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## East-west corporate networking: A theoretical approach

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# Kiel Working Papers

Kiel Working Paper No. 805

**East-west corporate networking —  
A theoretical approach**

by  
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## **Abstract**

In recent years after the beginning of the transition process, firms in Central and Eastern European countries have been trying hard to find access to international markets and production chains. Rapidly changing institutional, technological and demand conditions together with decades of isolation from world markets do not let „stand-alone strategies“ appear very successful in this context.

The paper presents networking activities as a promising alternative for Central and Eastern European firms (CEEf) to organize international transactions. As several theories show, network forms of organization can — by establishing an atmosphere of trust and stability and by pooling resources and information — make it possible for network members to realize an economic advantage over external competitors that is higher than in markets or hierarchies. Among various types of networking activities, it is especially long-term-orientated relations that offer the possibility for CEEf to participate in an international exchange of crucial technologies and to upgrade their position in global production chains in the long run. (L22)

## I. Introduction<sup>1</sup>

Since the beginning of the transition process in the late 1980's, companies in the Central and Eastern European countries have to struggle for a position on international markets. They have to undergo a fundamental restructuring process in order to become competitive in a system of market economy. The heritage from decades of socialist planning — a distorted specialization pattern, a range of products not designed according to consumer preferences, little incentive for innovation and a lack of management know-how as well as of financial resources — provides numerous obstacles here. In addition, along with western companies, they have to cope with rapidly changing market conditions in a global environment, making market access even more difficult. The question of how to link into international production chains thus becomes crucial.

This paper highlights the advantages of a network organization in a certain economic environment as a possible way of overcoming the barriers to entry on international markets for CEEF from a theoretical point of view. The first part of the paper describes the actual economic environment, that is, the changing market conditions that companies in the Central and Eastern European countries face; the second part provides a theoretical analysis of network forms of organization, using different theoretical approaches; the third part assesses the different forms of networking activities, and the fourth part gives a brief conclusion.

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<sup>1</sup> Research for this paper was undertaken with support from the European Commission's Phare ACE Program 1997 „Integrating Enterprises in Central European Countries in Transition into European Corporate Structure“, project no. 96-2003-R.

## II. The economic environment: A survey of recent developments

As conditions on world markets are changing rapidly, CEEF, still being in the middle of a rather painful restructuring process, cannot expect to enter a kind of closed season in the hunt for international competitiveness. On the contrary: If they want to survive in the medium and longer term, they have to manage the enormous leap from being more or less protected from the world market influence into being able to cope with the full pressure of globalization.

What does this mean in detail? Dunning (1995) defined globalization as a process that „integrates the international value added activities of firms ... in such a way that the prosperity of one firm is inextricably bound up with that of its foreign production and marketing activities“. As the world is moving from a set of independent enterprises linked by market-trade towards an integrated system of internationally fragmented production, the degree of interdependence among economic actors and consequently, the degree of organizational integration is necessarily rising. The world is becoming a network of production, involving the danger of exclusion for those firms that do not take active steps to become a part of it. This fundamental change in the economic environment is the outcome of several developments that have occurred in the past two decades; they can be roughly assigned to three categories:

- The first category represents changes on the market side, respectively demand side: Since the mid-seventies, with markets of mass products becoming more and more saturated and competition becoming international, consumer demand has turned from quantity to quality, from mass consumption of standardized goods to selective demand of differentiated goods. This imposed a considerable crisis on large, vertically integrated firms, which had until then been very successful in price competition because they had to a

large extent been able to make use of economies of scale. The change in the consumer orientation, however, required flexibility instead of standardized production methods, production in small, varying series, the emphasis of quality instead of mere price competition and a more intensive use of outsourcing strategies, complex technologies and qualified staff. Some economists see in this development a new economic paradigm, which is commonly referred to as the concept of „flexible specialization“ (Piore and Sabel, 1984).

- The second category represents changes on the institutional side: This mainly refers to the rapid economic integration which took place in the past decades. Obviously, firms are driven more and more towards a strategy of optimizing their value chains globally by the rise of trade blocks, implying a reduction of trade barriers inside the block, but often an increase of trade barriers to the outside. Thus, access to markets inside these trade blocks (e.g. the EU) is made more difficult for non-member countries, leading to increasing cross-border flows of capital and technology and to the rise of international production strategies: Whereas in earlier times, international integration was dominated by trade relations, this changed recently in favour of foreign investment and other forms of foreign involvements (Table 1).

Table 1 – Average yearly growth rates of world exports of goods and services and world foreign direct investment (in percent)

	1970-85	1985-93
world exports of goods	13,1	9,1
world exports of services	14,4	11,1
world foreign direct investment	10,5	15,3

Source: Beyfuß (1996).



- The third category represents changes on the technological side: Over recent years, technological development has accelerated considerably. New technologies allow higher flexibility of production and communication and offer the possibility for firms to buy, produce and sell in any part of the world. Apart from that, life cycles of products have become shorter, which requires more rapid innovation and product development. As a consequence, intangible and immaterial assets such as information and know-how have become a resource of major importance along the global value chains.

All these aspects being essential for the process of globalization cannot be considered separately. They are both cause and consequence of each other, in the sense that e.g. flexible production meeting the differentiated consumer demands would not have been possible without employing new production technologies; but these new technologies might not have been developed if consumer demands had not changed significantly.

As global production networks are expanding and non-territorially-specific resources such as information and technology become more and more important in the production process, firms become less and less dependent on locations, but more and more dependent on other firms in several locations.<sup>2</sup> Thus, globalization and so-called deep integration, i.e. integration via international production rather than via arm's-length trade (shallow integration), go hand in hand in order to somehow integrate mutual dependencies. For it is precisely these dependencies of firms trying to survive in a globally competitive environment that raise the question of finding an organizational form which allows them to get access to resources, know-how and technologies, to specialized suppliers and to production

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<sup>2</sup> Storper (1995) mentions in this context the replacement of locational factors of production, which a single firm in a certain location controls, by a large number of locations, which are integrated in a production network.

and distribution possibilities abroad. For CEEF facing heavy shortcomings concerning crucial resources and access to international markets, this question is essential.

Keeping this in mind, it is now to be asked which kind of organizational strategy between eastern and western firms might prove to be most efficient in organizing international production transactions. The following section intends to examine from a theoretical point of view whether cross-border networks of firms can be regarded as a suitable form of organization for CEEF seeking access to international markets and resources in a volatile economic environment.

### **III. Network forms of organization: A theoretical approach**

Production by means of labour division can be considered as a value chain<sup>3</sup>, which links firms on different stages of the production process and often in different locations together. In principle, firms have three choices to organize their transactions along the value chain: make, cooperate or buy. „Buy“ represents the classical market organization („arm's-length transactions“), where atomized actors meet on an extremely short-term basis to perform their transaction which is coordinated by the price mechanism. „Make“ represents the (vertical or horizontal) integration of transactions into the firm itself where they are coordinated by internal hierarchical regulations. For a while, these two options were seen as the dominant organizational alternatives, leaving the whole range of network activities in-between the two ends on the „organizational scale“ out of consideration. Only little by little, economic theory acknowledged the fact that economic actors

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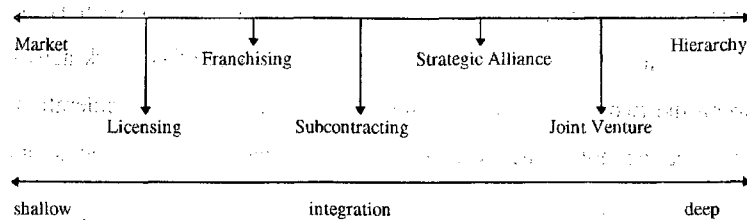
<sup>3</sup> Value chain is not meant to express a contrast as to the term „network“. It does not represent a strictly vertical process here, but — as nations as well as firms get more and more integrated in the context of the production process — rather a concept of an all-embracing global network of production with vertical, horizontal and diagonal links between the actors along the stages of production.

are not acting in an isolated way but that they are embedded in an extensive environment of social relations of various kinds; thus, network activities, which are based on social interacting, were integrated as so-called „hybrid organizations“ (Williamson, 1985) into the analysis of economic organizations.

The concept of a network is determined by the relations among its actors. Since markets as well as hierarchies also consist of relations among economic actors, they can likewise be understood as networks in a broader sense. What is different between the three organizational alternatives is the mechanism by which the relations are coordinated: In the market the coordination is effected by prices, in a hierarchy by rules and regulations and in a network by cooperation.

A network of firms is commonly defined as a set of cooperative relations among legally independent but economically dependent firms, which aim at coordinating parts of their economic activities in order to gain an advantage over their competitors (Sydow, 1992a). Networking comprises a wide range of cooperative activities between markets and hierarchies. These include activities with little commitment among firms, such as simple subcontracting or outward processing, as well as activities that imply equity involvement, like e.g. joint ventures (Figure 1).

Figure 1 – Networking activities between market and hierarchy



The aim of the theoretical overview now is to find out which organizational form is optimal for which type of transactions in a certain economic environment and to give a hint why networking activities can prove particularly advantageous for CEEF on their way from transition towards globalization. In the field of business organization, there is a vast literature on the characteristics and advantages of different alternatives to organize a firm's transactions. (e.g. Blaine, 1994; Sydow, 1992a) Since it is impossible to refer to all of these different approaches, three important views have been selected, which focus each on different aspects of organizational forms: first, the view of the transaction cost theory, focusing on cost aspects of organization; second, the view of interorganizational theories, focusing on aspects of dependence and interdependence among economic actors; and finally, the view of the strategic management approach, focusing on strategies of firms to gain an innovation advantage over their competitors.

### *Transaction cost theory*

The transaction cost approach aims at clarifying the cost efficiency of alternative organizational forms to coordinate economic transactions<sup>4</sup> in a given economic environment. In principle, it is based on ideas by Ronald H. Coase (1937), who was the first to present the firm as an institutional alternative to the market. He explains the organization of certain transactions inside a firm (or hierarchy) with the existence of costs of organizing them via the market mechanism. After being almost forgotten for a long time, the theory was developed further in the 1970s and 1980s, mainly by O. E. Williamson, who sees economic organization of transactions as a contracting problem: Since it is — under the assumptions of

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<sup>4</sup> According to Williamson, a transaction is assumed when a good or a service crosses a technically separable boundary.

bounded rationality and opportunism<sup>5</sup> among economic actors — virtually impossible to design a perfect contract for transactions in a volatile economic environment, contracting becomes very costly, implying for instance costs of searching for an adequate contracting partner, costs of bargaining, costs of control and costs of adjusting the contract to changes in the original conditions. These costs are generally referred to as transaction costs.

If transaction costs reach a certain level, it makes sense to „take the transaction from the market“ and to integrate it into the „firm“ as a hierarchical system, that is, to choose the „make“ instead of the „buy“ alternative. Inside a firm, transaction costs can be substantially lowered because uncertainty is replaced by a coordination by hierarchical instructions which make the transaction cost-intensive contracting process in the market obsolete. Besides, the possibility of opportunistic behaviour is not given to the same extent if a transaction happens inside a firm.

The level of transaction costs is influenced by several characteristics of the transaction resulting from the economic environment. The literature (e.g. Picot, 1982; Bonus, 1986; Picot/Dietl, 1990) mentions six essential characteristics in this context:

- uncertainty: A transaction can involve uncertainty in a double sense. First, an economic actor is confronted with uncertainty about the behaviour of his transaction partners. Considering the assumption of opportunism, this imposes high costs of safeguarding the transaction in the market. This is especially relevant for transactions involving R&D and flows of information and

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<sup>5</sup> Opportunism is a concept which goes a step further than the neo-classical assumption of self-interest among market actors. It is defined as pursuing self-interest, even using guile and deceit, which render the behaviour of market actors extremely unpredictable.

know-how among the actors. A way of protecting such information from abuse is the integration of transactions of this kind into the firm and thus internalizing the information flow. Second, an economic actor is confronted with uncertainty about changes in the economic environment. In a world of rapid technological change and volatile consumer preferences, contracting in unstable markets involves high transaction costs, in particular concerning the adjustment of contracts. These can be avoided by internalizing transactions.<sup>6</sup>

- specific investment: Sourcing strategies and an increasing specialization along the production chain often require investment of buyers, respectively suppliers, e.g. in certain technologies, equipment or human capital, which is transaction-specific and cannot be used profitably in other transactions. This creates a strong dependence of the investor on his transaction partner, high transaction costs of safeguarding the transaction and thus a reason to internalize it.
- frequency: The more frequently transaction partners interact, the more their dependence will increase and the stronger the inclination for internalization will be. The influence of the frequency of transaction on dependence, however, is limited; thus, it plays only a minor role in the organizational decision-making of firms.
- complexity: A transaction is complex if it implies difficulties in its evaluation. This is not the case with simple, standardized steps of production as they mostly occur in labour-intensive industries. However, it is the case for many transactions involving R&D and information flows, whose quantitative

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<sup>6</sup> A disadvantage of internalizing transactions in this context is, however, that there is no easy way out of this decision if it does not prove to be the most efficient strategy after economic conditions have changed. Thus, it involves considerable inflexibility for economic actors.

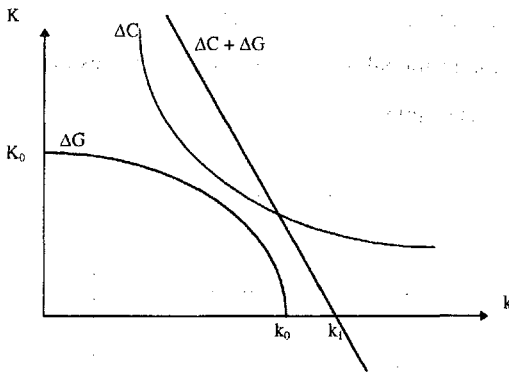
evaluation and exact assignment to each transaction partner is often impossible so that they cannot be easily organized in the market. Since technological development has accelerated and since information has become a resource of major importance in a world of rapid technological change and innovation, the complexity of transactions has become extremely relevant for firms.

- **centrality:** It does not make much sense to internalize a step of production which is not of strategic importance („central“) for the quality of the final product because it can be bought on the market without excessive transaction costs. This is not true though for inputs which are essential and non-separable as to the quality of the final product and might endanger its reputation if they are not delivered in a proper state and time. These involve a strong dependence of the buyer on the supplier — especially if the transaction is not only characterized by centrality, but also by complexity and specific investment —, raising transaction costs to a considerable level.
- **transaction atmosphere:** The transaction atmosphere describes all cultural, legal and technological conditions which are likely to influence transaction costs. This includes for instance a highly efficient information and communication technology and a stable legal framework which decreases transaction costs by lowering uncertainty in the economic environment. Such a framework is still underdeveloped in Central and Eastern Europe.

When considering the most efficient organizational form, transaction costs are only one half of the story. The other half that has to be taken into account are production costs, which are influenced by the choice of organization mainly through the opportunities of realizing economies of scale and scope. In a world of labour division, non-hierarchical organizations, including networks, prove to be

more efficient than hierarchies in this context because they are to a larger extent able to realize advantages of specialization and as a consequence, external economies of scale and scope than vertically integrated firms, which have internalized all steps of production — even those in which they are not particularly competitive. Thus, it only makes sense to organize a transaction hierarchically if the relative advantage concerning transaction costs overcompensates the relative disadvantage concerning production costs.

Figure 2 – Comparison of transaction costs and production costs in market and hierarchy



Source: Williamson (1985).

Figure 2 illustrates these reflections: In the diagram,  $k$  represents the specific investment as a representative of all transaction characteristics and  $K$  as the dependent variable represents the total costs (production and transaction costs). The  $\Delta G$ -curve is the transaction cost advantage of market organizations, which is high when specific investment ( $k$ ) among economic actors is low so that their transaction does not require a cost-intensive contracting process. With rising  $k$ , however, it falls sharply. The production cost advantage of markets,  $\Delta C$ , exceeds the transaction cost advantage, but also falls with rising  $k$ . This can be explained by the



fact that the more transaction-specific the equipment of a firm becomes, the less it can take advantage of economies of scale. Aggregating the cost advantages, it becomes evident that from a certain level of investment specificity,  $k_1$ , onwards it is more efficient to internalize transactions into a hierarchical organization because the aggregated cost advantage of market organization becomes zero. Below this level, however, it is cheaper to organize transactions in the market.

So far, the analysis was mainly focused on the two extremes on the organizational scale — on markets and hierarchies. The most important part of transaction cost theory tries to face this shortcoming by placing all types of hybrid or network organizational forms simply in-between market and hierarchy. This seems to be plausible because as a hybrid organizational form, a network comprises elements of markets as well as of hierarchies (Table 2).

Table 2 – Characteristic elements of markets and hierarchies

Market	Hierarchy
functional specialization external transactions under efficiency pressure  <i>Network</i>	integration of functions internal transactions protected from market pressure
opportunism information islands	trust integration of information  <i>Network</i>

Source: Siebert (1991).

Like in a market organization, we can find a division of labour (functional specialization) among the members of a network — in contrast to the integration of functions into a single firm as it is typical of a hierarchical organization. Thus, network firms can take advantage of market aggregation economies, which result from a cost degression due to specialization and learning curve effects. Additionally, they can benefit from economies of scope and synergy effects<sup>7</sup>, which, however, do not occur in market organizations. Another element that networks share with market organizations is the pressure to work efficiently. This pressure results from a certain competition among the firms in the network, which is stronger than in a hierarchical, but less strong than in a market organization.

Instead of opportunism dominating market transactions, the relations among firms in a network are — like in a hierarchical organization — ideally characterized by trust. Trust and a cooperative behaviour lower transactions costs and facilitate free flows of information. Due to this relatively free flow of information in a network and due to the fact that network firms are often linked by highly efficient information and communication systems, they cannot be seen as „information islands“ like the actors in a market organization.

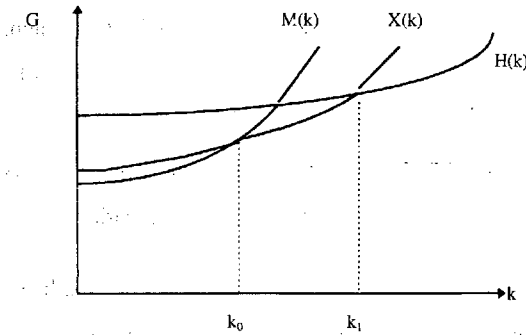
It is obvious from its characteristics that a network organization of firms can — under certain circumstances — offer advantages compared to markets as well as to hierarchies:

In Figure 3,  $k$  represents again the level of investment specificity,  $G$  represents general transaction costs and  $M(k)$ ,  $X(k)$  and  $H(k)$  represent the specific transaction costs of markets, networks and hierarchies, each depending on the level of

<sup>7</sup> The phenomenon of synergy is defined as „the sum is larger than its parts“, which — in the context of cooperative networks — means that firms, by combining their potential in a cooperative way, can realize an additional advantage which exceeds their potential.

investment specificity. Networks show the lowest level of transaction costs between  $k_0$  and  $k_1$ ; consequently, they are the optimal form of organization for medium levels of investment specificity.

Figure 3 – Transaction costs in markets, networks and hierarchies

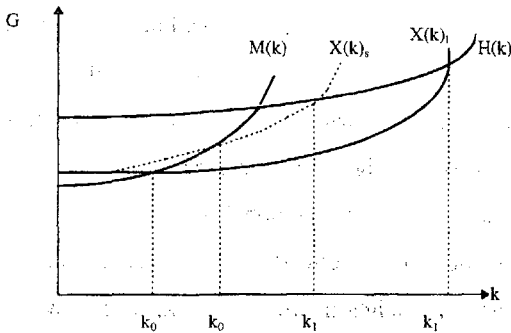


Source: Williamson (1991).

However, this illustration does not consider two important aspects: First, the fact that hierarchical organizations imply additional, so-called internal transaction costs, which are the result of diminishing returns to management (Coase, 1937). Among these are costs of organizational adjustment due to rigid bureaucratic structures, costs of internal conflicts and coordination in very large hierarchical organizations, costs of acquiring information from outside and of passing on the information through all levels of the hierarchy and costs of limiting opportunistic behaviour of employees, which can occur despite of hierarchies, especially in large organizations being difficult to control. Second, the possibility that transaction costs in a network can be reduced in the long run. Williamson's approach is static; a dynamic approach, however, has to consider the development of interactions in a network over time. Long-term interactions might intensify the relations among the network members, and establish an atmosphere of trust so that uncer-

tainty, and the danger of opportunism are reduced. This creates incentives for mutual specific investment and reinforces interdependencies. Thus, network forms of organization can in the long run develop additional transaction cost advantages. In Figure 4, this is illustrated by a shift from the short-run transaction costs in a network,  $X(k)_s$ , to the long-run transaction costs,  $X(k)_l$ . The range of investment specificity in which networks are the optimal form of organization is extended to  $k_0'k_1'$ .

Figure 4 – Short- and long-run transaction costs in networks



If we also consider the production cost advantages of networks compared to hierarchies, which result from functional specialization and stronger market incentives, it is evident that „cooperate“ might prove to be a more efficient organizational alternative than „make“, even in a very volatile and uncertain economic environment such as economies in transition.

### *Interorganizational theories*

Interorganizational theories trace the development of networking activities back to the intention of firms to integrate external dependencies on resources into one organization and to reduce the uncertainty of the economic environment. Exam-

ples are the resourcedependence approach (Pfeffer and Salancik 1978; Pfeffer 1987) and the network approach (e.g. Håkansson 1987; Håkansson 1989).

The crucial aspect of the resource dependence approach are resources which are essential for a firm's survival. Resources include natural, technological, human, financial and informational resources and can have a substitutional or a complementary function. In order to get access to external resources on which they are dependent<sup>8</sup>, firms engage in relations with other firms; the resources that are at a firm's disposal determine its position of power in these relations.

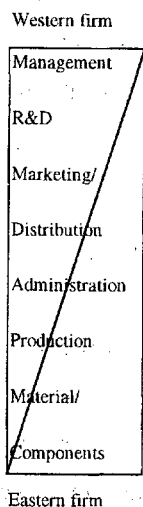
For CEEF which mostly have access to relatively cheap, skilled human resources and knowledge of Eastern European markets, network activities with western firms and their resources such as technology, management know-how, reputation, distribution channels and financial means might sometimes be the only opportunity to extend their market potential and enter into global production and distribution chains. Although their position in the network will presumably not be a dominant one to start from (Figure 5), it might improve with the development of the network relations over time, which allows for the creation of and access to new resources and thus, for a re-allocation of power.

The network approach, which was mainly developed by Scandinavian theorists (e.g. Håkansson 1987, Håkansson 1989; Axelsson 1990; Johanson and Mattson 1991), extends the ideas of the resource dependence approach. A network is seen as a combination of its three integral parts: resources, actors and activities.

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<sup>8</sup> Pfeffer (1987) distinguishes in this context between symbiotic dependence, which occurs on a vertical level in buyer-supplier relations, and commensalistic dependence, which occurs on a horizontal level among firms competing in the same niche.

Figure 5 – Control over important functions in a network from the western perspective



Source: Kröger et al. (1994).

Similar to the resource dependence approach, resources — or more precisely, the lack thereof — are the main motivation for economic actors to engage in network relations. The resources which the network actors integrate into the network are linked by the activities that the actors perform and through which they pool these resources. By coordinating their resources and activities, the actors in a network, mostly firms, intend to realize an economic advantage over their external competitors, which exceeds their costs of joining the network and which is higher than in markets and hierarchies.

The network firms or actors have access to certain resources, which determine the position of power they hold relative to their partners. The structure of these positions of power together with the coordination of the common and the divergent intentions of the actors strongly influence the development of the network

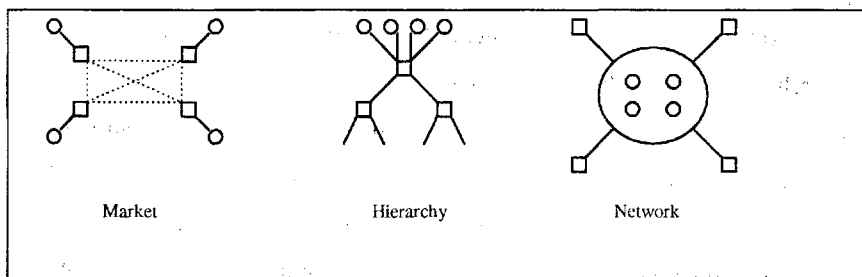
relations. Due to interactive learning processes and arising opportunities to use the resource pool in the network in an innovative way, the presumably subordinate position of CEEF concerning access to resources will thus most certainly improve over time. However, it is not important whether the positions of power are balanced in the long run as long as the network members can gain an economic advantage out of their cooperation.

The activities performed by the actors are connected via so-called „activity chains“. This means that an activity of a network actor, e.g. a product innovation, does not happen in an isolated way, but also affects other network firms. In order to coordinate these activity chains and to make sure that all network actors can realize an advantage out of their coordinated activities that is higher than in markets and hierarchies, extensive coordination mechanisms are needed. If e.g. a product innovation happens in a supplier-firm, the information about this has to reach the buyer-firm in time so that it can adapt its production process. The outcome might be a final product of better quality and better chances on the market. Such perfect information flows can only be established in an atmosphere of trust, requiring stable, interdependent network relations.

The establishment of a complex network of interdependent relations out of simple transactions requires specific investment of all members, thus increasing the mutual dependence and the stability of the relations, which themselves become the most important asset of each network member. Breaking the network becomes extremely costly for its members because their specific investments would be lost. Consequently, establishing network relations represents a limitation of a firm's autonomy. Only if this limitation is overcompensated by the expected opportunities offered by the network — e.g. reduction of transaction costs, exchange of know-how and information, access to markets and resources — firms will decide to join a network organization.

It is obvious that the network approach describes the network of firms as an organizational form which cannot simply be placed in-between markets and hierarchies. It focuses on the interaction of the network members in the form of exchange relations which coordinate the resource and information pool among the actors. In this way, synergies are created. These promote the process of realizing an economic advantage over external competitors in terms of costs, quality and/or innovation that is higher than in markets and hierarchies, where the creation of synergies is hindered by the lack of the necessary atmosphere of trust and stability in the arm's-length transactions of the market, respectively by the sluggish flow of information and resources through the different levels of the hierarchy (Figure 6).

Figure 6 – The coordination of actors and resources in markets, hierarchies and networks



Legend:      □ = actor      ○ = resource

As a consequence, the network approach — by taking into consideration the development of the relations over time and the network-specific advantages arising from it — takes a more dynamic view than the transaction cost approach. In an extremely uncertain economic environment which transition economies face in the era of globalization, firms in a network are able to adapt their interaction and to



continuously optimize and stabilize the network relations. In the end, a single firm cannot be seen in isolation of its network partners anymore.

### *Strategic management*

The strategic management approach tries to shed some light on the search for a firm's optimal strategy in a given economic setting in order to gain a comparative advantage over its competitors. In a world of 'flexible specialization' and rapid technological development, the key factor of a firm's competitiveness is innovation. The increasing importance of cooperative strategies in international production seems to support the hypothesis that cooperation might enhance innovation more successfully than competition does, which contradicts the well-known Schumpeterian view that innovation is the outcome of incentives derived from competition alone. The argument is that if firms pursue competition instead of cooperation strategies in the innovation process, certain risks are involved concerning innovation. One risk is the possibility of competition causing a duplication of research efforts, which could be avoided if the research activities were coordinated by cooperative relations in a network. Another risk is the possibility of too little innovation taking place. It can be argued in this context — like it is often done by supporters of industrial policy — that the price mechanism coordinating arm's-length transactions is not an optimal coordination mechanism for innovative transactions because, e.g., it is not able to include all external effects caused by the innovative activities of a firm. Thus, the potential for internalizing returns on innovation will be small and might not compensate the costs and risks involved. Moreover, incentives to invest in specific technologies are lowered if innovative transactions are organized as arm's-length transactions. The potential investor might lose his „quasi-rent“, which is the rent he expects from the specific investment, but which is lost once the transaction is ended. This is another factor that reduces innovative activities.

Cooperative relations in a network of firms, however, foster the innovation process by allowing firms to pool their resources and risks, by internalizing external effects into the network organization and by enhancing a flow of information which often cannot be obtained either in the market because of the danger of opportunism or in a hierarchical organization because of bureaucratic obstacles. As such, Powell (1991) describes the information transferred in networks as „thicker’ than information obtained in the market and ‘freer’ than that communicated in a hierarchy“. Thus, firms in a network organization can gain a comparative advantage over their external competitors by reducing the time and increasing the quality of the innovation process.

#### **IV. Types of network activities: A critical categorization**

In a world of rapidly changing economic conditions, globalizing markets, growing importance of international flows of information, technology and innovation and the formation of trade blocks, the strategy of international production in the form of cross-border networking has been shown to offer the possibility for firms to participate in global value-adding chains, to find access to markets and resources and to reduce uncertainty and one-sided dependencies by internalizing transactions into a set of stable relations. There is a wide range of strategic options between the two extremes on the organizational scale, markets and hierarchies, which can be ranged according to the stability of the relations and investment involvement<sup>9</sup> and according to the level of cooperation. In this context, three levels can be distinguished: cooperation on a horizontal level, that is among firms competing on the same markets, cooperation on a vertical level, that is buyer-supplier

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<sup>9</sup> The more firms invest into network relations, e.g. by equity involvement, the more stable the relations become and the more uncertainty is reduced — up to the extreme of an acquisition of other firms. This has to be bought, however, by higher expenses concerning the establishment of the relations, a loss of flexibility and a higher risk of losing large investments if the relations fail.

relations, and cooperation on a conglomerate level, that is among firms belonging to different industries.

The evaluation of different options of networking activities from the perspective of CEEF has to focus on the aims that these companies pursue. Although the aims of CEEF cannot be generalized over all firms, it is possible to define four main categories: access to crucial resources and technologies; (indirect) access to international markets; keeping up a certain autonomy and position of influence on decisions in the network; limiting the financial and other resources which are needed to build up and to coordinate the network relations.

The following section is supposed to give an overview over the most important forms of network organization, ranged according to committed investment, and to explain in how far they can be relevant and advantageous for firms in transition economies (see e.g. James and Weidenbaum 1993; Rumer, 1994).<sup>10</sup>

### *Licensing*

Under a licensing agreement, a firm sells limited rights to produce and to sell its products to another firm. In the past, it was often the only way for western firms to enter markets in the Central and Eastern European countries. Its advantage concerning the aims of CEEF is the possibility of finding access to foreign technologies. This advantage, however, might be partly offset by the fact that the licensor — here: the western firm — sometimes refrains from sharing essential technological know-how because he fears opportunism on the side of the licensee. Moreover, the western firm is — as the licensor — in a dominant position as

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<sup>10</sup> This overview is by no means complete and does not comprise all possible forms of network cooperation. It is only meant to list the „milestones“ among different network types according to the extent of commitment between the partners.

to the licensee. He can use the threat not to renew the licensing arrangement as a market-like sanction because he is not strongly committed to the cooperation by high investment. This can cause a potential for conflicts being implied in the licensing relations, which increases the costs of contracting and control. However, licensing relations can — since they can be established without high investment — serve as a kind of test for more intensive forms of cooperation: If the licensee proves to be reliable, the licensor might want to extend the relations towards more stable networking activities such as strategic alliances or joint ventures, which involve stronger commitment of all partners.

### *Franchising*

Franchising is a kind of a far-reaching licensing arrangement where the franchiser licenses an entire business system including brand name, image and know-how to the franchisee, who in turn puts his business completely at the franchiser's disposal. The relations in this form of cooperation are more balanced, i.e. determined by interdependence than in a licensing agreement because the franchiser risks his image and reputation if the cooperation fails. Franchising seems to be most suitable for services and retail activities where it has become very successful on an international level in recent years, possibly due to internationally converging consumer preferences (e.g. McDonalds, Benetton). For CEEF in these sectors, franchising agreements have for a long time been a way of participating in global networks and of acquiring international business know-how. The impact on economic growth of this type of networking activity though, being neither very much suited for high-tech industries nor for manufacturing in general, can be doubted.

*Subcontracting arrangements*

Subcontracting or outsourcing arrangements encompass all kinds of middle- or long-term production relations, mostly as buyer-supplier (vertical) agreements. They can start as simple outward processing activities, in which a western firm sources out those parts of its manufacturing process for which it has no longer any comparative advantage and which are not centrally positioned as to the quality of its final product. CEEF might in particular take over labour-intensive production and supply of components in this context and will thus hold a somewhat subordinate position in the network because crucial functions such as management decisions, design and administration will remain under the control of the western partner. If the relations prove successful, the partners might be inclined to invest specifically and to increase their extent, stability and trust. Such long-term interdependent subcontracting relations can be quite similar to the ideal scheme of a network in the theory: information and know-how will flow freely among the network members and through a process of technology transfer and interactive learning, the CEEF can improve their position in the network. They might over time become partly responsible for product development and quality control, change from component suppliers towards system suppliers with their own subcontractors or — if their specialization advantages are sufficiently high due to specific investment — even become single suppliers for certain systems, assuring a strong position of power towards their buyer. Since this type of networking activity often extends to truly global value-chains, the different firm cultures and language barriers together with the conflict potential arising from dependency disequilibria can impose relatively high costs of managing the relations.

### *Strategic alliances*

A strategic alliance is commonly defined as a form of long-term cooperation in which the allied firms coordinate certain business fields, intending to improve their position against other competitors. Each partner brings in his characteristic strengths and tries to compensate his weaknesses and to create synergies with his partners. Typical of strategic alliances is that the cooperating firms are led by a focal or 'hub'-firm, which centrally coordinates the network relations. Strategic alliances can take place on a vertical or on a horizontal level. Especially horizontal alliances among international companies in high-tech industries (e.g. aviation industry), which intend to undertake extremely costly projects which are too resource-intensive for a single firm to cope with, have become more and more important in recent years. Although interdependencies are high in this form of networking activity, the conflict potential is considerable. This is partly due to the danger of opportunism arising from the exchange of high-tech know-how and partly to cultural and language barriers among the international partners. For CEEF, such alliances are not of a significant relevance yet because they often lack essential resources which could make them an interesting partner for western firms. However, this picture might change considerably in the future.

### *Joint ventures*

A joint venture is an alliance where the alliance partners decide to found and run a legally independent company, involving equity capital of all partners. On the one hand, the equity involvement increases the stability of the relations: the partners are threatened to lose their investment in case of a failure. On the other hand, it increases the costs: only firms with a certain resource basis can undertake the investment and the complex contracting process. The stability of the relations contributes to a relatively unhindered flow of know-how and information, from

which especially the Central and Eastern European partners can gain. If a joint venture is established, the technology transfer involved might create considerable spill-over effects, which are beneficial for the entire country and can upgrade large parts of its production. In the long run, this can make CEEF very attractive alliance partners for international companies and promote their presence on western markets.

Table 5 – Assessment of different network activities from the perspective of CEEF

	access to crucial resources/ technology transfer	access to international markets	participation in decision-making	costs of establishing and managing the relations <sup>11</sup>
Licensing	0	0	-	low
Franchising	0	+	0	low
Subcontracting	+ <sup>a)</sup>	+	0 <sup>a)</sup>	medium
Strategic alliance	++	++	++	high
Joint venture	++	++	+(+) <sup>b)</sup>	very high

<sup>a)</sup>Depends on development of relation intensity over time. – <sup>b)</sup>Depends on equity shares among partners.

Despite the high investment of the partners, joint ventures are often observed to be quite unstable and difficult to manage (Grup d'Anàlisi de la Transició Econòmica, 1995). The high risk due to equity involvement as well as cultural and language barriers complicate the management of the network relations — although cultural and language barriers are not so important in projects between

<sup>11</sup> These costs include capital resources and internal transaction costs. Internal transaction costs comprise the costs of managing internal quarrels and mistrust which occur after internalizing transactions into a network or a hierarchy. They are not really considered by the transaction cost theory.

Eastern European and some Western European countries (e.g. Germany), which still dominate FDI in almost all Central and Eastern European countries.<sup>12</sup>

So far, networking activities between Eastern and Western European firms have only been to a minor extent technology-orientated. They have been largely dominated by relations that only involve little commitment, such as licensing and subcontracting (Table 6), which is not very surprising if the comparative advantage of the Central and Eastern European countries is considered.

Table 6 – Structure of cooperation relations between EEC-firms and CEEF at the beginning of the 1990s

Form of cooperation	Share (in per cent)
Licensing	26
Subcontracting/Outward Processing	24
Buyer-supplier cooperation within specialization contracts	19
Technology cooperation	11
Direct production cooperation (including distribution)	10
Tripartite cooperation	6
Others	4

Source: Zschiedrich (1994).

However, this specialization pattern between east and west can only subsist in the short run because in the long run, wages will rise as productivity and technological standards increase. For CEEF, this implies that only a strong, long-term-orientated commitment in their network relations — such as long-term contracts, specific investment of all partners or even equity involvement — offers them the possibility to reach a higher level of specialization than simple outward process-

<sup>12</sup> As an example, the share of German and Austrian FDI in the FDI stock of most Central European countries is relatively high; it amounted to 53 percent in the Slovak Republic, 44 percent in Slovenia, 42 percent in Hungary and 35 percent in the Czech Republic by December 1995. Only in Poland this share was relatively low with 14 percent (Hunya, 1996).



ing; to participate in an international exchange of crucial technologies and to efficiently manage their dependencies.

## V. Concluding remarks

The restructuring process as well as the rapidly changing economic conditions have imposed a major challenge for CEEF to survive in the struggle of international competition. An efficient way to organize international production activities and to link into global production chains thus might prove to be the crucial factor for success or failure. Network forms of organization combine characteristics of both markets and hierarchies, ideally accounting for flexibility and stability of the organization and might represent a viable organizational alternative for CEEF under the given economic conditions.

Due to the possibility of adapting the network relations to changes in these conditions and due to the possibility of creating an atmosphere of trust among the network members being most beneficial for information and technology transfers, network forms of organization cannot be simply considered a „second best“ alternative as compared to FDI in the international production and innovation process. Very often, they might prove to be superior for CEEF, especially if the lower investment of resources needed and the lower risk involved in the building of the relations are taken into account.

In spite of this, network strategies (with or without equity involvement) are still looked at with considerable scepticism by many CEEF. They are often seen as strategies of western multinationals to expand their sphere of influence on the cost of their Eastern European partners. These sceptics, however, overlook the dynamic character of network relations: They occur in a world of growing global dependencies among firms and persist, even strengthen because the partners in-

volved in the network have an interest in maintaining the relations through which they intend to realize some comparative advantage over their competitors. Consequently, firms contribute parts of their resources to the network and invest specifically, which increases interdependence among the network members and stabilizes the relations. Thus, a network of firms is not a strategy of creating dependence of an Eastern European firm on its western counterpart, but of internalizing dependencies which already exist in a world of globalization into a stable organizational form.

It is true that in most cases the positions might not be balanced between the partners. This kind of conflict potential is not a specific characteristic of east-west networking, but is to be found in most cooperative relations, especially on a buyer-supplier level. However, this does not hinder firms in a somewhat subordinate position to derive an economic advantage from the network relations as long as resources and information circulate among the network members.

Referring to the CEEF, this could mean that through networking activities, they have the chance of upgrading their production and of increasing productivity and hence, wages. As simple outward processing activities become obsolete with rising wages, the network might develop into a more technology-orientated cooperation in the end. However, if the CEEF want to „move up the ladder“ in the global production system in this way, they have to enter the system first. As this paper tried to show, joining in networking activities with western partners appears to be a promising strategy in this context.

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