mr. M the authority to reorganize Skoda and to determine how new finances would be absorbed within the firm. The banks received the authority to monitor both Mr. M and the new subsidiaries (subs) through two-level debt financing. As Mr. M allowed the subs greater decision making rights and direct access to material and financial resources, the government clarified the share prices and debt relief. As the banks provided alternative forms of refinancing and operating credits, the government clarified the banks' compensation, and Mr. M ceded valuable assets as debt collateral. In the "internal" monitoring triangle, the firm center (Mr. M), the banks and the subs exchanged information and control rights through the resolution of debts, transfer prices, and

project finance. To better understand this level of monitoring, we first present the basis for conflict resolution within Skoda and then show how the two monitoring triangles work together.

**B. Probing Holdups and Their Resolution Within Skoda**

As examined in Sections Ic and II, the viability of N-firms, such as Skoda Plzen, depends on the ability of its members to cooperate on the generation and development of probes. But as probes are regulated by incomplete contracts, they are prone to holdup problems. Our interviews with 10 major units of Skoda revealed that 9 of them were involve in at least one probing activity. Two thirds of all reported probes involved more than one unit. Six of them gave specific examples of product quality and R&D disputes which, they claim, jeopardized further cooperation. Three units cited instances of attempts by their suppliers to charge monopoly prices. Seven units reported that the recently introduced last-call principle, which liberalized procurement from outside, had at least brought monopoly pricing problems out into the open. Only two units reported the long-term nature of their relations with other units as a main factor in conflict resolution. Most of them reported that due to narrow technical specifications, it was not practical to go to outside suppliers. The interviews also revealed that these problems are more pronounced in the units that are engaged in large scale probing activities.

The interviews indicate that the units have well-founded fears about monopoly pricing and deficient components disrupting their production experminets. Below are two examples of how Skoda's center is helping the units to resolve such holdups.

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*1. TS and OK*

Two units of Skoda, TS and OK, were merged in 1983 and then separated in 1990. Despite their shared past, they could not agree to develop a common project for over three years. TS produces rolling mills, heavy presses, and sugar cane mills, and OK produces a wide range of industrial gearboxes. After separation, TS ran aground with the collapse of the CMEA. OK focused on its universal gearboxes, rather than the specialized designs TS required, and started its own probe into the gearboxes for textile machines. In 1991, TS was a finalist in a lucrative contract for sugar cane mills in Uzbekistan and asked OK to come up with a new design for gearboxes of these mills. OK refused, claiming that it needed assurances that the developed designs would not be thrown away after a few production cycles. This was indeed a critical moment for them: OK would soon have to replace some of the machinery it used to produce gears for TS, and TS had always complained about the quality of its gearboxes. So, OK had to decide whether to buy new machines (which could improve the quality as well), or completely move away from TS and spend the money on developing gearboxes for textile machines (its own probe). Due to recently fluctuating orders from TS, OK viewed TS as unreliable and would not commit strongly to TS. On the other hand, TS tried to obtain additional funding and to buy gears from outside contractors. Due to its very specific designs and small volume orders for development runs, it was not able to do so.

Progress towards the resolution of the long running dispute between OK and TS came through "moral" and financial backing of the holding center and the aid of IB and KB. The center would guarantee an export loan and contribute to export insurance for the sugar mill project, if OK and TS could agree to a financial and production plan which involves revenue

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sharing among TS, OK and the center. IB and KB, however, declined to finance the whole project up front. Rather, they demanded more progress in product development, which they would finance only with direct short-term loans to TS and OK and liens directly on their other in-process receivables. The center ceded to these demands, and the banks began directly monitoring the project. With this encouragement and active involvement of the banks and center, TS and OK started negotiating again, aiming to modify both the gearbox design and the specifications of the new machine to make both of them more compatible with OK's other probes. As the modifications progressed, the banks and the center's marketing and finance departments met with TS and OK to negotiate the terms of the export financing and target other potential export markets where the banks and Skoda had trade affiliates. To relieve the insurance costs, the parties then turned to their monitoring partner at the Ministry of Industry (MPO) to facilitate a partial state guarantee on the export insurance via the government's new export promotion agency, EGAP.

*2. Locomotives*

Loco, the locomotive assembly unit, procures electric motors, transformers, and pneumatics from other units. Loco and these subs share and rent from one another testing labs, work shops, and R&D facilities. The problem appeared when Loco, riddled by old debts and the loss of its main customer (USSR), needed to develop its suburban and long-haul locomotives for new market niches. This is at least a 3-5 year project whereby Loco needs to reduce its design-to-market time and have new advances in component production. But while Loco has been in a slump, its suppliers have been working on other products, particularly for trolleybuses, generators, and power plants. When Loco asked them to drop their side activities

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and focus, once again, on developing parts for it, they refused. The suppliers kept their side activities as potentially important sources of cash flow and leverage against Loco. But without decreasing their side activities, they could not provide the necessary improvements in parts. Yet Loco was too weak to provide upfront payments or other financial assurances to win over its suppliers.

The center managed to get the parties to locomotive production, including its development and finance departments, to meet regularly to generate a medium-term strategy. The team estimated financing of 150 mill Kc for 3-5 years. Since no bank would lend to Loco, the center would obtain a loan for it, adding a small surcharge. When the center turned to KB and IB for the loan, the banks declined since there was still no payment on Skoda's old receivable from the state railway company. The government had delayed, saying that the MPO and Skoda had still not found a buyer or leasee for the locomotives and that KB and IB had padded their loan restructuring costs. Mr M. then started to go public about the government unfulfilling its commitments (August 1993).[33] Negotiations between the banks, Mr. M, and the government resumed in late September only after all agreed not to go to the press on these issues. The resulting compromise was that the government would make an immediate down payment on the locomotives through the KOB, the price of locomotives would be renegotiated, and KB and IB would negotiate with the team of foreign investment bankers at the Ministry of Privatization about their restructuring costs. KB and IB then released the loan to Skoda, with the physically separate sub of Ostrov as the security. Once this was secured, Loco's supplier units took on short-term development loans for the project from KB. The center and the units

[33] Svobodne Slovo, Aug 6 1993; Hospodarske Noviny, Sept 15 1993;

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set annual and semi-annual progress indicators for each party to reveal bottlenecks, while the subs were largely responsible to resolve glitches and take new approaches among themselves.

These examples show that the probing activity requries experimental runs, frequent specification changes that could only be delivered by the existing suppliers.[34] The parties failed to provide one another with explicit guarantees, a sign of incompleteness of contracts. Past relations, even among the units that have worked together for year and still share facilities, were not strong enough to overcome holdup fears. These fears were so significant that in both cases potentially profitable probes were about to be abolished without starting a meaningful conversation between the parties. These impasses were broken in three ways. First, the center managed to lure parties back into negotiations by backing the projects, which enables them to exchange control rights on the production plans, and agree on the parameters of their joint development efforts. Second, KB and IB provided two-level debt financing, which allowed them to build closer direct relations to the unitss and exchange monitoring responsibilities and asset control with Mr. M. Third, financial difficulties with the new projects helped clarify the parties' negotiations with government on both prior commitments and the future development of Skoda.

### C. Intricate Monitoring Based Restructuring

We now present how the two monitoring work together to form IMBR. We identify three main components for the resolution of possible holdups: Skoda's internal market regulation, two-level debt financing, and the government's direct and indirect mediation.

[34] These are the necessary conditions identified by Riordan and Sappington(1989) to rule out second sourcing.

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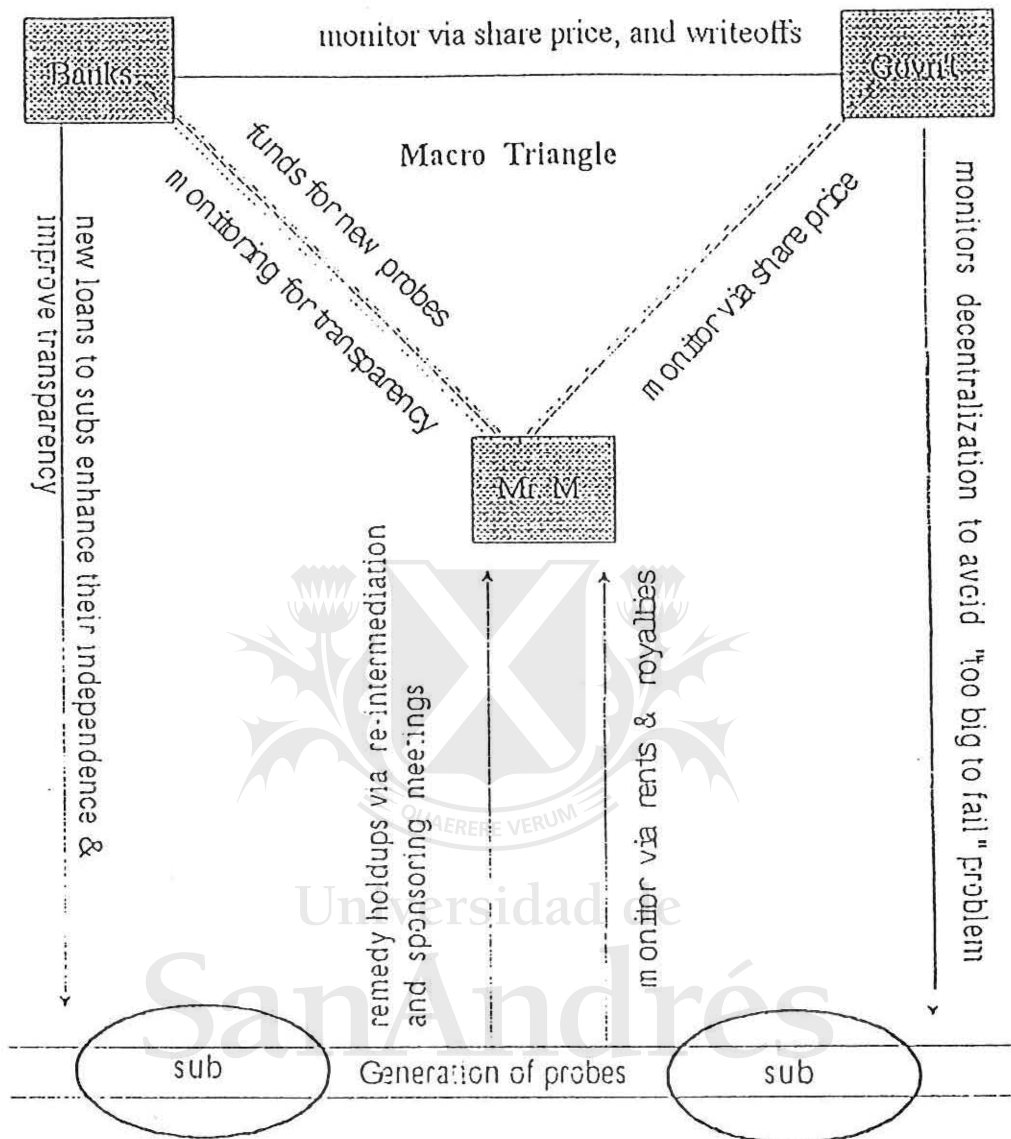
Figure 2

# Monitoring Triangles of IMBR

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i. Skoda's holding center wholly owns the 36 units, which are now independent, limited liability companies. While the center manages general production, financial, and marketing strategy, units have broad decision-making power over their own operations, including assessment of penalties against internal and external parties. Horizontal links are liberated. Units can pursue sales and suppliers directly outside the boundaries of Skoda. For the latter, they must however first see if an internal supplier can match or beat the offer (so called "last call principle"). But the background mechanisms for coordination and conflict resolution are negotiating forums and the center's discretionary powers of coercion. First, the center and units annually formulate a new set of rules for internal contracting, product development, and finances. The rules on their own do not necessarily govern relations, but trigger collective deliberations over specific issues. For instance, all ten units interviewed regarded the use of penalties for overdue payables or deliveries as minimally effective to improve internal sub-contracting. Yet they did note that the rules and monthly meetings among unit financial officers expose financial and production problems and generate collective solutions. In addition, the center convenes regular strategy meetings for related units to resolve production break-downs and share information on new technologies and markets. On the one hand, the information and preliminary objections or assurances allow the units to monitor and resolve conflicts directly among themselves. On the other hand, the center uses information to set indicative benchmarks for debt ratios, cash flow, employment, productivity and energy use.

Second, in many stalled initiatives, the center manages to bring everyone back to the negotiating table, using, if necessary, its coercive powers. The power of the center comes from its leeway to determine rents and royalties, which are subject to annual negotiation. The center

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uses these for cross-unitsidization and monitoring -- to solicit information and discipline the units. Yet credible use of this authority is checked. Managers judge abuses of the center and one another through the above mentioned forums. An alternative check comes through the two-level debt financing, which brings us to the second component of IMBR.

**ii.** Since Skoda was heavily indebted, the units were chronically short of funds and unable to finance the probes on their own. This made it difficult for the units to cooperate with one another. The banks, however, were unwilling to provide long-term loans or support atomization, despite the offer of partial compensation for partial write-offs. Rather, the banks pushed for greater information about the units and guarantees from the center for existing and future loans. The result of this bargaining between Mr. M, the banks, and the government was a new lending structure that combined increased monitoring with the sharing of risk and control rights. IB and KB created a two-level debt financing system for Skoda: they kept large investment loans on the accounts of the holding and delimited the rest among the units in October 1993.

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Two-level debt financing reconfigures internal and external monitoring in two ways. First, bank lending for development of the major programs, export contracts, and operations in the most distressed units occurs via Skoda's center, as it owns all the real estate. Recall that one of the center's main contributions for probing is to offer project financing to coax units into making compromises. In reissuing loans to the units, the center acts as a screen for the banks -- by engaging in re-intermediation and ensuring projects. Second, with direct lending to the units,[35] the banks enhance their monitoring of the whole group and the units increase their

[35] Through this channel, the banks offer short-term credits secured with liens on the subs' receivables.

autonomy. As short-term lending increases the cash flow of units, it offers the banks a low risk evaluation period of unit operations and an avenue to observe any abuses by the center of its internal taxing and cross-subsidizing powers. With increased financial autonomy, the units are in a stronger position to bargain with the center and with one another.

**iii.** Through the use of an incomplete contract, backed by its financial and monitoring commitments, the government directly and indirectly builds cooperation and restructuring progress. First, the government directly monitors and pressures the parties via negotiations about debt relief, share prices, Skoda's internal structure, and debt restructuring. Additionally, by having two of its representatives on the board of Skoda for over a year, the government enhanced its abilities to monitor the progress with decentralization and prevent abuses by the center. Second, as it establishes itself as a credible "mediator of last resort," the government allows the banks and Skoda breathing room to improvise and learn to resolve their disputes directly with one another. The government's credibility to play this role was initially established by its financial commitment but is continually tested by the way it treats each party in altering or relaxing the restructuring criteria.

Within IMBR, both control rights and risk are frequently being reassigned to facilitate the flow of information and coordination on multiple probing experiments. The dual monitoring traingles with delegation of partial authority helps maintain flexibility as well as creates channels of deliberation in which the parties can head-off major showdowns. Just as the government trades control rights and risk with Mr. and the banks, the center is doing the same with the banks and the units on more detailed restructuring issues. Moreover, the shared responsibilities and vagueness of the initial agreement force the parties at both levels to reveal

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information and thus monitor one another. In turn, abuses of discretionary powers, such as those of the Mr M. and his center, are held in check by both Skoda internal forum and the scrutiny of the government and the banks. This allows the parties to learn to cooperate without the fear that they will simply be taken advantage of continuously. A short-term concession will likely be compensated over time, perhaps into a long-term gain.

## IV. Conclusion

This paper has argued that the network characteristics of the large indusrtial firms and the duality of privatization makes it imperative that the state participate in the creation of *intricate monitoring based restructuring* (IMBR) of large industrial firms with multiple units (what we call N-firms). At a micro level, the self-resturcturing of N-firms comes about through the probing of new markets with new or modified products. However, the fludity and unpredictability of the probing process, amplified by the tight production links within an N-firm, create contracting problems among the units: underinvestment and holdups due to incomplete contracts. Rectifying the incompleteness of contracts, which regulate their probes, appears as the main challange to restructuring.

At a macro level, the Czech governemnt's attempts to define the terms of governance but remain insulated led to the dichotomization of the two components of privatization. The only recourse then for private agents, such as the main banks and IPCs, to resolve conflicts was through complete contract methods (i.e., takeovers, bankruptcy, etc.). They declined to initiate restructuring as they were neither willing or able to bear all the risks alone. Attempts by N-firms to create JVs with foreign partners also failed. As the the network properties of N-firms

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prohibited a clear division of asset control and risk, JVs had to be regulated by a incomplete contract with third party guarantees -- principally the government. The Klausians rejected such participation and the JVs collapsed. Consequently, a stalemate among the N-firms, the main banks, and the government about who would lead restructuring.

The macro stalemate for the N-firms is further aggravated because the micro-level underinvestment and holdup problems of an N-firm appears solvable through a forum of its units and an internal adjudicator (eg, the center of the firm). However, the effectiveness of this forum depends on the fluidity and ambiguity of the control rights among the member units and the center. This forum can only function under the monitoring of outside agents who will ensure that the center (as the internal adjudicator) does not abuse its powers and the units are empowered. Yet with such internal ambiguity, external agents are unwilling to commit resources to any extented participation in the N-firm. In order to bridge the incomplete contracts, the government has the opportunity to take on the role of both mediator and financial partner to the forum, in turn merging the two components of privatization.

Section IV illustrated this development through the case, Skoda Plzen, a major Czech N-firm. The government first tried to break the stalemate by creating powerful owners for Skoda through a public tender. However, this tender failed for the reasons just mentioned: given the unclear division of internal asset control and liabilities, Mr. M and the banks were unable to cooperate on Skoda's restructuring without a commited third party to share the risks and monitoring responsibilities. These failures created the basis for IMBR, the keys for which were the dual processes of delegation and the creation of two inter-linked monitoring triangles. At one level, the government delegated to Mr. M the authority to reorganize the firm and to the

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banks the authority to restucture the finances. These parties then shared information and traded control rights and risk as they negotiated restructuring criteria and the future terms of share purchases. At another level, Mr. M's center, Skoda's units, and banks similarly learned to trade control rights and risk as they negotiated the terms of product development and the bank's two-level debt financing.

IMBR now seems to have revived a company whose obituary was written a long time ago. M&M's debt has fallen to 50% of its 1992 level, in 1994 revenues increased 43% to 17 bill Kc, and employment is increasing. Skoda's success have even been recognized by independent observers such as the stock market, the *Economist*, The Wall Street Journal, and *Balkan News International*. It's share price has increased threefold and has a market capitalization of 55 billion Czech Korunas (US$ 2.2 billion). During 1994-95 it initiated new ventures for locomotives in Russia and Germany, trolley buses, electric car engines and turbines in the US, and power plant technology in China. Skoda's acquisition of an eastern German pressed-steel maker from Treuhand, Germany's privatization agency, solidified its growing involvement in European and Asian markets as a supplier of heavy machinery and automotive crankshafts and chassies.

It is unclear, however, to what IMBR will lead. First, IMBR for Skoda appeared not as a design but through negotiations. Upon observing its relative and faced with other declining N-firms, the Czech government has attempted to replicate it with N-firms in various industries. CKD now looks remarkably similar to Skoda. After the failure of the JV between Dow Chemicals and the Chemapol Group, the government created a partnership between itself (represented by the MPO), a foreign chemical consortium, and Chemapol member firms. A

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similar structure has emerged for Vitkovice, Nova Hut, and Trinecke Zelezarny, but with a US consortium of minny-mills. Each has an ownership take, with the transfer and payment of shares occurring over time and the main Czech banks providing finance. In the aircraft manufacturer, Aero, the joint-owners and partners in both the holding and various units are the three main Czech banks and the state's clearing house bank, KOB. As these parties resolve Aero's debt problems, the MPO on behalf of the KOB negotiates with Aero management and the banks on the reorganization of production. Pratt and Whitney is also a 50% partner in two units.

But the recent troubles and allegations of fraud at Poldi, the high-end steel producer, reveals that IMBR is not a simple mechanical structure. At Poldi, the state administrator of property, FNP, took control of the project and simply put the actors in place, wrote some incentive-based ownership contracts, and walked away. Unwilling to provide room for continued negotiations and changes in the original contract, the FNP allowed initial conflicts to turn into a public war of words. The FNP and KB now seek the ouster of their owner-manager in the courts and the press. It appears, then, that the government's vigilant tending to the mechanisms that force deliberation are critical to the sharing of information and risk, and, in turn, to conflict resolution and probing. The recent work on Japanese and Chinese industrialization support this. (See for instance, Sabel 1993; Cui and Gan 1995)

This leads to the second dilemma: as the government pulls out of IMBR at Skoda, can Mr. M., the units, and the banks maintain the confidence building that has taken them so far? If one believes that long-term loans are the only method to maintain cooperation and monitoring between banks and firms, then the future may be dim. Although KB won a bid in 1995 to

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finance 400 mill Kc of Skoda's 1.5-2 bill. Kc investment plans, Skoda has repeated its interest to loosen its dependency on IB and KB, seeking to use its own retained earnings and better equipped foreign banks. For instance, recent investments in Skoda's forge and gearbox units were financed through the EBRD and Skoda's retained earnings. Yet this might not spell doom for the governance of Skoda. IB and KB still provide flexible short- and medium-term operating capital to both the units and the center. The recent research on German banks and "relational banking" shows that this form of lending may be essential for continuing the deliberations and learning between banks and firms. (Sabel et al 1994; Edwards and Fischer, 1994)

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