Abstract

This paper analyzes articles about interorganizational relationships published in ASQ and covering more than three decades. These articles represent different frameworks, each one of which provides its own interpretation of interorganizational relationships. Of special interest are articles in the nineties dealing with alliances by entrepreneurial firms that operate in rapidly changing industries.

Introduction

This paper is a second report in a project that aims at exploring the historical development of research about interorganizational relationships (the first report: Högberg, 1998). The rationale of the project is twofold: First, that interorganizational relationships are a relevant issue in a multitude of frameworks that deal with profit and non-profit organizations. How is this phenomenon interpreted in different frameworks, and how have these interpretations developed over the past decades? What empirical support can be found for the frameworks and to which issues were they applied? Secondly, there are new ideas being developed in the study of interorganizational relationships. What characterizes these new ideas and how do they compare to existing frameworks?

The paper takes as its starting point the development of the exchange and resource dependence theories in the sixties and seventies. In the seventies and eighties the transaction-cost theory became an alternative framework. Interorganizational relationships are also studied in the neo-institutional theory. In the nineties, the social-structure framework has gained a strong position in the study of alliances. Articles that belong to this last framework have been given relatively more attention than the other frameworks, because they represent new trajectories.

The paper is limited to articles published in ASQ (Administrative Science Quarterly) except for the presentation of each framework. The presentation of the frameworks needs a wider basis than only ASQ, because some of the basic sources are not articles published in this journal. The central arguments must be representative of the frameworks. Articles published in ASQ from the sixties up to and including the September issue of 1998 are the sources for our effort to trace development trajectories. ASQ was chosen as the first source, because it is one of the leading journals in the study of organizations. It was here that the first article about exchange relations between organizations was published. Subsequent research will expand the scope of this paper to cover other leading journals too.

1 Bengt Högberg, Department of Management & Economics, Linköping University, S-581 83 Linköping, Sweden, Tel: +46 13 281000, Fax: +46 13 281873, E-mail: bengt.hogberg@itec.se

Each section starts with a presentation of the basic ideas of the framework. The articles, and especially the empirical studies, are then discussed. This process requires that the articles can be classified as belonging to one or the other framework. This was not a major problem for articles that dealt with the early developments of the frameworks. As these frameworks were applied to new issues previously dominated by other theoretical approaches, or were replaced themselves, the question of categorization became more difficult. This means that even though several frameworks can be applied to the analysis of a certain issue in an article, the article will appear in one of the frameworks. However, the article can also be relevant in connection with another framework.

Finally, the ideas that have evolved during the nineties are discussed with respect to important new aspects of interorganizational relationships and their consequences for the viability of existing frameworks.

Published Article Analysis

This paper covers 71 articles published in ASQ. Table 1 shows that more than half of the total number of articles was classified as belonging to the exchange resource-dependence frameworks (E/RDF in the table). The exchange resource-dependence frameworks dominated until the end of the eighties. During that period 32 out of 43 articles belonged to these frameworks. In the nineties, the pattern became very different. Less than a third of the articles belonged to the exchange/resource-dependence frameworks. In fact, most of them were combinations of frameworks. Closely related to the exchange framework are articles classified as social embeddedness (SE). There are 9 of these articles, all published in the nineties. The transaction-cost framework (TCA) is represented by 11 articles, which is a rather small number considering that the framework has made a strong impact on research in this area. Neo-institutional theory (INST) is also a venue for interorganizational analysis. There were 5 articles in the eighties, and 6 in the nineties.

The quantitative representation in Table 1 shows that neither exchange/resource-dependence theory nor transaction-cost theory plays a dominant role in recent research about interorganizational relationships. There is a multitude of frameworks that one way or the other includes interorganizational analysis. The rest of the paper attempts to analyze this apparent development.

It should be observed that not all articles that form the basis for the numbers in Table 1 are referred to in this paper. The reason is that they do not fall into the main development of each framework, or another article is selected in order to represent the same argument.

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Table 1. Dominating frameworks

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Exchange and Resource Dependence Frameworks

The frameworks

The genesis of research about exchange relationships between organizations is generally attributed to Levine and White (1961). They applied exchange theory to interorganizational relationships. Exchange theory had been used mainly to study exchange between individuals (e.g., Weber, 1947; Homans, 1958 and 1961). “Organizational exchange is any voluntary activity between two organizations which has consequences, actual or anticipated, for the realization of their respective goals or objectives” (Levine and White, 1961:588). Exchange can cover the range from simple referrals of clients or transactions of goods and services to interorganizational arrangements such as joint programs. Under scarcity of resources and requirements of efficiency, organizations must decide on which functions to perform themselves. This means that they have to exchange resources with other organizations.

The decision to exchange goods or services is a trade off between the rewards from and the investments in the exchange (i.e. the partners to the exchange have a reasonably clear opinion about the conditions of the trade off, even though they are not assumed to be perfectly rational). In order for there being any exchange, however, the partners must have achieved a consensus regarding their respective domains, i.e. they must have reached an acceptance of each others’ claims in terms of the goals and the functions that each one of them pursues. The conditions of exchange are assumed to be equitable and of mutual benefit to the partners, but Levine and White (1961) did not make the assumption that the exchange ratios were equal between the partners. The partners could bargain and use sanctions in order to affect the ratio. However, Levine and White (1961) did not include the use of power and coercion in their framework. Others have argued that power can be used, but in a manner that is perceived as fair (cf. Blau, 1964). The concept of trust plays an important role in the exchange framework. Blau (1964) argued that contrary to economic exchange, in which a formal contract stipulates the conditions of exchange, social exchange must rely on trust. (As will be discussed below, trust is assumed to be of importance also in business relationships.) Thus, in the early exchange framework, interorganizational relationships are interpreted as voluntary activities in order to acquire resources from other organizations but at the expense of autonomy. Thereby, exchanging organizations build up interdependencies, which not only represent conduits of resources but might also lead to restrictions on the freedom to act.

Emerson’s (1962 and 1972a and b) definition of dependence and power played an important role in the further development of the exchange framework and for the introduction of a power/dependency or a resource-dependence framework. This development built on the ideas of bounded rationality (cf. Simon, 1965; Cyert and March, 1963) as well as on open-systems theory (e.g., Buckley, 1967; Yuchtman and Seashore, 1967). Organizations seek to reduce uncertainty that arises from (1) their dependence on other organizations for valued resources, and (2) market conditions that
produce potential conflict i.e. scarcity of resources in imperfect markets.² They enter into exchange relations in order to achieve negotiated and relatively predictable environments that will secure the flow of resources (e.g., Thompson, 1967; Aldrich, 1976; Jacobs, 1974; Benson, 1975; Pfeffer and Nowak, 1976; Cook, 1977; Dunford, 1987). Powerful organizations are assumed to use their power over less powerful organizations in order to improve their return from the exchange or to reduce uncertainty arising from their dependence on these other organizations. Unlike in the early exchange framework, interdependence is not primarily the result of, but more the reason for the formation of coordinated action between organizations. Furthermore, the early exchange framework explained the establishment of exchange where there was no exchange before. Extensions of the framework took the issue one step further. Interdependence that arises from existing exchanges of resources could be managed through interorganizational arrangements such as cooperation agreements, joint programs, mergers, and acquisitions, to quote a few examples. The extension of the exchange framework to include power and uncertainty reduction made it less distinguishable from the resource-dependence framework. The two perspectives converged, and it became rather difficult to distinguish between them. This confusion can also be observed in the articles published during the seventies (see Högberg, 1998).

Both the exchange and the resource-dependence theories acknowledge that efficiency considerations create a need for interorganizational activities. Efficiency is the ratio between the output an organization produces and the input resources required for producing that output. Levine and White (1961) put it that under scarcity of resources and requirements for efficiency, an organization specializes in certain functions, which leads to a need for resources (e.g. the referral of clients) from other organizations in order to attain the goals of the organization. The success with which an organization can establish and manage exchange relations with other organizations determines how effective it will be in attaining its goals. Here, effectiveness is defined as the degree of goal attainment.

In resource-dependence theory, the starting point can also be derived from the consequences of efficiency: “In the current dense environment, efficiencies are no longer the solution to organizational problems, for the efficiencies have created interdependencies with other organizations, and these interdependencies are the problem. The dominant problems of the organization have become managing its exchanges and its relationships with the diverse interests affected by its actions. Because of the increasing interconnectedness of organizations, interorganizational effects are mediated more by regulation and political negotiation than by impersonal market forces” (Pfeffer and Salancik, 1978:94). The resource-dependence framework is strongly influenced by an open-systems approach to effectiveness in which effectiveness is more related to survival than to goal attainment as in the early exchange framework (e.g., Yuchtman and Seashore, 1967; Pfeffer and Salancik, 1978). Effectiveness is defined as the ability of an organization to manage its dependencies on other organizations for resources that are necessary for its survival. This leads to a focus on the bargaining position of an organization and how the position is exploited (Benson, 1975).

² Conflict has been found to be highest in markets of medium concentration (cf. Pfeffer and Nowak, 1976).

Quite early on, interest was expanded from the focal organization or dyads to organization sets (Evans, 1966) and interorganizational fields or networks of organizations (e.g., Warren, 1967; Benson, 1975; Cook, 1977). This development mainly concerned two issues: (1) network structure i.e. definition of structural dimensions of the network (e.g. centrality, density, connectivity, distance), and (2) network roles and strategies (e.g. mediator between organizations, strategies for changing network power distribution).

Motives for interorganizational relationships – empirical support

Until the end of the seventies there were 16 articles on interorganizational relationships published in ASQ. All of them were based on the exchange and/or the resource-dependence frameworks. Most articles dealt with non-profit organizations (e.g. Levine and White, 1961; Litwak and Hylton, 1962; Turk, 1973; Paulson, 1974). This is probably an important fact when it comes to understanding why a particular framework was employed and the results achieved in the study.

Levine and White (1961) reported preliminary results from two studies of U.S. health organizations. The importance of this article lies in the development of the framework rather than in the empirical results (which were rather meagerly mentioned in the article). However, Levine and White found that depending of the functions that organizations performed they became more or less dependent on other organizations for resources. The function also established the range of possibilities for exchange. Organizations which depended on resources from other organizations that belonged to the same local health system established a larger number of exchange relationships than did organizations which had state support (and were less dependent on the local health system). The authors also found that organizations high in prestige led in the number of joint activities. They concluded that “prestige, leadership, and other organizational variables seem to affect interaction patterns within limits established by the function variable” (Levine and White, 1961:595).

Paulson (1974) replicated and extended conceptually an earlier study by Aiken and Hage (1968) in which they had related internal organizational variables to the propensity of health organizations to form joint programs with other health organizations. Aiken and Hage (1968:912) argued that “with increased division of labor, organizations become more complex and more innovative; the need for resources to support such innovations promotes interdependent relations with (other) organizations, and the greater the integration of the organizations in a community structure” Paulson’s study supported the argument that joint programs were positively related to innovation and complexity, but that there was a slightly negative relation between complexity and innovation. These studies brought the exchange argument by Levine and White (1961) one step further. They showed that innovative organizations were more prone than their colleagues to establish exchange relationships.

Representatives of a resource-dependence framework interpreted the reasons for interorganizational action differently (e.g., Pfeffer, 1972b; Pfeffer and Nowak, 1976; Pfeffer and Salancik, 1978). “These authors (Aiken and Hage, 1968; Paulson, 1974 – our remark) argued that organizations are pushed into joint activities because of the need for resources, ... this study differs from Aiken and Hage in that it is argued that interdependence causes the creation of joint ventures to manage the interdependence, rather than joint ventures themselves creating the interorganizational interdependence”.

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From the results of a study of U.S. companies based on data at an industry level, Pfeffer and Nowak (1976) concluded that joint ventures were formed with firms in the same industry in order to manage competitive interdependence. Joint ventures with firms in other industries followed the patterns of resource flows between industries. Dependence on R&D was positively related to joint ventures. Pfeffer and Nowak interpreted this not as a quest for resources in order to implement innovations, but as a means to reduce technological uncertainty. While advocates of the exchange framework (e.g., Aiken and Hage, 1968; Paulson, 1974; Van de Ven and Walker, 1984) claimed that intraorganizational variables explained better the propensity to form joint activities than external variables, proponents of resource-dependence theory expressed the opposite opinion (e.g., Pfeffer and Nowak, 1976). The early exchange framework, therefore, implies a strategic choice, because the intraorganizational variables can be subject to managerial discretion. In the resource dependence framework, decisions are assumed to be more constrained by the environment. This framework is more concerned with the conditions of equilibrium and the processes to change existing power structures than with the development of new products or services.

**Coordination of interorganizational relationships - dyads**

In the seventies and eighties there were a number of articles dealing with the management of exchange relationships and the role of cooperation and conflict in such relationships. Interaction between organizations could comprise not only the exchange of resources, but also the processes leading to and the management of the exchange. Empirical studies of non-profit organizations showed that the patterns of coordination varied with type of exchange (e.g., voluntary and mandated exchange). The level of cooperation seemed to be associated with the level of communication. The extent to which exchange partners communicated affected the perceived success of coordination (Hall et al., 1977) and the deepening of the relationships (Van de Ven and Walker, 1984). Levinthal and Fichman (1988) found that trust and the ability to cooperate positively affected the survival chances of exchange relationships.

Organizations used power associated with their bargaining positions in order to improve coordination (from their point of view) and their benefits from the exchange, but they did so to a lesser degree under voluntary relationships than under relationships mandated by the authorities (Hall et al., 1977). Schmidt and Kochan (1977) found that the frequency of interaction was highest when mutual benefits were present and lowest when no benefits were perceived. Power situations, which imply an asymmetric distribution of benefits, led to an intermediate frequency of interactions. Cooperation and problem solving would be associated with the exchange framework (the original one), while bargaining and conflict are natural forms of interaction in the resource-dependence framework. Both Hall et al. (1977) and Schmidt and Kochan (1977) stated that an organization could have voluntary as well as power/dependency-based relations within its organization set and that one and the same relationship could be of a mixed kind. Voluntary relationships tended to be more interaction intensive and coordination perceived more successful than in relationships were power played a significant role. The support for the exchange framework proved to be strongest when interaction was voluntary.
Some studies showed how conflict could evolve during the course of exchange and cooperation. Molnar and Rogers (1979) found that mutual exchanges on a continuing basis increased the risk of interorganizational conflict of a structural kind (conflict over basic identities and responsibilities that define a relationship). Just as in Hall et al. (1977) mandated relationships led to more conflict both of a structural and an operating nature (conflict associated with problem solving) than in relationships of more voluntary interaction. Van de Ven and Walker (1984) found that with deepening interdependence came not only consensus but also elements of conflict that could threaten the stability of cooperation. But, as Assael (1969) argued, interorganizational relationships need not only be the potential generator of conflict, but could also be a venue for conflict resolution and an alternative to litigation. Assael also stated that "partial conflict" could contribute to coordination.

The exchange framework includes both cooperation and conflict. The trade-off between resources and autonomy implies the existence of both these aspects on relationships (cf. Aiken and Hage, 1968). Zeitz (1980:82) elaborated on the dialectic nature of cooperation and conflict: "The mutual interdependence upon which exchange is based provides fertile ground both for acts of cooperation and acts of conflict and opposition. Cooperation may increase interdependency, yet decrease awareness of the need for further compromise, thus leading to intensification of conflict. Likewise conflicts lead to mutual interaction and thus establish the basis for interdependence and cooperation; former enemies become the best of friends, while former partners often feel the greatest antipathy".

Position and influence in networks

In the eighties, empirical studies of networks began to appear. This made it possible to analyze the inter-relationships between several organizations and their hierarchical positions in the networks. The concept of centrality was important in these studies. Centrally placed organizations are assumed to have more power and influence than less centrally placed organizations. If an organization could develop strategies to improve its centrality, it should be able to improve its bargaining power over the allocation of scarce resources. Boje and Whetten (1981) found that strategies (forming joint programs and using communication) could improve an organization’s centrality and influence in a network. But, centrality did not improve influence in mandated relations, only in voluntary ones. An organization’s dependence on a central organization for resources should be reduced and its power increased, if it can establish relationships outside the particular network (Levine and White, 1961; Benson, 1975). Provan et al. (1980) showed how such relations did not only represent alternative sources of resources but could also affect the resource flows to the network in general and to the central organization in particular. Network centrality can also be used in order to determine the directions of influence (Mizruchi and Bunting, 1981).

Mariolis and Jones (1982) found that centrality measures in corporate networks were both reliable and stable, which they should be if they are means to reduce uncertainty from interdependence. Centrality improves the ability of a firm to withstand external pressures and to strengthen network stability (Davis, 1991). If uncertainty cannot be curbed, organizations will attempt to change the critical interdependencies. Leblebici and Salancik (1982) studied the stability of interorganizational exchanges at the Chicago Board of Trade – a network in itself. They found that the higher the
environmental uncertainty, the more likely were changes in the working rules governing these exchanges.

**Interlocking boards of directors**

In another group of network-oriented articles, the resource-dependence framework was applied to the role of interlocking boards of directors in the U.S. industry. This research had primarily been rooted in class or elite theory. How was the control of U.S. corporations exercised and in whose interest? One variant of class theory concerned the dominance of banks over non-financial corporations. An alternative explanation to class theory would be that interlocking directorates follow the pattern of interorganizational interdependence. An organization may coopt to its board of directors, persons from organizations that control resources essential for the survival or profitability of the organization. Also the representation by banks on the board of directors can be explained not (only) as a class issue but (also) an effort to reduce uncertainty concerning resource flows.

Pfeffer (1972a) was the first article in ASQ to apply arguments of resource dependence to explaining patterns of interlocking boards of directors. Even though he only used indirect measures of dependence, the results indicated that the coopting of external directors varied with the dependence of the firms for external resources. The deviation from an optimal composition of the board in terms of internal and external directors was negatively related to profitability. In a subsequent study of hospital boards of directors, Pfeffer (1973) found that the composition and size of the boards followed the resource requirements. The effectiveness of the hospital in acquiring resources was greater, if the board reflected resource requirements rather than administrative needs. Thus, the effectiveness in managing critical interdependencies with the environment had a positive impact on resource acquisition (and profitability of the business firm).

Based on his empirical results, Burt (1980:579) concluded “a firm is likely to have a great variety of potentially cooptive relations, with firms owning establishments in sectors most seriously constraining its profitability... much of the research on interlocking directorates assumes that such interlocking is aimed at eliminating market constraints on the firm. A more general perspective on this response of an organization to its environment is the ‘resource dependence’ model”.

Most of the articles were published during the eighties and represent a majority of resource-dependence articles during that decade. In five studies, class and resource-dependence theories were directly compared. In all but one (which came to a 50/50 conclusion) the empirical data pointed in favor of the resource dependence theory (Palmer, 1983; Ornstein, 1984; Stearns and Mizruchi, 1986; Richardson, 1987; Mizruchi and Stearns, 1988). It is not just a situation in which proponents of a theory find support for it. Several of these researchers have appeared as authors of books and articles taking the perspective of class. Some of these articles also dealt with the direction of ties: Did firms coopt or were they forced to accept persons from more powerful firms (such as banks) on their boards? This question concerns the use of directorates as a means of power. However, the empirical results about the direction of ties seem to be inconclusive.
Another issue is that the determinants of board composition seem to be unstable over time. During the late eighties and early nineties, shareholder power has apparently increased (Davis and Thompson, 1994). Zajac and Westphal (1996) found that also top managers have been able to increase their influence on the composition of their boards. Strong CEOs were able to have passive directors appointed to the board. Zajac and Westphal, 1996) integrated theories about interorganizational interdependence, agency, and elite class. Also Davis’ (1991) study of the spread of the “poison pill” through the inter-corporate network showed that top managers can use interorganizational ties for their own purposes. Thus, the study of interlocking boards of directors is an area where a multitude of theoretical frameworks can compete and be integrated. Here it suffices to note that the resource-dependence framework has made an important contribution to the research about interlocking boards of directors. It plays a less salient role in articles published in the nineties than in the two preceding decades.

Change and survival

In resource-dependence theory, effectiveness is commonly interpreted in terms of survival (cf. Yuchtman and Seashore, 1967). This leads to an obvious link to population ecology, in which change and survival are essential issues. There are some articles in the nineties that exploit the opportunity to study the effects of interorganizational relationships on the survival of organizations under various conditions. These articles could have been categorized under the heading of “population ecology”, but because there are only a few articles that combine population ecology and exchange/resource-dependence arguments, they remain under this heading.

According to resource-dependence theory, organizations are assumed to buffer external changes. Access to resources could serve as such a buffer. One article covered the development of Finnish newspapers during a 200-year period (Miner et al., 1990). It was found that interorganizational relationships buffered from failures and explained survival better than theories of resource-munificence and strategy. Miner et al (1990) also found that newspapers with interorganizational linkages changed more than their counterparts. They did so both during periods of stability and radical change. These results showed that interorganizational relationships did not serve as buffers against change, but as buffers against failure when change was required.

In subsequent studies, (1) Baum and Oliver (1991) showed that linkages of child care service organizations to government and community organizations improved their survival rates, and (2) Ingram and Baum (1997) found that hotels that were members of chains had a lower failure rate than independent hotels. They argued that the linkages between the chains and the member hotels represented a distinct organizational form – the “superorganization”. “Superorganizations use relatively autonomous subunits to respond to local conditions and avoid the pitfalls of hierarchy, were initially considered radical but are now familiar, and have been innovators in developing and applying technology and management techniques to operate a diffuse organization” (Ingram and Baum, 1997:99f).

These articles point at a link between interorganizational theories and population ecology. Resource-dependence theory provides important contributions, but the results are more in line with those applications of exchange theory in which interorganizational relationships are viewed as providing resources that facilitate change (and growth).

in McLaughlin, Damien and C. Horan (eds.), Proceeding of the 15th Annual IMP Conference, University College, Dublin 1999
Summing up the exchange and resource-dependence frameworks

The early exchange framework is characterized by its focus on voluntary relationships and the absence of power. Organizations form exchange relationships in order to gain resources important to goal fulfillment. Extensions of the framework introduced power and bounded rationality as important building blocks. The resource-dependence framework states that organizations establish interorganizational relationships in order to manage critical interdependencies with their environments. Forces external to the organization have a strong influence on its range of strategic choices. It also means that power can be used in order to force other organizations to interact and to influence the return from such interaction. The early empirical research tried to answer the question whether factors internal or external to an organization would explain its propensity to form relationships with other organizations.

Studies of interaction patterns showed that voluntary relationships were more communication intensive than relationships based on mandates or power, and that communication was an important determinant of successful coordination. Organizations, which need partners, seek those that they can trust. Personal communication plays an important role in the creation of trust. The results supported the assumed importance of equity or mutual advantage for successful cooperation. These studies also showed that cooperation and conflict could exist in one and the same relationship, and that conflict need not only have a negative effect on exchange relationships.

Empirical studies of organization sets or networks made it possible to deal with issues such as centrality, bargaining position, and network stability. The resource-dependence framework was also applied to studies of interlocking boards of directors. It was found to be a potent alternative to class theory when it came to explaining the reasons for and the composition of interlocks. Studies of change and survival published during the nineties combined interorganizational analysis and population ecology. The results underscored the role of interorganizational relationships for improving the chance of survival and in facilitating change.

These are frameworks mainly related to the effectiveness of organizations. The empirical studies reported in the articles covered here, however, seldom dealt explicitly with effectiveness i.e. attempts to measure and explain effectiveness in relation to the management of exchange and other interorganizational relations. There are a few exceptions, for example in studies of interlocking directorates (Pfeffer, 1972a and 1973) survival rates (Miner et al., 1990; Baum and Oliver, 1991; Ingram and Baum, 1997), and interorganizational networks of mental health delivery (Provan and Milward, 1995). The efficiency of the management of exchange relations or of the exchange relations themselves was hardly, if at all, discussed (with the exception of Hall et al., 1977).

Except for the interlock studies, a majority of the articles were about non-profit organizations. Interestingly, some authors were confident that their framework would apply to both non-profit organizations and business firms (Levine and White, 1961), while others were more hesitant (Benson, 1975; Pfeffer and Nowak, 1976). While it is of interest to understand why non-profit organizations establish exchange relations at
all, the corresponding issue for business firms is exchange that goes beyond market-based transactions.

Most of the articles published in the nineties represented combinations of frameworks. Exchange and resource-dependence theories were combined with, for example, population ecology, institutional, and strategy theories. Specific issues were addressed and competing frameworks were applied to these issues. This is a change from the earlier periods when a framework was developed and tested on issues derived from that specific framework.

Before continuing to the main development during the nineties, two other frameworks will be discussed. The transaction-cost framework represents an alternative explanation of how transactions between business firms are managed. Neo-institutional theory is an alternative venue for analyzing interorganizational processes.

**Transaction Cost Framework**

The original ideas behind transaction costs were published already in the thirties (Coase, 1937), but it was not until mid seventies that these ideas were developed, mainly, by Williamson (1975) into, what is today known, as the transaction-cost framework. This is essentially an eclectic framework that builds on microeconomics, contract law, and organization theory. Sometimes it is categorized as belonging to a new institutional (micro)economics. Williamson applied the theory to the analysis of both the micro level and the larger institutional framework of a society (Williamson, 1985).

Transaction is a narrower concept than exchange. All transactions are exchanges, but all exchanges do not involve transactions. Transaction costs are the costs associated with both negotiating the conditions for the transaction and the subsequent implementation of them. Thus, transaction-cost theory deals with a more limited range of relations than exchange and resource-dependence theory. It is concerned with business firms and the cost-side only. Efficiency is then defined as the lowest cost attainable for managing transactions.

Firms are supposed to choose that form of governance of transactions, which will economize best on transaction costs. In a “perfect” market, transactions are most efficiently handled at arm’s length. However, markets are often imperfect and decision-makers are less than perfectly rational. Hence, imperfect markets characterized by complexity and potentials for opportunistic behavior by transaction partners will generate uncertainty. The higher (1) the frequency of transactions, (2) the uncertainty associated with them, and, most importantly, (3) the asset specificity, the more efficient the incorporation of the transactions under one hierarchy (Williamson, 1979). Thus, the “early” transaction-cost framework foresaw two distinct alternative modes of governance: the market and the hierarchy.

Williamson was criticized for overstating the role of asset specificity in explaining vertical integration (Demsetz, 1993; Coase, 1993), and for underestimating economies of scale and technological conditions of economic organization in the prediction of...
modes of governance (Demsetz, 1993). This criticism came from "transaction-cost theorists". Criticism from people adhering to competing perspectives was also plentiful. Robins (1987) criticized Williamson for overstating the usefulness of the framework for causal explanation of organizational form or patterns of institutional economic history. Instead, "transaction-cost economics is useful in organization studies not as a basis for general laws of organization, but as a means of integrating research on the behavioral aspects of organization into an economic and strategic analysis of the firm" (Robins, 1987:84). Granovetter (1985) argued that transaction-cost theory neglected the social context in which economic actions take place, and therefore becomes an insufficient and too narrow theory for explaining economic action. Granovetter's criticism is strongly related to the ideas that are discussed below under the heading of "Embeddedness - a Social Structure Framework".

In Williamson's original framework, intermediate forms of governance e.g. joint programs and joint ventures were deemed unstable as means to govern transactions under efficiency requirements. The criticism and the empirical support for it, however, led Williamson to further develop his framework also to include intermediate forms (Williamson, 1979, 1981, and 1991). In his ASQ-article, Williamson (1991) discussed the conditions under which hybrids (intermediate forms of governance) would be the most efficient alternative. Hybrids would be appropriate when disturbances that require coordinated adaptations are of an intermediate strength. Strong disturbances that require coordinated responses would be handled most efficiently under hierarchy. Hybrids are characterized by semi-strong incentives for opportunistic behavior and an intermediate degree of administrative apparatus (Williamson, 1991:281). Thus, the transaction-cost framework would allow for forms of governance of transactions other than pure market or hierarchy.

Ouchi (1980) added an additional form of internal governance the clan. He built on the assumption in exchange theory that, in order for exchange to take place, the participants must perceive the conditions to be equitable (the norm of reciprocity). When performance evaluations are highly difficult, which is the case in complex and changing situations, it becomes difficult to evaluate whether exchange is equitable or not. As a result, transaction costs increase. Bureaucracies are not capable of curbing opportunism efficiently when performance evaluation is highly difficult, because the rules (or incomplete contracts) that govern bureaucracies cannot provide the necessary reduction in uncertainty relating to opportunistic behavior. Instead, efficiency must rely on common beliefs and values that dominate in an organization. These will represent a culture of paradigmatic character and offer guidance in difficult decision situations. The clan is characterized by high goal congruence that curbs opportunistic behavior. "... clan control that can efficiently govern uncertain and complex transactions requires the development of shared social knowledge in two areas: (1) a general paradigm that helps participants determine what is in the best interest of the collective, and (2) the perception of goal congruence (the belief in a general or long-tem equity ... )" (Wilkins and Ouchi, 1983:475).

The clan is an expensive form of governance requiring intensive communication and will take more time to build than a bureaucracy. Its efficiency is limited to situations characterized by high ambiguity, complexity, and interdependence of transactions. Jones (1983) discussed how culture emerges out of the arrangement chosen in order to govern exchange and transactions. He used the concept of property rights defined as the
allocation of specific rights to organizational members to use resources. Jones (1983: 464) concluded: “From this property-rights structure develops a professional culture in which reciprocal monitoring replaces hierarchical authority, and professional norms and values replace bureaucratic rules and procedures”

The ASQ has not been a major forum for the publication of empirical research based on the transaction-cost framework, but it was here that an important extension of the framework appeared (Williamson, 1991). There are six empirical articles based on or strongly influenced by the transaction-cost framework. Three are basically single-framework articles and investigate make-or-buy decisions. The other three articles deal with economic reforms in China.

Make-or-buy decisions

The first article about make-or-buy decisions was published in 1984. After 1991 there are no articles about that subject and based on the transaction-cost framework published in ASQ.

Walker and Weber (1984) tested transaction costs compared to relative production costs and buyer manufacturing experience in predicting make-or-buy decisions in a U.S. automotive manufacturer. They found that comparative production costs were the strongest predictor, but that uncertainty and asset specificity (measured as supplier market competition) also had a significant explanatory power, albeit small. Experience in manufacturing hardly influenced the make-or-buy decision.

Neither the first article in the nineties (Pisano, 1990) considered hybrids. It dealt with decisions by pharmaceutical companies to internalize biotechnology projects or to acquire the desired technology through external contractual arrangements. Pisano found support for the hypothesis that small-numbers bargaining problems lead to R&D projects being internalized. The results did not support the argument that appropriability problems would also result in internalization. Small-numbers bargaining was measured as supplier concentration (logarithmic scale). One may not consider this as a basis for a strong support for the transaction-cost framework.

The second article in the nineties (Walker and Poppo, 1991) was also published before Williamson (1991) and did not take into account the theoretical extension made by Williamson. However, Walker and Poppo considered the criticism of Williamson’s previous works. They compared the effects of asset specificity on transaction costs in internal versus external supply relations in a large, decentralized company. The relationships with external, single-source suppliers were of a hybrid character. Walker and Poppo (1991) found that only one of three types of asset specificity (supplier asset specificity) operated in the expected direction i.e. higher asset specificity would lead to internal procurement. They even found that decreasing supplier-market competition (i.e. higher asset specificity) in fact resulted in lower transaction costs with external than internal suppliers. Relational contracting with external suppliers could curb the risk of opportunistic behavior by these suppliers, while the means of hierarchy were less effective on internal suppliers.

Even though Walker and Poppo found support for the central argument of transaction-cost framework that of asset specificity, their results also underlined the existence...
(stability and efficiency) of hybrids forms of governance. It is also interesting that their results indicated that higher asset specificity could lead to higher transaction costs with internal compared to external suppliers. In general, these studies provided support for transaction cost argument, but transaction costs were not the strongest determinant of make-or-buy decisions. Furthermore, empirical data underscored the prevalence of hybrids, which represent an extension of the original market-failure argument.

**Economic reforms - China**

Boisot and Child (1988) applied transaction-cost reasoning to economic reforms in China. They extended the framework and used a classification based on the degree of codification (the selection and compression of data into stable structures) and the diffusion of information—a two-dimensional scheme termed a “cultural space.” In the modern Western societies, information has a high degree of codification: Relationships are impersonal and there is little need for shared values and beliefs in order to make the economic system work efficiently. The legal system functions as an overall supportive structure for economic transactions. According to Boisot and Child (1988), this is the context in which Williamson’s transaction-cost framework is applied. If information is diffused, markets are more efficient than hierarchies in economizing on transaction costs. Undiffused information corresponds to Williamson’s small numbers situation in which information is asymmetrically distributed between actors, and hierarchy becomes the efficient mode of governance.

There are societies that are not based on well-developed legal systems and nation wide institutions. Information has a lower degree of codification than in the Western societies. In such a context, Williamson’s framework was not deemed entirely relevant. China’s economic reforms take place in a context of noncodified information. In a relatively less modern society, such as China, bureaucratic failure would not result in market transactions, which require that information is codified and diffused. Instead, bounded rationality and information advantage for a small number of opportunistic players have led to fief-like governance structures in which transactions are characterized by uncodified and undiffused information. Fiefs are social organizations hierarchically structured through face-to-face and personalized power relations that are often charismatically legitimated (Boisot and Child, 1988:508). Boisot and Child (1988:525) concluded: “Bounded rationality and opportunism are responses to an information environment that has been insufficiently specified by Williamson. He has concentrated on information impactedness—degree of nondiffusion in the culture space—and relegated problems associated with codification under the catch-all term of ‘atmosphere’.”

In a later article, Boisot and Child (1996) followed up the subsequent development of economic reforms. China’s modernization and decentralization did not develop along the lines of Western societies, despite very rapid growth. The fief-like system did not change into markets but into clan-like relationships, which are characterized by diffused but uncodified information. Boisot and Child used the term “network capitalism” in order to denote interpersonal relationships based on trust and mutual advantage in such an environment. Chinese firms entered long-term relationships of an alliance character (also with foreign firms). “The Chinese system of network capitalism works through the implicit and fluid dynamic of relationships. On the one hand, this is a process that consumes much time and energy. On the other hand, it is suited to handling complexity and uncertainty. Networks offer greater capacities for generating and transmitting new...
information, and when they are sustained by trust-based relationships they offer a cushion against the possibility of failure that is a concomitant of uncertainty” (Boisot and Child, 1996:625).

Nee (1992) built on Williamson (1991), who had established the criteria under which hybrids are supposed to be the most efficient means in order to adapt to environmental change. Nee’s article described a period that lay between Boisot and Child’s two articles. Economic reform was in a transitory state; further developed than in Boisot and Child (1988), but not yet put to a test whether it would lead to market-based transactions or not (Boisot and Child, 1996). Nee found that the hybrid form of governance economized on transaction costs during the transitory phase, but that these hybrids relied more on personal ties than on legal contracts in order to reduce uncertainty from, potentially, opportunistic behavior. Thus, Nee’s results support those of Boisot and Child.

These articles applied the transaction-cost framework to the restructuring of a socialist economic system (in the Chinese case without totally abolishing the political structure). Nee (1992) found support for Williamson’s (1991) argument that hybrids would be more efficient than hierarchy and market under semi-strong incentives for opportunistic behavior during a period requiring change, but not of a radical type. Boisot and Child (1988) argued that the transaction-cost framework did not completely apply to the Chinese case, but that an additional dimension was required. Furthermore, Boisot and Child (1996) found that, as decentralization moved on and the number of players increased, the failure of hierarchy did not lead to predominantly arm’s-length transactions, but to a network structure strongly based on personal ties. This type of governance structure is similar to Ouchi’s (1980) clan but transferred from an intraorganizational form to the management of interorganizational transactions.

**Summing up the transaction-cost framework**

Williamson criticized the resource-dependence framework for being inexact. Power might become such a wide concept that it “can be used to explain virtually everything” (Williamson, 1981:572). Where the resource-dependence theory resorts to dependence and power, efficiency would be a more precise and accurate argument. There is not much empirical evidence for one or the other position as a result of comparative studies. However, Walker and Weber (1984) argued that they had not found any evidence that the U.S. automotive company would use power in order to shift uncertainty to its suppliers. It reduced uncertainty through moving production in-house. There is no article in ASQ before 1990 that compares the validity of these frameworks. Such discussions appeared later and are accounted for below.

At least in Williamson’s version of the transaction-cost framework, there is a marked difference in the “opportunism – trust” dimension compared to the exchange theory. Although Williamson (1975:108) recognized the existence and importance of trust, he claimed that the “reputation for fairness is also a business asset not to be dissipated... It cannot be safely concluded, however, that business trust is so great and pervasive that the costs of interfirm contracting are negligible”. Others, such as Ouchi (1980) and Boisot and Child (1988 and 1996) downgraded the importance of opportunism and regarded trust as a viable means of governance in specific contexts.
Transaction-cost theory seems to have attracted little interest among contributors and/or editors of ASQ after 1992. There are only scant references to the framework in other articles, and little contribution to new theory building in ASQ. Boisot and Child (1996) is an exception, but their results are not entirely supportive of Williamson’s version of the transaction-cost framework. In general, the empirical support for the transaction-cost framework published in the ASQ is mainly for hybrid forms of governance. Maybe, the extension of the theory to include such forms of governance may have made it lose some of its distinctive identity.

**Neo-institutional Framework**

This paper will only discuss those articles about institutional processes in which interorganizational relationships or networks play a role. Institutional theory deals with processes which lead to similarities in terms of structure, beliefs, norms etc among individuals and organizations, and how these similarities will affect or restrict the behavior of individuals and organizations. Unlike, for example transaction-cost and exchange theories, institutional theory concerns processes that generally are not in alignment with efficiency and goal attainment (the distinction between the technical and the institutional sources of practices). The interorganizational network will then represent the arena in which institutional processes are taking place.

Beginning in the first half of the eighties, a growing number of articles that take an institutional approach have been published in ASQ. DiMaggio and Powell (1983) is one of the most influential theoretical basis for this group of articles. (For a comprehensive discussion of institutional theory see Scott, 1987.) DiMaggio and Powell (1983) argued that isomorphism develops when organizations become an integrated collectivity as a result of the structuring of an interorganizational field. They distinguish between three processes leading to isomorphism. First, coercion is the use of power by one organization on another organization. Secondly, mimicry is the imitation of structures or practices in an interorganizational field. Thirdly, normative pressures are likely to be found in professional relationships. Coercion is similar to how resource-dependence theory views the use of power in order to manage interdependence or to change its structural pattern, but the reasons for doing so are interpreted differently. There are several examples of comparisons between institutional and resource-dependence theory. Mimic and normative processes represent a larger extent of voluntary conformity. Building on the theory of bounded rationality, diMaggio and Powell (1983) posited that organizations facing uncertainty tend to imitate other organizations. Most of the articles deal with the latter two forms of institutional processes.

There are basically two ways in which the interorganizational network could function as a conduit for institutional processes. The structure of an interorganizational field, according to diMaggio and Powell (1983), consists of both interconnectedness and structural equivalence. Organizations can be directly or indirectly connected, and the institutional processes take place through contacts between organizations ties. There is a potential relation to exchange theory and social embeddedness (see below) in the sense that personal contacts with those for whom one feels trust and reciprocity can reduce uncertainty and distrust associated with economic exchange. However, institutional theory mainly limits itself to imitation that is not related to goal attainment or efficiency. Structural equivalence means that organizations occupy equivalent positions in the network without having relationships. Imitation will not result from
interaction, but from organizations copying other organizations, which they perceive as peers or leaders.

**Empirical studies**

Most of the articles apply neo-institutional theory to the adoption of innovation, imitations in philanthropy and acquisitions, as well as change in institutional practices. Which institutional processes are at work, who imitates whom, and how does imitation take place? The interorganizational dimension is generally represented as interlocking boards of directors (representing ties), network centrality, and measures of structural equivalence.

In studies of the adoption of new practices there are some interesting results regarding the distinction between technical and institutional reasons for adoption. Both Tolbert and Zucker (1983) and Westphal et al. (1997) found that early adopters (in a voluntary setting) tended to be motivated by (internal) efficiency requirement, while later adopters were more strongly affected by institutional processes of legitimacy and status as the new practices became institutionalized. In the early stages of the institutionalization process, interorganizational ties helped managers identify those innovations or practices that best suited the needs of their organizations. In the later stages, social networks were conduits of information about the normative form of the new practice. Then, the network contributed to conformity through mimetic behavior. Westphal et al. (1997) concluded that network effects are not constant over time, contrary to what has often been assumed.

Others have found that deviant practices were initiated in the periphery or outside the network. Leblebici et al. (1991) studied how a new institutional practice to manage exchange relationships became dominant in the U.S. radio broadcasting industry. Peripheral players introduced new, more efficient, exchange methods. These spread throughout the network, but gained overall legitimacy as a result of being adopted by central players. Geletkanycz and Hambrick (1997) found that the adoption of deviant strategies was associated with extra-industry ties, while intra-industry ties were related to strategic conformity.

Galaskiewicz has himself and in cooperation with other sociologists studied philanthropy using agency theory (Atkinson and Galaskiewicz, 1988), institutional theory (Galaskiewicz and Wasserman, 1989), institutional and network theory (Galaskiewicz and Burt, 1991). Starting from his original Twin-City study he has successively applied new theoretical frameworks. Of special interest here is the question whether imitation takes place through personal communication between decision-makers (for example they sit on the same board of directors) or via symbolic communication based on structurally equivalent positions in the interorganizational network. Galaskiewicz and Wasserman (1989) found support for DiMaggio and Powell’s (1983) assumption that under conditions of uncertainty mimicry will be enhanced and lead to conformity in behavior. Decision-makers first imitated those organizations, which they trusted and second successful organizations. Interpersonal ties provided trust and reduction of uncertainty. In a subsequent study the explanatory strengths of ties and structural equivalence were compared (Galaskiewicz and Burt, 1991). It was found that structural equivalence proved strongest in predicting imitation. Thus, imitation did not primarily operate through interorganizational relationships but

rather through the structure of the network i.e. unconnected but structurally equivalent organizations.

As is evident from the above-mentioned examples, neo-institutional theory is often compared or combined with other theories in order to explain imitation. Haunschild (1993 and 1994) and Haunschild and Miner (1997) found that the more uncertainty, the more interorganizational relationships affected the acquisition behavior of companies. They imitated other companies with which they had interlocking boards but also investment banks who acted as advisers. Imitation was not only a result of institutional processes but also of organizational learning i.e. organizations learnt from other organizations, which had made successful acquisitions.

**Summing up the neo-institutional framework**

With the exception of Leblici et al. (1991), the institutional practices did not concern exchange relations, but the adoption of TQM and mimicry of acquisition and donation behavior. The neo-institutional framework, as it was used in these articles, does not pose an alternative to exchange, resource dependence, and transaction-cost theories for the interpretation of exchange relations and modes of governance of such relations. However, neo-institutional theory uses a network approach in order to explain how institutional practices diffuse among organizations. Here is a (latent) area of competition: What kind of practices are diffused, for example the use of joint ventures? Are the reasons institutional or technical, for example the management of interdependence?

**Embeddedness – a Social Structure Framework**

There are nine articles about interorganizational relationships published between 1990 and September 1998 and not discussed above under another heading. These articles comprise the core of new ideas, which triggered this paper. They deal not only with the exchange of goods and services, but also with more far-reaching cooperation. The term alliance is often used and is generally defined as a voluntary cooperative agreement that involves exchange sharing or codevelopment (Gulati, 1995). All of these nine articles are about business firms, most of which operate in fast growing and quickly changing industries. They cover biotech, fashion, computers, and general high-tech firms. Previous dominance by non-profit organizations has given way to entrepreneurial firms. Interorganizational cooperation becomes a phenomenon that is supposed to further the development of these firms.

Previous studies of non-profit organizations added an “economic” dimension by applying the exchange perspective to interorganizational relationships. The economic dimension is close at hand, when one analyzes the growth of and the relations between business firms. Therefore, it is the social dimension that is added. Economic actions are conceived of as embedded in a social structure that will affect the economic behavior and enrich the analysis of that behavior (cf. Granovetter, 1985). Embeddedness as a framework is not limited to improving the interpretation of how organizations behave, but also implies an efficiency argument. Socially oriented relationships can further economic efficiency up to a level, after which over-embedded relationships can have the opposite effect.

The embeddedness or social structure approach, "old" in itself, has gained a strong position in the research about interorganizational relationships during the past decade. This approach is often combined with or applied to a network perspective that is not only limited to the network as an arena for interorganizational activities. Rather, the network form is conceived of as a specific organizational form in its own right. Powell (1990) is an important reference concerning definitions and basic ideas. The network form is constituted by the relationships between a number of organizations. These relationships are "more" than price-based transactions regulated by formal contracts. They are "long-term and recurrent exchanges that create interdependencies that rest on the entangling of obligations, expectations, reputations, and mutual interests" (I arson, 1992). Powell (1990) argued that firms operating in fast growing industries, in which changes come quickly and might not follow a clear pattern, will be likely to form network organizations in order to adapt to these changes and to transfer knowledge that is difficult to specify. Thus, there are arguments that growth, adaptation, and learning can be enhanced through cooperation in a network form.

Coordination and transfer of knowledge in an embedded network will rely more on personal contacts than on formal contracts or other legal measures. This means an emphasis on ties between organizations as important conduits of information and coordination between partners. In neo-institutional theory, tie versus structural equivalence is a salient issue. It was reported above that there is empirical evidence that organizations (both business firms and non-profit organizations) mimic other organizations having similar network positions. In a study of alliance formation, structural equivalence could be related to the choice of partners.

Network structure is a relevant issue also in the social structure framework, but perhaps less related to structural equivalence than to other aspects of network structure such as centrality, connectivity, and density. There is no assumption that all organizations in a network are "equal". Rather, the framework provides for strategic action in terms of positioning in the network in order to improve the reward from exchanges. Powell (1990) discussed a type of network form that consists of multiple relationships around a hub organization.

Yet another aspect on network structure is represented by Burt's (1992) concept of "structural holes". Organizations, which occupy positions that are rich in connections with other organizations not themselves well connected, will attain a structural autonomy that gives them a strong position in the network. They can become "brokers" of information or receivers of opportunities for alliance formation. Structural autonomy means less of constraints arising from interdependencies and more of opportunities arising from the position that the organization holds. Hargadon and Sutton (1997) described how a product-design firm exploited its network position to acquire knowledge of technological solutions in many different industries, and combined these solutions into new products or simply offered them to other sectors where they were not known. The theory about structural holes adds to ideas about the role of ties as conduits of information and opportunities. But, it also represents an alternative in that such opportunities are related to the structural position and not primarily to existing ties taken out of their network context.

**Alliance as a form of governance**

In an embedded relationship, the control mechanisms governing the exchange between two or more organizations are based on trust, reciprocity norms, and reputation that are realized within the context of personal ties. The alternative of arm's length relations based on formal contracts, or the incorporation of transactions under one and the same hierarchy, are either conceived of as less efficient or just a less accurate account of the behavior of organizations (efficient or not). Three empirical studies addressed the efficiency issue (Larson, 1992; Lazerson, 1995; Uzzi, 1997). All of them dealt with so-called entrepreneurial firms.

Larson (1992) actually began as a study “to explore factors enabling small, successful, high-growth firms to sustain growth, adaptiveness, and innovation” (Larson, 1992:79). It is a non-quantitative study based on interviews with company representatives. Being asked what explained the rapid growth, company representatives had one answer in common: “certain critical external relationships with other companies contributed significantly to the entrepreneurial firm’s financial success, rapid growth, adaptiveness, and innovation” (Larson, 1992:79).

Larson selected seven dyadic relationships from networks in which each one of the entrepreneurial firms was defined as the hub of the respective network. The dyads were by the respondents regarded as critical in the sense described above. She explored the development of social control in these seven dyads. Prior personal relations and reputation were instrumental in reducing uncertainty and in creating expectations about performance in the initial stage. During the second phase the cooperation was build up. Then rules and procedures, trust, and reciprocity were developed. During the third phase integration and control were strengthened in order to further communication and integration of administrative procedures. The firms became increasingly interdependent during the third phase. Larson found that “relationships began to resemble well-coordinated, vertically integrated units with established systems, procedures and modes of communication” (Larson, 1992: 91).

The cases were selected on the basis that alliances were reported to improve competitiveness and growth. Larson explored how social control was built up and how it, in these cases, contributed to competitiveness. There were no direct comparisons with other alternatives. However, she found that not all firms engaged in alliances. Rather, these relationships represented at clear minority of all relationships (albeit the most important ones) also among those firms, which formed alliances. It was not enough to be interested in forming an alliance. The alliance makes demands on the ability of the partners to manage the relationships. The advantage of a cooperative arrangement is not limited to short-term efficiency. It might even mean that short-term economic reward is sacrificed for the development of longer-term competitiveness. Larson argued that resource-poor entrepreneurial organizations could build network organizations as an alternative to more traditional strategies (e.g., going it alone).

Uzzi (1997) analyzed how social structure affects processes, which determine the competitiveness of entrepreneurial firms. He conducted a field study of 23 firms in the fashion industry. His unit of analysis was the relationships between these firms and their suppliers and customers, but his interviews were limited to the 23 firms only and not their partners. It is a non-quantitative study. Uzzi argued that embedded ties are superior to the price system in a number of dimensions such as allocation of resources.

economies of time, complex adaptation and integration under conditions of short product cycles and rapidly changing customer preferences.

He identified three aspects of embedded relationships that created these advantages for the companies studied: (1) Trust reduced uncertainty about the partner and facilitated integration with the partner as well as the access to important resources. (2) Fine-grained information transfer concerning detailed and tacit information is difficult to communicate at arm’s length. (3) Joint-problem solving that consists of routines for negotiation and mutual adjustment made it possible for the partners to handle situations that might threaten their business relations. Mutual trust and norms of reciprocity led to an allocation of resources of a Pareto type. Allocation was not at the expense of any one of the partners. In quickly changing markets it is essential to launch new products, when there are windows of opportunities. Close relations that included the transfer of information and problem-solving arrangements facilitated timeliness and adaptation to these changes.

Lazerson (1995) investigated the Italian knitwear industry, which is characterized by putting out production to small and local firms (artisan microfirms). Just as in Uzzi’s study, women’s fashion wear dominates in this type of industry. Lazerson argued that contrary to Williamson’s (1985) statement that putting out induces transaction costs of a magnitude that gives centralized factories a clear competitive advantage, the Italian example showed prosperous and efficient actors. Their relationships were built on long-term relationships of a rather informal type characterized by trust and transparency. Favorable infrastructure such as good transportation could lead to transportation costs not higher than in a large factory. Rapid changes in fashion made adaptability a major means of competitiveness. The type of production created diseconomies of scale for large factories, while economies of scale could be achieved at the machine level.

Both Larson (1992) and Uzzi (1997) found that the cooperative relationships were in a clear minority in terms of number, but covered those relations, which were considered essential to success. Thus, the empirical results of these studies point at a specific role of embedded ties (or cooperative alliances). They are most advantageous in a certain type of “environment”, when they are applied to relations that are critical to competitiveness. Organizations have to economize on resources allocated to managing such relationships, because they “cost” more to manage than arm’s length relations.

In the literature about social embeddedness there is also the argument that relationships can become overembedded and have negative effects on economic outcome and adaptability to external change. Both Larson (1992) and Uzzi (1997) discussed these negative effects, but their empirical results only provided a few examples to substantiate the theoretical arguments.

Alliance for growth and learning

Although Larson (1992) and Uzzi (1997) discussed the effects that embedded ties have on growth and learning, their empirical studies neither used time series nor focussed specifically on the dynamic patterns of growth and learning. There are two other articles that empirically addressed the dynamic conditions for growth.
Powell et al. (1996) studied R&D and other alliances by biotech firms during a five-year period. It is a quantitative study using established statistical techniques. They argued that “when the knowledge base of an industry is both complex and expanding and the sources of expertise are widely dispersed, the locus of innovation will be found in networks of learning, rather than in individual firms” (Powell et al., 1996:116). Then, cooperation would not only be limited to compensating for lack of knowledge on a project to project basis, but an ongoing strategy for giving timely access to new knowledge. The successful firm would position itself in the network so as to get access to information and potential partners.

Powell et al (1996) interpreted their results in terms of “cycles of learning”. Existing alliances provided network experience that further improved the ability to manage relations with other firms and, hence, increased the propensity to form new alliances. More alliances, especially R&D, improved the centrality of the firms in their networks. Centrality and experience enhanced the potential for growth. Firms with alliances grew faster, were more often publicly traded, had more competence and experience than firms that did not involve themselves in cooperative ventures. The number of firms with alliances increased during the period and became a majority. However, the number of ties and partners per company grew only slightly. Instead, alliances became more elaborated and deepened (although it did not have to be one and the same alliance). Unlike what Larson (1992) suggested, the network organization is not only a means for “poor” firms but also a “general recipe” for success. Firms establish interdependencies in order to “learn” rather than to manage interdependencies through interorganizational modes of governance.

Brown and Eisenhardt (1997) is one article in a series of articles dealing with product development in six computer firms. It is not a study of alliances per se, but alliances were found to play an important role in the development of three of the six firms. The design of the study bears similarities to Larson (1992) and Uzzi (1997) in that it is a non-quantitative study based on interviews with a limited number of firms. Brown and Eisenhardt (1997) argued that the so-called punctuated equilibrium model of change, in which long periods of incremental change are interrupted by short periods of radical change, does not adequately reflect what happens in many industrial branches and specific companies. Rather, there are companies, which compete by changing continuously (Brown and Eisenhardt, 1997:1). These changes are neither radical nor incremental. They are somewhere in between these extremes. Brown and Eisenhardt (1997) also made references to other studies that report similar findings. Also Powell et al. (1996) described a development that was not punctuated but more of a continuous nature (albeit the study only covered a five-year period).

Brown and Eisenhardt (1997) compared successful and less successful firms in their endeavors with multi-product innovations. The successful firms worked with rather loose structures but with clear responsibilities and priorities in order to maintain flexibility without losing control of the projects. They had an experimental attitude in that they tried “low-cost probes into the future”, in which strategic alliances played an important role. Finally, they were able to develop procedures in order to link present projects with future ones. Therefore, the successful firms could synchronize their own development patterns with those of the industry.

The three successful companies were all involved in strategic alliances, while the three less successful ones had no alliances at all. The alliances were with companies with complementary technologies and customers in existing or new markets. The article does not provide much information about the alliances. They were not the main focus of the article. However, the alliances were both means to get access to complementary knowledge and to test the projects.

These two articles put alliances into a dynamic perspective i.e. how alliances contribute to the processes that determine successful development over time. It is not an analysis of conditions of (comparative static) equilibrium, which dominate in resource-dependence and transaction-cost theories. Brown and Eisentadt (1997-3) stated that theories, such as transaction-cost theory, which were developed in the seventies described organizations in slow-moving or powerful environments in which speed and timeliness were not as essential for success as today. Powell et al. (1996) argued that the "complex reality of rapidly developing fields, in which knowledge is both sophisticated and widely dispersed, transcends the simple calculation of a make-or-buy decision. Research breakthroughs demand a range of intellectual and scientific skills that far exceed the capabilities of any single organization". The role of interorganizational alliances in promoting growth and learning could be conceived of as enhancing the effectiveness of the organization. Thus, embedded ties could contribute to both the efficiency and the effectiveness of the organizations involved.

**Choice of partner**

There are three articles that explicitly addressed the issue of choice of partner for alliances. Two of them did not deal specifically with entrepreneurial firms in rapidly changing environments (Podolny, 1994; Gulati, 1995). Their results have a more general applicability with respect to how a social structure approach can explain the choice of partner. The third article concerned high-technology firms (Stuart, 1998).

All of the articles are quantitative studies.

Podolny (1994) found that market uncertainty increased the extent to which social structural position affected the choice of partner. With increasing uncertainty follows difficulties to optimize the choice of partners according to some objective criteria. Instead, the choice of partner will follow a satisfying search behavior. This is the same argument as was put forward in the articles that dealt with complex and rapidly changing industries. In Podolny's article uncertainty was related to the difference between investment grade and non-investment grade debt markets in the U.S.A. The latter category consists of junk bonds and similar papers, which are more risky and less regulated than the investment-grade market. Investment banks tended to reduce uncertainty by resorting to exclusivity when they selected exchange partners. First, they chose exchange partners with whom they had prior relationships. Secondly, they selected partners with structurally equivalent network positions (interpreted as similar status). These strategies could be mutually reinforcing. Partners selected on the basis of status will in the next phase represent existing ties. Repeated exchanges might lead to similar status. In his concluding remarks Podolny advocated for an integration of status into, what he called network research, and then particularly Burt's (1992) theory of structural holes.
Gulati (1995) compared strategic-interdependence theory (resource-dependence or exchange theory) and social structure theory in explaining the choice of alliance partners over a ten-year period by “prominent” firms in the U.S., Europe, and Japan. The first alternative would mean that interdependence guides the choice of partner, while the second one would say that the choice is directed to previous partners. Gulati found support for both hypotheses, but also that these forces operated in conjunction. If firms had common third-party ties, interdependent firms were more likely to form alliances than other firms. Interdependent firms were more likely to form alliances, if they had third-party ties than if they had not. Gulati (1995:643) concluded that his results provide a “bridge between network and resource dependence theorists studying interorganizational ties. Network theorists have focused on establishing the importance of social structure in guiding firm behavior but have paid less attention to the origin and perpetuation of interorganizational relations. Resource dependence theorists have looked at the critical contingencies guiding the creation of new ties but have assumed that those ties are created in a social vacuum.”

Stuart (1998) argued that not only the propensity to form alliances, but also the choice of partner is largely determined by the position in the network. He acknowledged results of previous studies (among them Podolny, 1994 and Gulati, 1995) that ties are related to the choice of partners, but argued that a focus on network position would complement and extend previous results. The two dimensions of network position used were (1) crowding, which means that many other firms were concentrated in the same technological area, and (2) prestige, which was reflected in the history of important patents of a firm. Crowding is a measure of structural equivalence. The results showed that structurally equivalent firms were more likely than other firms to become partners. The probability increased, if at least one of the firms enjoyed high prestige. Prestige reduced the strength of crowding in explaining which firms became partners. Firms with high prestige were more likely to find partners with whom they were not structurally equivalent. There were few examples of alliances between two low-prestige firms. Stuart’s results confirmed previous arguments that in high-technology industries alliances are not a second best alternative. Successful firms cooperate with those that they find most suitable, while less successful firms try to join with the successful ones.

These three articles show that the social structure affects the choice of partner, but that explanations are rather complex. Different frameworks could offer complementary instead of competing explanations. Social structure arguments add a dimension to resource-dependence theory. Furthermore, it is not a question of ties or structural equivalence within the social structural framework, but both may operate simultaneously, albeit one or the other may be leading.

Comparison with the other frameworks

All of the frameworks show strong influences from behavioral theory of decision making. Decision-makers are assumed to be boundedly rational. They satisfy rather than maximize. The environment is a potential source of uncertainty, which decision-makers try to reduce. These aspects were introduced into the early extension of the exchange framework. They are some of the core assumptions in the resource-dependence and the transaction-cost frameworks. Also in neo-institutional studies, mimicry tends to be a response to uncertainty. When decision-makers are uncertain about which route to choose, be it donations or acquisition, they tend to imitate other firms. In the social-
structure framework, the notion that exchange is embedded in a social relationship is strongly related to how decision-makers manage uncertainty. In addition, most of the articles covered in this paper are about a specific type of context that could really cause uncertainty. However, the reduction of uncertainty is only one dimension of behavior in this group of articles. By focusing on entrepreneurial firms and innovation in rapidly growing industries, these articles bring into the picture the exploitation of opportunities. Here, the behavioral assumptions need not be limited to how external relationships are stabilized and uncertainty is avoided. Also Burt’s (1992) theory about the role of structural holes highlights opportunities.

The early exchange theory applied the notion of exchange to relationships between non-profit organizations. Exchange implies some kind of reward that is related to the investment made in the exchange. Empirical studies dealt with various aspects of interaction between exchange partners, for example determinants of successful coordination. This is similar to an analysis of the governance of exchange relations between business organizations. Studies of non-profit organizations showed that voluntary relationships based on mutual benefits and rich in communication were associated with high frequency of interaction and successful coordination. These results are very similar to those reported in articles about embedded ties among profit organizations. Of course, economic interaction is a natural phenomenon for business firms. Therefore, the embeddedness becomes a social instead of an economic one. One can see a direct line between the early exchange framework and the social structure framework, albeit the latter one being the result of further developments.

The differences between social structure and resource-dependence theories are larger. Power is hardly at all discussed in articles having a social-structure orientation. These frameworks evolved during quite different periods and were affected by the contexts in which they developed. Resource-dependence theory gained acceptance during a period when limitations to growth dominated the agenda, while the nineties have seen new and rapidly growing industries. Maybe, it is difficult to exercise power in complex and rapidly changing situations. The structure of dependence and power becomes unclear and the chances to forcibly maintain status quo are reduced. Furthermore, in expanding industries, one company’s gain does not have to be at another company’s expense. However, not all articles were about growth industries. Lazerson (1995) and Uzzi (1997) dealt with the clothing industry (at least these articles did not convey an impression of rapid growth). Power was not an issue in these articles. Instead, the importance of trust and mutual advantage was stressed. Gulati (1995) showed that interdependence and embeddedness could be integrated in order to explain the choice of partner. He did not discuss power, but merely an extended exchange framework according to which dependence can be managed in cooperation with other firms i.e. the partners may have mutual interests. Interdependence is not turned into a power game.

Burt’s (1992) theory about structural holes takes earlier network analysis further in two related aspects. First, the role of third parties is related to opportunities provided by structural holes. Secondly, structural holes will generate processes that affect the structure of the network. If we can identify structural holes in a network, we may be able to draw conclusions about the type of processes that will be generated. Others have found strong influence from resource-dependence theory (e.g. Krackhardt, 1995). However, Salancik (1995:346) criticized the structural-hole theory for emphasizing the individual actor and therefore miss much “about the other major concern of resource
dependence theory: the collective nature of organizational action and the role of networks in maintaining stable collective structures by enabling coordination among interdependent parties”.

One difference between transaction-cost theory and proponents of the embeddedness perspective relates to opportunism versus trust and reciprocity. Larson (1992), Lazerson (1995), and Uzzi (1997) argued that trust and reciprocity are efficient mechanisms of social control that make exchange arrangements viable alternatives to vertical integration. Larson’s respondents made comparisons with “theoretical” alternatives such as arm’s-length exchanges based on price and vertical integration (Larson, 1992:82). Podolny (1994) showed that status could serve as a means to economize on transaction costs in situations that are characterized by high uncertainty. He criticized the transaction-cost framework for ignoring “the significance of status, given that the central focus of this approach is how organizations economize on transactions” (Podolny, 1994:480). The transaction-cost analysis was also criticized for being limited to the dyad and not taking the whole network into consideration.

Social structure theorists have less in common with Williamson’s than with Ouchi’s version of the transaction-cost framework, which deals with such dimensions as culture, values and beliefs as well as their role in creating efficient transactions. While Ouchi had the internal organization in mind, social structure theorists applied similar arguments to network organizations and exchange relations. Boisot and Child (1996) built on Ouchi’s concept of a clan organization when they described a network form of capitalism in China. This interorganizational form resembles the type of networks that Lazerson (1995) and Uzzi (1997) studied i.e. relationships between firms in special segments of the clothing industry in Italy and the U.S.A. The so-called networks of capitalism were characterized by strong personal ties and by mutually advantageous relationships.

Neo-institutional theorists would treat the formation of alliances as an effect of imitation. Organizations would be assumed to imitate structurally equivalent organizations and organizations with which they have or share ties. The establishment of ties may itself be a result of imitation. However, there are no articles in ASQ that treat alliances as an institutional practice. It would be interesting to find out whether institutional imitation of successful practices (such as alliances) plays an important role compared to motives advanced by other frameworks. The independent variables—ties and structural position—are the same in studies of the choice of partner and who is imitated.

Finally, to summarize the comparisons concerning efficiency and effectiveness with other frameworks, it can be argued that the social structure framework addresses these issues more comprehensively than the other frameworks. The analysis of interorganizational relationships is not only limited to matters of effectiveness but also deals with efficiency. Social structure theorists claim that embedded relationships can be superior to arm’s-length relationships in both of these aspects. Nevertheless, since embedded ties are costly to manage, firms must economize on them. Alliances are, consequently, allocated to the most important relationships between a firm and its environment. The efficiency of embedded ties relies heavily on the level of trust between the partners. Here is a difference compared to the transaction-cost framework in which opportunism is supposed to have a stronger effect than trust on the costs of
transactions. Thus, the social structure framework predicts lesser impetus toward internalization of transactions than the transaction-cost framework. In resource-dependence theory, effectiveness has generally been interpreted in terms of the organization's bargaining position and its ability to make use of this position in order to secure resources critical for its survival. Social structure framework deals with effectiveness in a more dynamic context. It is related to the creation of new products and services and also to the ability of learning. Exchange relationships and alliances have the potential of enhancing this kind of effectiveness.

Concluding Remarks

There is a general trend toward combinations of frameworks. This can take the form of testing the explanatory power of competing frameworks, but also of integrating frameworks in order to generate theories that are more elaborate. It was mentioned above that the frameworks have basic assumptions or building blocks in common (e.g. from behavioral theory of decision making).

Articles that are classified under the label of a social structure framework are the result of a combination of three important factors. The first is rich literature about social embeddedness that could be applied to business firms. The second is that there are considerable developments in network theory. While the final factor is that we are experiencing an era of rapid technological development that seems to accelerate and generate new industries dominated by entrepreneurial firms. These three factors taken together have resulted in new and very exciting research. Perhaps the most notable aspect of this is the move away from equilibrium toward dynamic analysis. Although rapid technological development attracts interest, this was not the only context in which timeliness and adaptability were found essential for competitiveness. The fashion industry also poses similar requirements that can be achieved through embedded relationships. In each one of these contexts, an additional means of competitiveness different from cost-based competition is also required - that is a specific type of competence. In the fashion industry, design plays this role. A low price might even be a disadvantage. In high-tech industries, it is not so much the cost structure of the supplier that matters, but the ability to supply advanced products and services which, for example, leads to favorable cost effects at the buyer.

It is possible that some of the results are specific to entrepreneurial firms in rapidly changing and growing industries. If in the future growth slows down, environments stabilize, and firms become less entrepreneurial there might be a revival for resource-dependence and transaction-cost arguments. Researchers might become more interested in the analysis of conditions for equilibrium than dynamic growth.

This author's own experience as a minor industrialist involved both in the automotive and IT-industries might merit some personal reflections. Sometimes, the impression from the embeddedness-oriented articles is that business is done in a very friendly atmosphere and that dishonesty and power games are totally absent. This may be true in many cases, but even in the closest of cooperation there are inducements to selfish action. Maybe, the early exchange theorists were right in arguing that cooperation and conflict exist side by side in a dialectic relationship (e.g. Aiken and Hage, 1968: Zeits.

Big customers do use power in order to tilt the distribution of rewards in their own direction. Entrepreneurs do use their competence in alliances with less competent partners in order to achieve the same result. But, why did not the empirical studies convey a similar picture? Possibly because the researchers only made interviews with one partner and they did not follow the development of the alliances in real time as observers. The respondents compared important alliances, in which trust and reciprocity no doubt played a salient role, with arm’s-length relationships that involved more of haggling and divergent opinions.

This paper is limited to articles published in ASQ. This fact has consequences for both the choice of frameworks and the particular examples within each framework. In the next step of the project, other journals will be included. It is quite possible that topics and approaches will differ as our search for development patterns is expanded. Furthermore, the articles published in ASQ only represent a portion of published empirical research based on those frameworks that are covered in this paper. Those authors, who are considered prominent in here, also publish elsewhere. It is possible that further work in the project should explore what clusters of researchers emerge if references, as well as those names that appear in the “thank you” footnotes in the beginning of the articles, are cross-classified.

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