Multinational Enterprises and the Emergence of Markets and Networks in Transition Economies

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Abstract
This paper explores the impact that foreign investors in the transition economies have on the evolution of market relationships. Starting points are the role of networks and the process of enterprise transformation in economic transition. On this basis, the evolution of the supplier network of VW-Škoda is explored and related to world-wide trends in the car industry. Relationships within the network are growing increasingly complex, and thus create mutual dependencies and pose particular challenges for managing market relationships.

The paper concludes that network relationships have a pivotal role in business-to-business markets and, therefore, have to be taken into account when analysing enterprise transformation in transition economies. Economic policy also has to consider the pivotal role of the flagship firm, and its interdependence with local businesses.

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“Compare the problem of establishing transactions after the disintegration of the party-state hierarchy with a hypothetical situation in which all consumers from Paris would be replaced by Londoners, while all producers, wholesale and retail companies from Paris would be replaced by companies from the Milan area. For quite some time Paris would be dominated by chaotic conditions and a serious fall in output as actors would lack any frame of reference to base their decisions upon” [Swaan 1997:65].

Motivation

The essence of systemic transformation in Central and Eastern Europe (CEE) is the replacement of coordination by central plan with coordination via markets, as reflected in the title of the 1996 World Development Report. The same study suggests that foreign investors have an important role in the transition process through their contribution to enterprise restructuring and through their transfer of capital and know-how [World Bank 1996, also see McMillan 1994, Kogut 1996, Desai 1997, Meyer 1998a, b]. Yet, foreign investors’ impact on the development of markets has not been analyzed. This paper aims to understand the evolution of markets under the influence of multinational investors.

However, markets do not function as the classic microeconomic model suggests. Perfect competition is the exception rather than the rule. This is particularly true when multinational companies are involved. Therefore, the essential question is ‘what types of market relationships will evolve?’ In important sectors, firms operate within, more or less, tight production networks of international partners, which are often dominated by one strong partner [e.g. Borrus and Zysman 1997, Rugman and D'Cruz 1997]. Foreign investors expand the networks of which they are part, and - in an optimistic scenario - integrate CEE businesses into global production networks.

Following introductory remarks on markets, the paper summarizes the recent literature on the ‘impact’ of FDI on enterprise restructuring in Central and Eastern Europe (CEE), as well as the development of inter-firm relationships. These are then examined in relation to the automotive supplier industry, and specifically for the case of VW-Škoda. The structures found here are reflected upon in light of transaction-cost economics. The paper concludes with a modified assessment on the role of foreign investors. The creation of business networks, and the access to international production networks is stressed a major elements of enterprise restructuring.

A case-method of analysis is used because many variables influencing patterns of adjustment are not available in financial reports, and the large enterprise-level data sets used in related research [cf. Carlin et al. 1995]. What is more, new theory building is required to understand the
process of enterprise transformation. Case-based research can identify relevant variables and provide new insights on the causal relationships between them.

Markets in Transition
A market economy encompasses a variety of markets, both for consumer goods and for factors of production. Where foreign investors enter the markets, they influence the behaviour of local market participants. For instance, with respect to labour markets, foreign investors may introduce more competitive incentive schemes to attract highly qualified individuals, and employ more flexible hiring- and firing-policies. Other market participants observe such behaviour and, as a result, adjust their job search or recruitment strategies. This is an example of 'demonstration effects' which represent an important aspect of the impact of FDI on host economies [e.g. Blomström and Kokko 1996, Kogut 1996].

Labour markets are, however, unique in many ways, and thus, merit a separate treatment. The same applies to markets for energy, telecommunications and other infrastructure projects. Investors in these industries, obviously, make major contributions to the development of the sector, and to the businesses using its services. The extent of welfare effects for the local economy, resulting from these investments, depends, however, on the regulatory framework established for natural monopolies. Led by Hungary, several East European countries made their experiences with liberalizing telecommunications and utilities in recent years - even ahead of some continental West European countries [Canning and Hare 1996, Carbajo and Fries 1997].

On capital markets - another unique market - the contribution of non-bank foreign investors is limited.\(^2\) Since the shares of foreign-owned firms are usually not traded on local equity markets, the foreign investors do not *per se* contribute to the evolution of local systems of corporate governance [Kogut 1996]. Exceptions include privatization projects in which a foreign investor acquires a major share in equity, and the remainder is distributed in the voucher-based mass-privatization, or floated on local markets. Nevertheless, East European capital markets are developing under strong Western influence. Western businesses, investors or others, may not raise capital locally, but they become involved as consultants to local firms, as traders of equity, or as portfolio investors.

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\(^2\) On transaction costs inhibiting the efficiency of new commodity exchanges in transition economies see Davis [1998].
This paper focuses on business-to-business markets for manufacturing goods and business services. Eastern observers complain that CEE firms cannot access Western markets. Even foreign investors in the region frequently obtain goods from their established Western suppliers, or from these same suppliers' local affiliates, rather than from domestically-owned firms - even though local suppliers claim they can provide comparable goods at a lower price [e.g. Sereghyova 1995, Lorentzen et al. 1998]. Apparently, subtle 'barriers to entry' inhibit sales to corporate customers at downstream stages of the product chain. Without marketing or distribution capabilities, manufacturers can rarely sell their produce directly to consumers (other than local neighbours). The paper explores why barriers to entry in business-to-business markets appear so difficult to overcome.

A supplier offering a product of the same quality as leading competitors but at a lower price would - under the ‘usual assumptions’ - be able to sell his output. Similarly, a producer offering a slightly lower quality product at a substantially lower price would find customers at the lower end of the market. Since CEE has substantial factor-cost advantages, economists would expect major export opportunities.

Yet, the assumptions of the neoclassical market model only hold for some markets. On markets for raw materials, natural resources and agricultural goods, perfect competition is a reasonable approximation. Therefore, exchanges can be established to trade raw materials such as oil, copper and coffee. Yet, producing raw materials and standardized products offers little potential for economic development in CEE. Most countries in the region lack natural resources, except in agriculture, where the market model, due to the regulatory framework, does not apply. What is more, the competitive nature of the markets makes them unattractive as they permit only small profit margins.

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3 It is difficult to verify the validity of such concerns because full information on all properties and prices of the goods concerned would be required. From an economic policy perspective, the distinction between local and foreign-owned firms may not matter if local value-added is considered as the crucial aspect of impact analysis. However, public opinion may also be concerned about the locus of control over economic activity.

4 Since marketing was unnecessary under the central plan regime, few CEE firms have these capabilities, particularly not for exports to the West.
On markets where the standard assumptions do not apply, business networks play an important role. Firms procure goods, customized to their specific needs, from suppliers with whom they have had long-standing business relationships. Similarly, sales are often customer-specific due to customization of products, e.g. in machine building or automotive supplier industries, or due to marketing strategies and interdependence of production and sales activities. Therefore, many inter-firm relationships are built on long-term relationships, or business networks. Studies have demonstrated that, to a large extent, exchange in business-to-business markets takes place within long-lasting business relationships [e.g. Håkansson 1982, Levinthal and Fichman 1988, Ford 1997] and that a limited set of customer firms and supplier firms account for a large share of each other's businesses [Cowley 1988, Håkansson 1989].

Often relationships start as ordinary market transactions with weak interdependence, but change as partners learn about each others capabilities and the potential of closer coordination. This increases interdependence, mutual trust and the commitment to future exchange. As a consequence, exchange relations with other firms are a defining element of the modern business firm and become essential for the firm's capability-building process [Andersson et al. 1997]. By operating in networks of established business relationships, firms economize on search costs and create a certain degree of stability. In addition, social embeddedness of market transactions [Granovetter 1985] eases the collection and verification of relevant information and, through reducing scope for opportunism, reduces contract enforcement costs.

In the electronics industry, cross-national production networks are replacing integrated MNEs. The dis-integrated value-chain is controlled by a firm that possesses key competences in form of technology or brand names. Borrus and Zysman [1997] thus see competition shifting away from final assembly and vertical control of markets by the final assemblers. In the area of ‘Wintelism', competition becomes a struggle to influence de facto market standards, with market power lodged anywhere in the product chain, including product architectures, components and software. This new pattern of cross-national production networks first emerged in the Pacific region. Yet, it holds great potential for Europe as it becomes more heterogeneous and offers opportunities to combine different comparative advantages in a value-chain. The leading industries predicted to develop new forms of networks include the automotive sector [Zysman et al. 1996, v.Tulder and Ruigrok 1997].

The evolution of business relationships is, from this network perspective, an essential element of enterprise restructuring in CEE. Firms must establish international business contacts and integrate into international production networks. The emergence of East-West Business and
markets in CEE is thus, related to the development of business networks. This is a crucial, though often neglected, barrier to enterprise restructuring in CEE.

FDI and Enterprise Restructuring

A growing number of empirical studies explores the determinants of enterprise performance in CEE, both before and after privatization [e.g. Estrin et al. 1995, Pohl et al. 1997, Smith et al. 1997, Frydman et al. 1997, Earle and Estrin 1997]. Using performance criteria such as productivity, profitability, output-growth and adjustment of employment, this research takes special interest in the impact of different forms of ownership. The evidence suggests that, if hard budget constraints were imposed, most firms have initiated adjustment processes, even before privatization, in order to increase productivity. Post-privatization performance varies across countries, industries, and most importantly, according to the initial conditions in 1989. The evidence is, however, mixed with respect to the hypothesized effects of various forms of ownership. For instance, performance improves under a dominant outside owner but weakens under dispersed ownership. Insider-owned firms appear to have inferior performance by some criteria, such as investment and access to finance. However, the evidence is controversial.

Most studies show that foreign-owned firms, and firms with non-equity cooperation with foreign partners, outperform purely domestic firms. Domestic firms made progress in terms of defensive or passive restructuring, that may have involved downsizing of employment [Estrin et al. 1995, Carlin et al. 1995, Djankov and Pohl 1998]. However, domestic firms rarely develop corporate strategies that would enable them to compete in the open markets of the future. Foreign-owned firms are more actively engaged in strategic restructuring: development of new products, investment in new production facilities, development of marketing, entry into new markets, etc.

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5 The empirical literature has been reviewed by Andreff [1998] and Carlin [1998].

6 For instance, Frydman et al. [1997] find that insider-owned firms are less restructuring. However, Mygind [1997], Vaughan-Whitehead and Uvalic [1997] and Djankov and Pohl [1998] suggest that there is no systematic underperformance that should be attributed to the fact that firms are owned by insiders.

7 See for instance Szanyi [1998], Hunya [1998], Rojec [1998]. Jones and Mygind [1998] find that foreign-owned firms in Estonia have similar average profitability but are over-represented among both the best and the worst performers. This suggests a higher willingness to accept risk, but may also be due to peculiarities in the tax regime as firms shift profit through transfer pricing in or out of the country reacting to different marginal taxes, e.g due to tax holidays.

8 Not always does the adjustment lead to a focus on core activities as the management philosophy of 'downsizing' presumes. In many cases, rent-seeking activities of management and informal networks may further deteriorate the long-term potential. See Mills and Polonski [1998] for an extreme case.
These strategic aspects of restructuring are difficult, if not impossible, to capture using economic variables such as (current) profitability and labour productivity. The distinction between defensive and strategic restructuring (figure 1) is, however, crucial to understand which firms may prosper in the future.
**Figure 1: Aspects of Enterprise Transformation**

<table>
<thead>
<tr>
<th>Socialist Firm</th>
<th>==&gt;</th>
<th>Competitive Private Enterprise</th>
</tr>
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<tbody>
<tr>
<td>Low productivity</td>
<td></td>
<td>Competitive productivity</td>
</tr>
<tr>
<td>Inputs and production volume are determined by the plan</td>
<td><strong>Defensive adjustment,</strong> <strong>downsizing</strong></td>
<td>Adjustment of production volumes and inputs to demand and costs</td>
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<tr>
<td>Plan bargaining</td>
<td></td>
<td>Strategic management</td>
</tr>
<tr>
<td>Products at the end of their life cycle</td>
<td><strong>Strategic</strong> <strong>Restructuring</strong></td>
<td>Products at early stages of their life cycle</td>
</tr>
<tr>
<td>Passive financial transactions</td>
<td></td>
<td>Financial management and accounting</td>
</tr>
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<td>Plan fulfilment</td>
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<td>Marketing</td>
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<td>Vertical and horizontal integration</td>
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<td>New boundaries of the firm</td>
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<td>Centralized decision processes</td>
<td><strong>Organizational</strong></td>
<td>Delegation of responsibilities</td>
</tr>
<tr>
<td>Plan oriented culture, technological perfection of quantitative targets.</td>
<td><strong>Change</strong></td>
<td>Competitive culture, cost-benefit based, continuous improvement of the value of production.</td>
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Based on the empirical studies, I argued earlier [Meyer 1998] that following ‘barriers to restructuring’, which enterprises without foreign partners have difficulties in overcoming, can be identified:

- The access to financial resources is inhibited by an underdeveloped financial sector and the high risk of investing in an uncertain environment.  
- Weak systems of corporate governance often lead to principal-agent conflict between owners and management, and between different groups of owners, notably in the case of insider-owners.

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9 Financial markets in the region are unable to provide finance to small and newly established business because banks continue to provide finance for unviable but large (former) state-owned enterprises with soft budget constraints [e.g. Claessens and Peters 1997] and acquire governments bonds to finance the budget deficit.
Systems of corporate governance were identified as a major obstacle to enterprise restructuring in CEE before and after privatization, see e.g. Frydman et al. [1996], or as introduction Carlin [1998] or Wright et al. [1997]. The theoretical foundations for corporate governance analysis are presented by Shleifer and Vishny [1997] and by Mayer [1990, Franks and Mayer 1997].
The local leadership lacks the kind of managerial knowledge - and latest technology - that is necessary to compete in an open economy of the 1990's. Leaders in the central plan system had different tasks to fulfill and developed other skills than managers in a market economy.

Foreign investors have crucial advantages over local owners: they have access to international financial markets, they can contribute human capital especially for managerial tasks, and they can establish effective owner-control over the organization. Furthermore, foreign acquirers may be in a better position to overcome organizational inertia through convincing leadership. However, investors face more serious obstacles to change than post-acquisition management experienced elsewhere. The change-process in the acquired firms is part of the overall transition process. It poses two particular challenges:

- The adaptation to a new economic system often has to be accomplished simultaneously with the shift to from Fordist methods of production to flexible, specialized forms of production, which requires entirely different methods of organizing the business [Sorge 1993].
- Success in a market economy depends on tasks, skills and performance criteria that are beyond the experience of individuals and organizations used to the central-plan system. Deficiencies in these areas can only be overcome through the acquisition of tacit know-how which requires an interactive and time-consuming learning process [Frydman and Rapaczynski 1997, Swaan 1997].

In CEE organizations, existing routines, attitudes and possibly even value-systems often inhibit competitive behaviour [Sztompka 1993, Michailova 1997, Meyer and Bjerg-Møller 1998]. The pre-1989 organization had been adopted to the needs of the central plan regime. Awareness of the need to change is high, but this does not necessarily translate into willingness to give up benefits of the old regime, such as stability and social services. Often, guidance and reassurance are lacking with respect to basic patterns of behaviour. This poses formidable challenges for management in transition economies - local managers as well as foreign expatriates. For instance, tacit knowledge about how to behave in a market economy, which is taken for granted by many expatriate managers, now has to be communicated efficiently to local employees. In addition, attitudes and

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11 The importance of managerial training for restructuring emerges for instance in Barberis et al. [1996] and Djankov [1996]. On the technology transfer by Western firms see Dyker [1997] and Barz [1997].
value-systems may have to be amended, e.g. to encourage responsibility, entrepreneurship and risk taking.

Markets and Networks

The changes within organizations are interdependent with changes in external relationships. With the break-down of the central plan system, the coordination system for inter-enterprise relationships disappeared. Suddenly, firms had to use markets to find new suppliers and customers. Few studies have so far explored how the lack of market expertise has inhibited the enterprise restructuring.

With the dissolution of the central-plan, administrators became economic agents. They had to act on markets that did not yet exist: they lacked both the (tacit) knowledge about how to use the market mechanism and the market knowledge about potential partners and competitors. Swaan [1997] explores the transaction costs faced by agents without experience on the market; they need to become aware of potential types of business, and respective preferences of consumers and other business partners. Furthermore, they must learn to assess the composition of demand and supply, notably to estimate demand elasticity. Thus, agents have to engage in considerable search processes to set up transactions and to find the right price. The transaction costs of these search processes are so high that they may inhibit many transactions. This, Swaan [1997] argues, has been a major factor leading to the output drop.

In addition to the cost of search processes, other transaction costs are also high. With weak information-, accounting- and legal enforcement-systems, information asymmetries and opportunities for opportunistic behaviour are common and vast. As many firms are new entrants on the market, they have not yet had the opportunity to establish a reputation. Seeking out partners of good reputation and using self-enforcing contracts have, therefore, become essential for foreign investors in Russia [Thornton and Mikheeva 1996].

A related problem in establishing transactions is the lack of competence to define the transactions [Swaan 1997]. Transactions can be very complex with respect to both technological specifications and contractual details. Both the buyer and the seller need to understand the nature of potential transactions to engage in an efficient conversation over its specification. Without this, repeated readjustments and frustrations will occur.
To overcome these transaction costs of emergent markets, agents seek to establish relationships with each other that reduce search, negotiating and enforcement costs. The emergence of markets is, therefore, interdependent with the transformation of business networks. In the central-plan economies, networks had an important role in linking, for instance, enterprises with the relevant ministries and party institutions. Informal networks between firms were often crucial to negotiate barter deals that could overcome crucial shortages. With transition, such personal networks may have permitted short-term adjustments for many firms. Yet, only after a major transformation, will these new networks be able to foster new production structures.

In a market economy, business networks link enterprises in a product chain directly, without intermediation of individuals in a party or government agency. It has been argued that the underdevelopment of supply-chain-management, the lack of coordination between business units and poor distribution, have been a major source of inefficiency in the Soviet regime [Liefert 1993, Chikan 1996]. In contrast, modern businesses compete on the basis of supply chains that are often integrated across firms.13

The old networks do not provide the necessary contacts and information-exchange. Inertia in the existing networks may in fact inhibit the creation of new, market oriented networks [Sorge 1993, Rosenbaum 1998]. Huber and Wörgötter [1997] observed survival networks composed of enterprises in which managers saw little hope for a future under new market conditions. Preserved personal ties are used to create ‘old-boys’ networks which follow short-term objectives and aim to preserve the status quo. For instance, members of practically bankrupt enterprises coordinate their activities to extract rents from the government.14 Persistance of personal networks thus contributes to the path-dependent nature of the transition process [Rizopoulos 1997].

On the other hand, various old institutional structures and industrial combines have been broken up as a result of privatization policy, or due to the exit of key players from the network. The former was especially the case in East Germany and may have contributed to the collapse of industrial output [Grabher 1997, Albach 1993]. Other firms lost valuable knowledge on customers intermediaries disappeared. For instance, the dissolution of an export ministry could cause severe disruptions - at least temporarily - since firms producing for export, generally, had no direct contacts with their foreign customers [e.g. Michailova 1997]. However, the personal

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13 Firms in transition economies appear slow in adapting higher degrees of sophistication and integration of supply chain management, compared to foreign owned firms operating in the same country [Price 1998].

14 Tesar [1997] found incidences where obligations arising from old international contracts become an outright liability as firms are obliged to export goods under unfavourable long-term contracts.
contacts that survived the institutional break-down offered short-term solutions and form the basis for both old-boy networks and new trade intermediaries.

Successful development of network relationships has been a key factor in firm performance during transition. This is especially true for firms that were taken over by foreign investors or were able to integrate themselves in an international production network. However, another group of successful firms, that were not taken over by foreigners, used existing networks to successfully lobby the government, e.g. to protect a monopolistic position [Todeva 1997]. Yet, only the first type of networks show promising long-term prospects.

The network configuration thus appears crucial for the enterprise transformation. However, the observed networks in transition economies are based mainly on personal relationships while production networks in the West refer to relationships between business units. Having been separated from the global economy for forty years, CEE-firms must now integrate themselves in global networks. This has high priority as benefits from international trade are expected to make a major contribution to economic development. Yet, how do international networks function? Let us look at an industry of high relevance for Eastern Europe: the automotive component suppliers.

The Production Network of VW-Škoda
The automotive industry has been especially active in the transition economies, accounting for a major share in FDI inflows and featuring some of the most publicised industrial investment projects. Many local governments consider the automotive sector of paramount importance to their industrial development. At the same time, the industry is at the forefront of introducing new concepts of production and supply-chain management. Trends observed here may soon spread to other industries. This makes the car industry a particular interesting case to observe when developing projections for the future.

Before 1989, nine independent manufacturers in CEE were producing some 3.2 million cars, primarily for CMEA markets [v.Tulder and Ruigrok 1997]. Soon after 1989, all major producers of passenger cars in CEE formed joint-ventures with, or were taken over by, Western partners, notably Polsky (Fiat), Wartburg (GM-Opel), Trabant, Škoda (VW) and Slovenian IMV (Renault). Some multinationals have invested in greenfield operations, notably in Hungary which had an extensive components industry but no manufacturer of passenger cars. In addition to West European companies, two Asian firms use Eastern Europe to enter the lower end of pan-European markets: Daiwoo in Poland and Romania, and Suzuki in Hungary.

The largest early investment has been the partial acquisition of Škoda by VW. Škoda was
the most advanced car manufacturer in the socialist countries before 1989, and the only one to produce its models on own technological developments, rather than on Western licenses. It had a quasi monopoly in Czechoslovakia and exported to other CMEA countries and, though in small volumes, to the West. VW acquired its initial minority share following a competitive bidding, and extensive negotiations. The project went through a much publicised re-negotiation following a crises at SEAT, VW's Spanish affiliate, and the decision to cancel a major investment project planned for Škoda. However, VW was able to overcome the resulting tensions, and subsequently acquired majority ownership in Škoda.

Car manufacturers are followed by their suppliers, who are themselves increasingly growing into multinational corporations. About 50 Czech and Slovak suppliers formed joint-ventures or were acquired by established multinational automotive suppliers, while 20 foreign firms invested in greenfield sites. In this way, the automotive components sector received about 10% of all FDI in the Czech Republic [CzechInvest 1996]. Škoda is said to have pressured its local suppliers to link-up with Western partners, while VW urged its global suppliers to invest in the Czech Republic. VW imposed tough requirements for costs and quality, and threatened to drop those unable to fulfill worldwide standards. At the same time, VW - as other car multinationals - worked closely with suppliers to help them achieve the required standards. VW established various qualification programs for its Czech suppliers, including training, seminars and workshops with Western partners, combined with strict quality control [Sander 1994, CzechInvest 1996].

A major break in the supplier relationships was the introduction of the new model ‘Octavia’ in 1996. It is built in an entirely new production plant near the Škoda premises where latest production management is implemented. The Octavia is based on a global VW-platform, which is integrated in the global product development and product-chain management. The product development and the production process are closely integrated, and the development of components is in part delegated to suppliers. VW introduced this new strategy following a crisis in the early 1990's, triggered by poor performances by SEAT. The number of basic platforms in the VW-group is reduced from 16 to 4, and procurement is to be concentrated on 100 to 200 first-tier suppliers by the turn of the century, instead of the 1500 in the early 1990's [CzechInvest 1995]. The remaining core suppliers are taking extended responsibilities and are becoming more closely involved in both product development and the actual manufacturing process. The closer integration of suppliers enables reduction of customer-order-to-delivery time and thus the 'logistics costs' in the VW-supply chain, 75% of which are determined during the design of new models [Augustin et al. 1996].
Sharing a platform with VW and Audi, the Octavia shares many components with other models in the VW group, with fewer than a third of components being specific to this model. Škoda’s R&D focuses on the adaptation of global platforms to Škoda-models and the integration of Czech-sourced components, while platform development and thus R&D is concentrated at other locations. Even so, some 800 people are working on the Škoda-specific development tasks in Mlada Boleslav [CzechInvest 1995].

The use of global platforms is optimized through a unified sourcing strategy that requires Czech suppliers aiming at supplying components to bid in a worldwide competition. The new global sourcing strategy was introduced after a financial crises and following the recruitment of top-manager Lopez from GM. Some Czech suppliers, who had received positive performance assessments before, now came under renewed pressure as they had to face global competitors.

Global sourcing has two implications for Czech international trade: Škoda is importing a larger share of its components from VW-affiliates and suppliers abroad, while great opportunities emerged for some of the local suppliers to become global suppliers throughout the VW group. Other Czech suppliers who did not succeed in securing contracts for the Octavia had undergone substantial modernization which enabled them to export supplies to other multinationals. Yet another group struggles for survival as second-tier suppliers [Myant 1997].

The global sourcing strategy and the globalization of the supplier industry reflects a worldwide trend. A major trend of the 1990s has been for carmakers to devolve much responsibility for researching, developing and manufacturing of whole component systems to their major suppliers. This enables increased utilization of economies of scale and component-specific know-how. This modular production is the continuation of outsourcing, a trend led by Japanese car firms in the 1980’s. As components are becoming more complex engineering products, suppliers already account for four-fifths of the added value of the new Toyota or Nissan cars [Economist 1998]. VW introduced modular production at Škoda as well as at its new Brazilian facilities in Resende.

The selected suppliers are furthermore becoming more closely integrated in the assembly process. They set-up their production facilities in nearby supplier-parks or, with Škoda, even within the plant itself. Just-in-time delivery by suppliers operating on the premises was established for the Felicia model (launched 1994) and extended for the Octavia (launched 1996). Lucas Autobrzdy, an affiliate of the British Lucas Group, supplies brake-systems for the Favorit and takes “full responsibility within Škoda for the logistics, control and assembly of the whole of the module from within the Škoda works based on a Škoda technical design” [M.J. Charlton, General manager, cited in EEM 1996]. More than ten first-tier components manufacturers are
supplying full modules directly to the assembly line of the Octavia, for instance Rockwool (sunroof, door trim), Johnson Controls (seats) and Siemens/Sommer-Allibert (cockpit) [CzechInvest 1996]. Their integration enables close coordination, reduces logistics costs, and facilitates product modifications and development. In VW’s plant in Resende, Brazil, employees of the respective component suppliers even assemble the car on the assembly line. VW takes over the car only at the final stage of production. [Collins et al. 1997].

The new modes of production require high investments by the supplier, both with respect to the development of components and for the actual production facilities. Since many smaller Czech firms faced tight financial constraints during the transition period, they were unable to undertake such commitment. However, those suppliers who did invest in the relationship with the car manufacturer are rewarded with a higher value, long-term contract. With the design of a new model, the partners are engaging in a relationship that is flexible in technical details but subject to high sunk costs for both the suppliers and the car-manufacturer.

Yet, the first-tier components companies are becoming powerful partners of the car industry. A wave a global consolidation has left three or four producers for parts such as brakes, transmissions and suspensions worldwide [Economist 1998]. They gain strength not only from market power but from their control over essential technology. Since the product development is in part delegated to first-tier suppliers, they also possess crucial aspects of the technological competences necessary for the final product. Suitably designed, long-term contracts give suppliers a security of demand that encourages further product innovation without fear of losing the sunk costs of development or a monopsonistic exploitation of the productivity advance by the manufacturer [Nishiguchi and Anderson 1995].

The long term-nature of supplier relationships raises the entry barriers to this, now global, industry. Opportunities for specialist component manufacturers may emerge with the development of new models. Although car makers use competitive bidding processes, incumbents have a number of advantages. Their long-standing relationship and their global production network give them better access to information and enable them to build a reputation which is a determining factor in choosing long-term partners. Also, large firms are better able to guarantee quality and just-in-time delivery, i.e. to cover any costs arising for Škoda in case of unsatisfactory delivery.

Besides the increasingly global first-tier suppliers, there are a multitude of producers of small parts in the second tier. The production networks evolving in the East European automotive industry appear to follow the worldwide pattern, with one peculiarity: The first-tier suppliers are mostly foreign-owned, at least in part, while the second tier consists of those locally-owned firms
that failed to attract foreign investors. Second-tier firms are usually not involved in product development and, thus, benefit far less from technology transfer from the Western customer and a new Western owner or JV partner. They may specialize on product of lesser technological sophistication than before 1989, and become the most vulnerable partners in the network. Their markets are more price-competitive, and they have to bear a major burden of adjustment in case the multinational car-manufacturer changes its strategy or its product design.

Most manufacturers of car parts in the Czech Republic, Slovakia and Hungary find themselves in a weak bargaining position. Many strive to supply more than one major customer [Havas 1997, Myant: correspondence]. However, VW appears to constrain such efforts by requiring exclusivity to avert diffusion of its transferred know-how [Lorentzen et al. 1998]. On the other hand, Suzuki in Hungary follows a single-sourcing strategy and, therefore, encourages suppliers to achieve viable economies of scale [Havas 1997]. Such supply of intermediate goods in the second, or even third, tier to foreign-owned car makers in the region enables survival for many components-manufacturers. However, their prospects of receiving technology and to develop their capabilities, such that they can enter new markets, are bleak.

Thus, despite the German investment in car-manufacturing in the Czech Republic, and a special commitment to aiding local suppliers, the Czech automotive-components industry faces an uphill struggle. They have to compete with multinational corporations with worldwide research and production networks. Secondly, they have to acquire the managerial know-how to provide the services, such as just-in-time delivery, expected in the industry. Thirdly, they have to offer complete modules ready for insertion on the assembly line, rather than traditional 'parts'. This requires broader expertise and large specific investments for their customer, Škoda. Thus, it is not surprising that only Czech firms cooperating with a global components-manufacturer are able to prosper as suppliers in the first tier.

A Transaction Cost Interpretation

The pattern of supplier relationships observed for VW-Škoda shows remarkable trends:

- The number of interfaces that car-makers have to manage on their supply side is reduced by outsourcing large modules rather than only car-parts, and by creating multiple layers of suppliers. The manufacturer-supplier interface is shifting downstream.
- With the disintegration of industry value-chains [Borrus 1996], interfaces between firms are becoming increasingly complex. Firms are now interdependent due to asset specificity, the necessary exchange of highly confidential information, and the time horizon of cooperation.
In its basic tenets, transaction cost theory suggests that increasing complexity and asset specificity would lead to more internalization [e.g. Williamson 1985]. Yet, in the automotive industry, the trend points in the opposite direction: outsourcing and modular production. Instead of internalization, firms are reducing their in-house value-added and focus on development, marketing and coordination of external business relationships. They organize transactions in new modes that bear characteristics of both markets and hierarchies. They are embedded in a network of business relationships, which are - formally or informally - long-term in character.

Internalization of the full supply-chain would not be efficient because the size of the merged firm would extend beyond a firm’s efficient size. This is firstly due to the fact that the joint firm - the car-manufacturer and all its suppliers - would be unmanageably big. Major monitoring and control problems would inhibit the efficiency of hierarchical organization. Secondly, the managerial competences required vary greatly for the different stages of the product chain: for instance, downstream operations depend less on technological know-how, than on marketing. Thirdly, a network structure allows more flexible adjustment, e.g. of product specifications, than do either markets or hierarchies [e.g. Buckley and Casson 1998].

The complex interactions of firms in a production network are thus managed by a lead firm. The competitive advantage of the lead firm, or ‘platform firm’ [Rugman and D’Cruz 1997], is shifting away from production-based competences towards competences in managing a network of related firms [Borrus and Zysman 1997]. The lead firm identifies the most suitable suppliers, considering both their production costs and their innovation potential. Secondly, the interfaces between firms have to be designed such as to minimize transaction costs. These tasks are interdependent because production costs may vary for different agents. A supplier may be able to build his module into the car on the assembly line at lower costs than the car-manufacturer himself. By transferring the task to the supplier, however, the market-interface between the two firms becomes more complex.

Transaction costs within a network are minimized through the selection of partners and the establishment of suitable contracts. Firstly, the agreed transactions have to be enforceable. If alternative suppliers are available, the threat of supplier-switching can be used to pressure weaker partners into compliance. If manufacturers rely on a single supplier, as manufacturers increasingly do for their customized modules, then mechanisms within the business relationship have to be created. Contracts can be designed to be self-enforcing, such that each partner, at all stages of the relationship, has more to gain from a continuation of the relationship than from its cancellation, and the gains are of similar magnitude. Multiple interfaces with the same supplier,
e.g. in different countries, also increases the mutual interest in the continuation of the relationship.\textsuperscript{30} Complementary, enforcement costs are reduced if opportunism is reduced,

- by working with partners who can be trusted, e.g. because of a long-standing relationship, a reputation, or integration in the same home business community.\textsuperscript{31}
- by working with firms who have a proven ability to fulfill the requirement concerning, e.g. the innovative potential to develop not-yet-existing components, and the financial strength to guarantee product quality.

In close cooperation, suppliers develop customer-specific know-how and contract-specific technologies. To some extent, these capabilities are developed through experiential learning in the business relationship. Over time, the partners invest in relationship-specific human capital which is a form of asset specificity, and increases their interdependence [Nishiguchi and Anderson 1995, Andersson et al. 1997]. The relationship-specific learning process reinforces the benefits from continuation of the relationship. It lowers transaction costs and gives incumbents a competitive advantage over entrants.

Components-manufacturers in the old Škoda network experienced two shocks that loosened the network structure, devalued customer-specific assets, and increased competition: the entry of VW, and VW's change of sourcing strategy following the crises at SEAT. Even so, the continuity of the basic customer-relationship with Škoda, is the main hope for most suppliers to avert the costly search process that Swaan [1997] outlines. Following this major upheaval, new - and surviving old - suppliers are investing in new customer-specific assets and capabilities. The remodelled network is gradually evolving towards a tighter network with fewer partners in the first tier.

Implications for Further Research and for Economic Policy

This paper explored the role of networks in business-to-business markets in transition economies for the case of the automotive industry. The emerging patterns are strongly influenced by recent trends in the worldwide relationships between car-manufacturers and their suppliers. As local suppliers in CEE are weak, major investors can coerce them into their sourcing strategy by fostering joint-ventures and take-overs by their global suppliers.

As a consequence of the worldwide trend, business relationships between the formerly independent firms are becoming closer, with integrated supply-chain management [e.g. O'Laughlin et al. 1993]. This leads to more complex exchange relationships, higher degrees of
interdependence, and longer time horizons. This trend has also been observed in other high-tech industries, notably in the electronics industry [e.g. Borrus 1996, Borrus and Zysman 1997]. However, even in low-tech industries, supply contracts are also often of a long-term character as retail-chains develop a comprehensive supply and marketing strategies. Further research should investigate the prevalence of production networks in the automotive industry as well as other sectors. Particularly interesting aspects are the coordination-mechanisms between members of the network, and the role and development of second-tier suppliers. A case analysis of a network should be an appropriate approach.

The importance of network contacts for enterprise transformation has to be taken into consideration when analysing this transformation process. Recent empirical research draws primarily on corporate governance aspects, notably potential principal-agent conflicts. Our research indicates that it is furthermore important to consider the assets and network contacts that a firm can access, including those provided by new owners. Incorporating this insight in the theoretical analysis of enterprise restructuring may permit better explanations of the puzzles found in the empirical evidence.

Production networks raise barriers to entry in industries where multinational firms dominate. The implications of this for development policy are rather discomforting. Local firms and governments are often in a weak negotiation position with regard to accessing existing production networks, unless they possess a valuable asset or market. Note that Skoda is a positive exception in CEE, in terms of preservation of a local brand and its supplier development. Industrial policy may thus focus on the development of new local capabilities and industrial clusters. This leads to important policy implications:

First, market access is in itself an important aspect of enterprise transformation. Access to corporate customers, in the industries concerned, depends, both internationally and domestically, on access to key business networks in the industry. If CEE firms can establish a supply relationship with a major customer, this may aid them in their enterprise restructuring in many ways. Market access through a partnership can also ease other problems, e.g. in raising financial capital (lower risk) or in obtaining managerial and technological know-how (from the partner).

Second, the impact of foreign investment on the host-economy depends upon the position of the investing firm in its own business network, as well as on the strategic role of the new affiliate within that network. Flagship firms have, at least potentially, an essential role in the evolution of industrial clusters [Dunning 1998]. The investment of VW in Škoda illustrates the case of a major multinational establishing a major production facility, which induces many follow-up investments by suppliers. It can also generate various other forward and backward linkages.
Other investors, who are first or second-tier suppliers, or who do not establish a major production operation cannot be expected to generate comparable impact. Consequently, industrial policy - if it considered beneficial - may focus on attracting ‘flagship firms’. The strategic decisions for major international production networks, e.g. on location, positioning and timing, are taken by the flagship firms for the entire network.

Third, opportunities for local firms to participate in international production networks depend on the structure of the network, and especially upon its openness [e.g. v.Tulder and Ruigrok 1997]. The participation in a network typically begins as a loose relationship that gradually evolves towards a tight network. Opportunities to enter a network depend on the network-management strategy employed by the flagship firm, notably the degree of competitive bidding used. Special opportunities may arise if the institutional environment encourages the investor to seek local suppliers. For instance, local-content requirements for the access to the EU market (Suzuki, Daiwoo) or obligations negotiated in an acquisition (VW), particularly induce more cooperation with local suppliers.\(^{33}\)

However, if countries are developing an industrial cluster around a single multinational flagship firm, the economy may, to a large degree, become dependent on this firm. This may expose the economy to external shocks affecting this particular firm, and it would increase the bargaining power of the multinational at the expense of local stakeholders. Suppliers in the cluster should, therefore, aim at diversifying their business-relationships to prevent a dominant dependency.
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