

Towards an Understanding of Different Types of Business Networks

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Abstract:

As large companies continue seeking flexibility outside of their own hierarchies, they are increasingly relying on relations that go far beyond standard arms-length relations with suppliers. At the same time, small and medium-sized enterprises are increasingly relying on close relations with other firms in their industry as a means for improving their operations and sales. Regretfully, the term *network* has been used to describe both of these types of relations as well as simple social relations that tend to cause people to work closely with a limited group of people over time. Thus, in this article we seek to parse out differences between the uses of the word *network* and establish new categories based on it. Building on the literature in transaction cost economics we also seek to demonstrate how each type of network can help firms deal with uncertainty, asset specificity, and frequency, the three categories usually used to determine the boundaries of firms. We pay particular attention to the benefits of one particular type of network for developing countries like Argentina supporting our arguments with concrete examples of such networks in that country.

Key words: Networks, markets, hierarchies, outsourcing, industrial districts, clusters, collaboration, economic development, supply-chain management, strategy and social relations, SMEs

Introduction

The era of the dinosaur is over. The large, isolated multidivisional corporation thrived in a climate in which consumers demanded an increasing volume of standardized goods. Under these circumstances economies of scale and scope were internalized within a company's own hierarchy. Until the beginning of the 1980s, the sheer size of firms seemed to enable them to disregard pressure from the market as well as their smaller competitors (Heilbroner 1989). Now the increasing demand of customers for a wide variety of heterogeneous goods has changed the landscape in which corporations operate requiring them to adapt quickly to changes in the marketplace. A dinosaur may indeed be big and strong but one thing it is not is agile. Consequently, some scholars have cast into doubt the very ability of such traditional creatures to survive under these new conditions (Best 1990; Lazonick 1991; Dörre 1997; Kotthoff 1997; Reich 1991; Hollingsworth 1997). Little attention has been drawn to the importance of such changes for small and medium-sized enterprises (SMEs). Even less attention has been paid to the emergence of networks among relatively similar firms that enable them to benefit from specializing rather than growing. Such specialization would seem to be exactly what is demanded by the recent shifts in markets outlined above.

The nature of competition seems to be pushing firms not only to reduce the activities they perform internally but also to deepen their relations with suppliers and customers. Even companies competing in relatively homogeneous markets need to change their organizational structure and their relations with suppliers. Hax and Wilde (2001) believe that all companies will have to be able to provide their customers an increasing variety of products. Even niches for high quality goods do not offer refuge for firms. A high degree of quality is simply expected for almost every type of product

today (Lindvall 1999; Streeck 1997). Thus, companies need to explore different organizational possibilities for achieving the type of flexibility demanded by modern markets. Large companies as well as SMEs have to rethink strategies which can achieve high levels of profitability without growth within the boundaries of the firm. The nature of markets may have indeed shifted toward a greater emphasis on heterogeneous goods. However, we should not simply assume that firms have automatically developed the best organizational structures for addressing this change. Although economies of scale would seem to be less important in today's market, we should not conclude that economies of scope are any less important than they were when the multidivisional firm emerged. The focus of large firms on core competencies can be seen as nothing more than a deepening of economies of scope. We contend that networks enable large and small companies alike to realize economies of scope within a limited group of other firms rather than within the boundaries of their own hierarchies.

The goal of this paper is to analyze what organizational structures can actually serve companies in this new environment, paying particular attention to SMEs in emerging markets. This paper contends that changes in the nature of competition for the vast majority of products have led some firms to change the manner in which they organize their activities in a way that is not captured by the traditional focus on hierarchies and markets.¹ It suggests that scholars need to carefully examine how networks offer an alternative means which firms can use to organize their activities. At the same time, we contend that the multiple uses of the term network do not enable scholars to fully understand what alternatives networks can really offer firms. Confusion arises because this term is used to describe a lot of different organizational

¹ Changes in the nature of competition do not automatically lead firms to adopt the proper organizational strategies to meet these challenges. Such tautological conceptions of change merely serve to obscure the complex relationship between perceptions and how actors adapt to change. Some actors may realize that

solutions to the problem outlined above. Consequently, we develop three different categories based on different uses of this term and seek to demonstrate how they offer different types of solutions to this problem.

Too often the same word is used to connote a multiple of meanings. Centuries ago in the often overlooked first chapters in Hobbes's *Leviathan* (Tuck 1999) he cautioned readers to clarify the definition of the terms they use before entering into any discussion. The failure to parse out differences in the manner in which a word is used leaves people talking past each other or misunderstanding exactly what others are discussing. Hammer and Champy (1993) claim that there are many different definitions of reengineering floating through ivory towers and office hallways. Womack, Jones and Roos (1990) claim that a similar fate has befallen the term lean production. Pfeffer (1998) contends that the term teamwork has become trite because of the different practices it is used to describe. Friel (2005) argues that the word team is used to describe a wide variety of activities ranging from simple cooperation between managers to empowered workers taking on tasks previously performed by managers. The same would seem to be true for the terms such as leadership and coaching.

We contend that a similar confusion is occurring with the term network. The manner in which scholars understand the term network has been clouded by people from different disciplines using this term to describe a wide variety of activities. Sometimes this word is used to describe close relations between suppliers and buyer, while it is used by others to describe a new type of organizational structure which integrates legally separate companies into a closed system which in some ways resembles the old multi-divisional structure albeit without common ownership and control. Sociologists studying organizations and networks generally focus on how

markets have changed but implement solutions which were designed under other conditions. In the end strategy is shaped by perceptions.

social relations smooth operations between different actors often helping companies overcome organizational rigidities. These three general ways of using the term network represent the new categories that we seek to develop in this paper. It may turn out that different types of networks are better for different types of business environments. This topic will be addressed in the latter part of this article. In the end, we hope that these new categories will enable scholars from different fields and different orientations to have more fruitful conversations with each other.

The first part of this article will document the changes occurring in markets and outline how firms are responding to them. The second part will provide an overview of how the terms markets and hierarchies have been used to describe, what are usually considered to be, the only alternatives available to firms. In this section particular attention is paid to the important issues of uncertainty, asset specificity and frequency, as outlined by Williamson (1985; 1991). The final part of this article will develop a new framework for understanding networks by parsing out differences in our understandings this term, using cases from Argentina to discuss how the third type of network operates in an emerging market. The conclusion seeks to set out how one of these conceptions of networks can be used as a framework to conduct empirical research and speculates on the potential relationship between this type of network and development within emerging markets.

How Businesses are Changing

The growing importance of heterogeneous goods lead Piore and Sabel (1984) to see a new divide opening up into which the dinosaurs would fall. These scholars predicted that traditional firms were simply not flexible enough to meet this relatively new type of demand. Countering arguments that flexible specialization was only suited to small firms operating in “clusters”, Piore (1990) argued that large-scale firms could

also adapt the methods of flexible specialization. In the 1990s U.S. firms began to adjust to their changing climate by transforming themselves into smaller entities through the process of downsizing, outsourcing and a focus on core competencies.² Hierarchies were flattened to speed up the flow of information through organizations. These changes were an attempt to help companies decrease the time it takes them to respond to changes in the marketplace (Hammer/Champy 1993).

The very survival of inflexible, overly bureaucratic firms, the hallmark of the 20th century until that point, was cast in doubt (Lazonick 1991; Reich 1991).³ Such bureaucratic structures were suited for a time when markets and consumer tastes were stable and technological change was slow (Hollingsworth 1997). Flexibility became the mantra and companies sought to pursue it through flatter hierarchies and an increasing reliance on outside suppliers (Lindvall 1999; Lazonick 1991; Hammer and Champy 1993). Chandler's (1977) vision of economies of scale and scope leading to the predominance of large multidivisional companies may have only been valid for a particular time in history. The goals of multidivisional companies have shifted from integrating activities to externalizing them and focusing on their core⁴ In a similar manner we argue that SMEs working in our third type of network are focusing on their own specialized core competency and relying on their network to help them buy raw materials, export and realize economies of scope.

Companies have sought to improve efficiency simply by trimming fat and shedding workers which do not add any value to their products. The degree to which

² To some extent the landscape began to change in the 1980s when large dinosaurs were being bought out through hostile takeovers which often ended up in the dismantling of these large enterprises.

³ However, Freeland (2001) has argued that even the archetypal multidivisional firm, General Motors, was never as strictly bureaucratic as their organizational charts would have us believe.

⁴ The most extreme example of vertical integration was Kodak, which during the height of the bureaucratic multidivisional era even produced its own screws (Osterman et. al. 2001). It is also interesting to note an important counter example, namely General Electric. This company has contracted out many of its manufacturing activities while actually diversifying into television and finance, activities which are clearly beyond their core.

downsizing in the United States in the 1990s was actually driven by this motivation or by the desire to outsource activities which they used to perform in-house remains unclear.⁵ These activities did not, however, necessarily entail a transformation in the actual organizational structure of firms (Friel 2003; Faust et. al.1994). In many regards these companies were simply shrunken versions of their former selves. Some firms did transform their organizational structure, albeit slightly, by implementing what Faust et. al. (1994) have termed strategic decentralization, namely the creation of profit centers focused on a limited set of products. Others pursue what Faust et. al. have termed operational decentralization namely, reversing the division of labor and empowering workers to take on tasks previously performed by their direct supervisors.⁶

Few firms, in the United States in particular, seem willing to pursue radical strategies such as operational decentralization (Kochan/Piore 1995). Many automobile producers in the United States have run into substantive difficulties implementing all the components of lean production (Kochan et. al 1997). Instead of pursuing more radical strategies, most companies focus on reducing their direct labor costs by externalizing activities. Some firms have stopped manufacturing components altogether thereby increasing the burden on supply chain managers and transforming themselves mere assemblers of products. Other firms have transformed into a new type of creature that simply develops and markets products leaving production to contract manufacturers.⁷

⁵ David Gordon (1996) claims that the downsizing movement in the United States did not really trim the fat of corporations but rather lead to an actual increase in levels of management and an overburdening of employees who had to take on more work.

⁶ Some companies actually combine both of these strategies as both are targeted at improving the responsiveness of firms to changes in their markets.

⁷ Nike and General Electric are the best example of such firms. Although it is often assumed that firms are increasingly relying on contract manufacturers and outsourcing arrangements because they are more efficient, often such decisions make economic sense simply because both of these types of suppliers simply have lower labor costs.

This focus on efficiency and labor costs fits well into the standard account of markets and hierarchies. However, it fails to help us understand how the actual coordination of activities may have changed. Relations between firms and their suppliers, including contract manufactures, often involve more than textbook arms-length contracts. Some firms even involve their suppliers in development of new products or improvements on existing ones. The close relations between these two groups of firms often cause firms to be reluctant to search for new suppliers. Put simply, relations between companies are often not shaped by strict market concerns. At the same time, suppliers are not under the hierarchical control of the firms for which they are working. To what extent can our traditional conceptions of markets and hierarchies serve scholars when firms are increasingly turning to such “network” alternatives?

These developments have lead many scholars to begin focusing on networks as an alternative mechanism for coordinating activities. To an extent networks lie between markets and hierarchies. Relations between firms involve more than price and quality concerns yet they do not involve suppliers becoming integrated into the hierarchy of their client. The potential for reducing transaction costs through the use of networks rather than markets or hierarchies clearly is one incentive for firms to rely on such relations. However, we should remember such reductions in transaction costs are based on improvements in trust that enable firms to lessen the degree to which they have to police and monitor their suppliers. In this sense, the vast literature in sociology on the importance of both “weak and strong ties” can help us to understand the logic of networks. Yet, this focus is not sufficient to explain how coordination actually occurs in such networks. The rest of this article turns to developing a new framework for

understanding networks. First, however, we have to examine how the literature has attempted to address the issues raised up to this point.

Markets and Hierarchies

Since the seminal work of Coase (1937) and those that followed his footsteps, most notably Williamson, the academic dialogue concerning alternative mechanisms for allocating resources in accordance with transaction costs has centered fundamentally around two possibilities, namely markets and hierarchies. In his most famous work, Williamson (1985) lays out a framework for understanding how different forms of governance emerge. Essentially transaction costs will determine whether an activity can be done more efficiently within a hierarchy or within the market. From the literature it appears not only that actors are always rational but also that their choices are not shaped by the nature of their particular environment. The general thrust of research into transaction costs has gone in this direction despite the fact that Coase (1998) has emphasized the importance of understanding how factors such as educational and legal systems impact transaction costs within a society. Instead of pursuing this line of research attention has been placed on how factors internal to a firm's operation, such as uncertainty, asset specificity, and frequency affect firm behavior. For activities with high levels of uncertainty, asset specificity and frequency it is preferable for firms to conduct them in-house while activities that have low scores on these activities are better done through the market.

It is important to point out that this way of approaching the topic suggests that these two means for organizing activities are mutually exclusive. One of the potential problems with this approach is the fact that it limits the choices of firms to one of these two governance forms. Apparently firms can only make a choice between doing something in-house or on the open market. Coase's (1937) definition of the firm seems

to rule out other mechanisms for coordinating activities. For him general contracts occur inside a hierarchy and specific contract occur through the market mechanism. The firm itself comes into existence when an entrepreneur, instead of the market, directs the allocation of resources. Each form of governance is able to efficiently carry out those activities which are done inefficiently in the other form of governance. One of the problems with such binary categories is the possibility that firms chose a form of governance by default rather than for reasons inherent to the particular system of organizing activities. Such categories leave no room for other options such as networks which involve forms of coordination that are betwixt and between markets and hierarchies. Below we discuss these uncertainty, asset frequency, and asset specificity, and frequency in greater detail in each of these forms of governance. In the following section we pick up on this topic and discuss how these characteristics are handled by networks.

Markets

Neoclassical economics provides the foundation for the main tenants and lines of research on markets. The market is the framework through which economic coordination occurs. According to this paradigm, any activity that does not occur within the market is by default less efficient for an economy as well as for society. The price mechanism ensures that goods and services will be traded at a price that is optimal for society. This system only works for “social efficiency” when there is a perfect market, namely a large number of buyers and sellers, perfect information, no uncertainty, perfect substitution of goods from different sellers, the lack of externalities. It is important to note in this context that if these conditions do not exist, the market

may not be the most efficient mechanism for ensuring the most efficient distribution of goods in society. State, politics and history just get in the way.

Arms-length relations between economic actors, whether it is between buyers and sellers, firms and their suppliers, or even between firms and governments, are optimal for the operation of the price mechanism because it ensures social criteria do not interfere with the operation of the market. The market works because the criteria for selecting partners, products, services, etc. are objective. Therefore, any subjective element, such as social relations, undermines the operation of the market. In this context we can understand why Adam Smith believes that any time economic agents meet to talk about their common conditions and problems they will end up conspiring to limit the free operation of the market. However, Granovetter (1985) points out that business activities can not be abstracted from their social context. The theory of pure markets may be correct in the abstract but it is far from the manner in which businesses actually operate.

Nevertheless, the theory of the pure market as the superior mechanism for organizing economic activities has gained new strength in the past 25 years with the spread of the idea of outsourcing. What remains to be proven is the extent to which companies using providers to perform activities previously done in house really rely on the market mechanism as a means for coordination. Quite often in outsourcing agreements companies develop long-term contracts which effectively bypass the continual pressure of the price mechanism for reducing costs (Byrne 1996). Transaction cost theory may help to explain why some firms rely on such contracts. It highlights the costs associated with using the market. One example of how costly the dependency on the market can actually be is the fact that some firms have created a new position, the Chief Resource Officer, to manage outsourcing agreements, or in other words their

market relations (Byrne 1996). According to the theory of pure markets outlined above, the market is efficient because the coordination that occurs within the market is automatic and therefore without cost. As Coase (1937) demonstrates, there is always a cost to using the market.⁸

These observations should not lead us to believe that the free market never exists. Transaction cost theory can help us understand the context in which the market may be the best mechanism for coordinating activities. Williamson (1985) points out that markets work well when there is a low degree of uncertainty, no asset specificity required from a particular supplier for a particular buyer, and finally a low frequency of transactions. The problem is that neo-classical market theory assumes that these conditions exist for all transactions. The open question is to what extent any transaction for a particular intermediate good or service actually meets these conditions. This is a question for research that can not be answered from the perspective of a particular paradigm.

Hierarchies

According to transaction cost theory firms exist because transaction costs for certain sets of activities are lower within hierarchy than on the open market. For Williamson (1985; 1981a) firms perform those activities for which there is high uncertainty, high asset specificity and a high frequency of transactions.

Under conditions of high uncertainty you can not rely on markets because there is not enough information to ensure that a firm can obtain the quantity of a particular good at the best price. For example Arcor, a large company in Argentina producing candies and crackers for domestic as well as international markets, produces its own

⁸ What remains unclear is who actually pays this cost, firms, their suppliers, or society at large. Is it possible that governments are actually subsidizing firms by creating institutions which reduce transaction

sugar, corn, cardboard boxes, energy, tomatoes, etc. Another company in Argentina Mauro Sergio is producing everything for its sweaters, including raising the sheep, producing zippers, and even their own shops for selling their sweaters (Aizen, December , 2004b) These companies are simply unwilling to risk interrupting the flow of their production. Although one could argue that such uncertainty only exists in countries like Argentina, Chandler (1977) has argued that uncertainty is one of the main reasons why large integrated firms would come to dominate the future capitalist landscape.

Hierarchies are better at coordinating activities that require high asset specificity paradoxically because the market proves incapable at providing goods or services tailored to a particular organization. The production of some goods and services sometimes requires inputs that are specific to a particular product. Consequently, there is no real market for such inputs, meaning there are few suppliers and no standardized solution. In this context, it is important to point out that markets are good at providing firms with standardized inputs. Therefore Williamson (1991) argues that firms will produce those inputs with high asset specificity in-house.

Hierarchies are also more efficient at producing goods or services that require a high frequency of transaction. Simply put, the transaction cost of policing and monitoring such contracts are higher in the market than in a hierarchy if the particular transaction can be adequately standardized. Markets are ineffective at undertaking such activities, according to classical theory, because it is assumed that companies will easily change their suppliers with fluctuations in prices. Arms-length relations in the end can lead to higher transaction costs under such conditions. The question not addressed by the literature on markets and hierarchies is the possibility that standardization of such transactions can occur between firms in networks rather than within any individual firm.

The standardization of such transactions within a firm is possible because firms have the power of fiat. According to Williamson (1991) fiat within a firm enables it to act unilaterally and avoid the costs of constantly negotiating with suppliers. The speed and ease at which firms can act is increased when the power to make decisions resides solely in a singular institution. Although a firm incurs bureaucratic costs resulting from the internalization of such activities, these costs may be more than offset by savings in transaction costs. One of the problems with this approach is the underlying assumption that power is actually concentrated within higher levels of management. Traditional literature in organizational behavior has clearly demonstrated that no actor possesses unilateral power (Mintzberg and Quinn 1993). Negotiations occur not only in the market but also within hierarchies. As Marsden (1999) has argued firms can never impose their will over employees. Any contract between an employee and a company involves some degree of negotiation. If this is true for hierarchies, then we can not assume that they are a natural response to conditions of uncertainty, asset specificity and frequency of transactions. Networks may indeed offer similar negotiated responses to such challenges.

For Chandler (1977) hierarchies were more efficient than markets not only because of the gains to be realized through vertical integration but also the benefits arising from horizontal cooperation within an organization. Although Williamson (1985; 1991) discusses this type of benefit, he does not really integrate it into his analysis of hierarchies. Chandler (1977), on the other hand, sees it as an essential reason for integrating activities in a firm. Horizontal integration, better known as economies of scope, enables different businesses within the same company to share resources. The most classic example is the ability for divisions within a multidivisional firm to lend money to each other without any real cost. Clearly multidivisional firms

have advantages over unitary ones in this respect. The question that arises out of this analysis in this context is the possibility that independent firms within a network could actually perform similar activities. Better said, they can achieve economies of scope without integration. One example of this type of integration is the development of leasing and financing in the automobile industry as well as within large companies such as General Electric.

In this sense, hierarchies would appear to be dissolving, being replaced by alternative mechanisms for coordinating activities which nonetheless are not performed on the open market. The bureaucratic contained firm standardizing practices only for itself would indeed seem to be a relic of history. General Electric, for example, has developed an organization form known as “the organization without boundaries”. The choice is no longer make or buy but rather how to coordinate activities internally without boundaries between divisions or business units and without boundaries between General Electric and other companies (De Silva 2002). Therefore we have to question the utility of preserving standard categories of markets and hierarchies given the fact that they can no longer explain how companies are organizing many of their activities as companies are continually searching for a form of coordination that is betwixt and between internal control and external adaptability.

Hierarchies would seem to be a residual category. Those activities which have high transaction costs on the market naturally pass to hierarchies. The problem with this binary perspective is that it leaves out alternative mechanisms for explaining how activities can be coordinated. Although Williamson addresses the potential role of networks in coordinating economic activities, he treats such mechanisms of coordination as anomalies rather than a field for investigation. As we pointed out above many firms are relying on long-term contracts with some suppliers. How can this be

explained from the traditional transaction-cost perspective? One of the goals of this paper is to highlight how networks actually constitute a third choice faced by economic actors attempting to coordinate activities.

Networks

The new challenges for firms that we outlined in the first section have lead many scholars to begin using the word network to describe actions and transactions that are not well described by the traditional binary categories of markets and hierarchies. In this sense, the term network has replaced hierarchy as the most prominent residual category. This term has gained so much resiliency that it is even being used by some scholars to describe activities within a hierarchy. At the same time, this term has been used even to describe arms-length transactional relations. If this trend continues, we run the risk of generalizing it into irrelevance. Hence, in this section we attempt to parse out differences in how this term is used as a means for developing three ideal types of networks. Although there are differences between types of networks, each one of them addresses the issues of uncertainty, asset specificity and frequency of transactions, albeit in different ways. First, we will turn to discussing how networks in general address these issues. In the conclusion of this article we will address how one of these ideal types performs functions similar to those found in hierarchies.

When companies face a high degree of uncertainty in their supply chain, one of the most common responses is to share risks through networks with their suppliers instead of internalizing activities in their own hierarchy. The advantage of networks is that they combine some advantages from both hierarchies and markets. To avoid the dangers associated with the fixed costs of internalizing activities while also avoiding the

dangers of confronting an uncertain environment alone with suppliers who may behave opportunistically firms prefer some type of network as an alternative.

The same basic principle applies with asset specificity. If a firm does not own a specialized asset but rather works closely with a firm that does have it, it can avoid the costs of internalizing the activity. At the same time, it has similar advantages as if it were operating on the market as it can change “its” assets without incurring the associated costs, whether these costs are transaction costs on the market or sunk costs in house.

The advantages of networks in terms of frequency are similar to the advantages found in hierarchies as in networks firms can standardize transactions with their partners without the costs of doing things themselves. Of course, one of the problems with markets in this context is the fact that no standardization can occur. If a company risks outsourcing a standardized process to an arms-length supplier they will have high transaction costs associated with policing and monitoring the contract for opportunism. In the pure market model without standardization we are left to renegotiate every transaction without the benefit of standardizing.

In the table 1 below it becomes clear that hierarchies and networks address similar problems albeit in a different manner. It shows that both of these forms of governance are able to address circumstances in which firms face high uncertainty, high asset specificity and a high degree of frequency. The critical difference between networks and hierarchies is that fiat is impossible in networks. Coordination has to be negotiated not dictated. All three types of networks outlined below address both of these issues. It should be pointed out that we consider all three of these categories to be ideal types. Hence, reality lies somewhere in between these general categories.

Table 1

	Uncertainty	Asset specificity	Frequency
Hierarchies	High	High	High
Networks	High	High	High
Markets	Low	Low	Low

Now we need to turn to the three ways in which firms can address these three problems without modeling themselves on dinosaurs. A **Broker coordinated network** is the first type of network in our typology. We use the term broker coordination to describe this type of network to highlight the dominance of one broker in coordinating the production and sale of a good⁹. This type of network is lead, or brokered, by a large firm that usually has substantial control over its key suppliers. It is not a market, however, because firms chose to work closely with a limited number of suppliers instead of relying on the open market. On one extreme in this category there are companies that simply contract out all activities except for sales, marketing and R&D. On the other extreme there are companies that work closely with their suppliers in long-term relations. In the end, these two types are similar because there is one company that is coordinating activities.

This type of network is usually discussed in business management literature. Scholars studying this type of network recognize that relations between firms and suppliers in the 21st century go far beyond market relations. This approach highlights how suppliers are often highly integrated in production processes as well as in research and development. In many ways suppliers are integrated into the hierarchies of their clients. Nevertheless, suppliers remain independent companies that have at least the

⁹ “Captive Value Chains” in terms of Gereffyy et al (2003)

possibility of separating from their buyer(s). This option is of course impossible for standard hierarchies without a particular internal provider being sold off and torn from its hierarchical dependence. Normally the focus in this paradigm is on large companies. Nevertheless, it is possible for this type of relationship to exist within a network of SMEs if there is one dominant player calling most of the shots.

To a certain extent, relations between companies and suppliers in this approach lie somewhere between cottage production and the putting-out system. In the cottage production of the 16th century stages in a production process are performed by a variety of small producers and the sale of the final product is coordinated by a broker. The fact that cottage producers own the means of production enables them, much like modern suppliers today, to remain independent of a particular broker. Naturally, they have to have a broker. They can choose with whom they want to work and they are generally accustomed to working with a number of different brokers.

The fact that many suppliers today are tied to one particular large client generates a type of dependency which cottage producers did not have. In this sense suppliers today in such networks resemble suppliers in the putting-out system. The critical difference between these two different types of suppliers is that producers in the putting-out system did not own the means of production. Although suppliers in broker-coordinated networks do own their means of production, the extensive help that such suppliers often receive from larger firms, including assistance with research and development along with specialized training, creates a level of dependency that is similar to that which was characteristic of the putting-out system.

In essence, production activities in broker coordinated networks are dominated by large brokers. Although stages of production are divided among many small shops, large firms control the process of coordination. In essence, there are a few large brokers

and firms have to work for them. Most suppliers in such networks dedicate most, if not all their time, to working for one particular merchant. This is not contract manufacturing, however, because in that form of production one firm is responsible for the whole production process of “the broker”. Benneton is perhaps the best known example of a broker coordinated network because it retains control over its core competency, namely dying, while outsourcing many other activities to firms with which it works together with over time.

Although social relations may help provide the grease for the machine in broker-coordinated networks, scholars working on these types of networks do not view such relations as the key component to their operation. By contrast, many scholars in sociology focus almost exclusively on social relations paying little attention to formal structures. We term this approach Social-coordinated networks. Much of the focus in this approach is on the manner in which similarities and connections between parties ease their ability to cooperate.

The work of Saxenian (1996) is one example of this approach. She does not examine formal structures between individuals or between firms but rather the close nature of relations between individuals in different firms in Silicon Valley. Regretfully, the level of analysis is limited to connections between individuals in relatively low positions in these companies. She does not examine social relations between top executives at these firms either facilitates or hinders cooperation between firms. From her perspective firms in Route 128 around Boston faced difficulties largely because these social relations did not exist.

Powell and DiMaggio (1983) contend that people from the same social background are more likely to work effectively together. In short this view holds that firms tend to hire people who think alike and come from similar backgrounds.

Managers are often taken from the same universities and filtered by the same criteria. Common socialization in common organizational fields provide the ability of actors to “deal rationally with uncertainty and constraint” (147). People are likely to surround themselves with others who think like they do. Thus social networks provide people access to organizational fields which then provide the contacts necessary to conduct business. Clearly if two people think alike, they have fewer difficulties in cooperating.

Within the social-coordinated network approach the embeddedness argument developed by Granovetter (1985) emphasizes “the role of concrete personal relations and structures (or “networks”) of such relations in generating trust and discouraging malfeasance” (490). In addressing the potential danger of functionalism he points out that social relations may indeed be important for generating trust but their existence is not necessarily sufficient for dealing with problems of malfeasance. He highlights the problem that people do occasionally break trust. In his example of diamond traders he points out that even under circumstances in which contracts do not exist and relations are coordinated solely through social networks, sometimes murders occur to cover the tracks of broken trust.

The weakness of this approach is its failure to consider how formal institutions, or devised rules, created by actors seek to deal with the issues of trust and the possibility of malfeasance without relying totally on the powerful hand of hierarchical fiat or the invisible punishing hand of the market. In essence, this approach focuses on what North (1990) has termed informal institutions, or conventions and codes of behavior. The most important difference between Granovetter and North is that the latter focuses on formal and informal institutions in society while the former focuses on informal

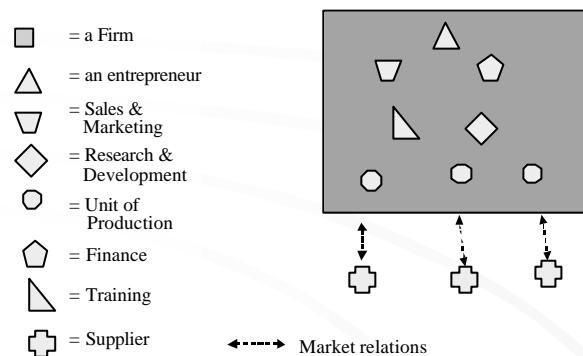
institutions in groups.¹⁰ What is missing is a focus on formal institutions created by groups. Governments are not the only institutions which can generate formal institutions and these institutions do not have to be at the national level. They can exist among a limited number of individuals within a given society. In the end, such formal institutions are an alternative to that which can occur through the *invisible hand of social relations*. In many cases pure social relations in an of themselves may not be sufficient to insure that coordination occurs between any two given parties that are neither within the same hierarchy nor coordinating their activities through the open market. Although clear, detailed contracts are clearly mechanisms for coordinating activities between two separate actors, they are not the only means for formalizing relations between such actors. Contracts are clearly of less importance for companies that wish to develop long-term relations with other companies. The mechanisms for formalizing such activities may indeed be quite different across different industries, countries, and institutional conditions.

Our third category is the **multi-broker coordinated networks** approach. It is different from the other approaches because it highlights the fact that in some networks there are more than one broker. Quite often these brokers work together to construct formal institutions to govern their cooperation with each other. Although at any given time one broker may actually coordinate most of the activities within the network, this should not lead to the unwarranted conclusion that the same broker always leads such activities. The critical difference between this type of network and a broker coordinated one is the fact that such rotation occurs and the fact that cooperation within the network is governed by rules set by all actors. It is distinctly possible that a given organization

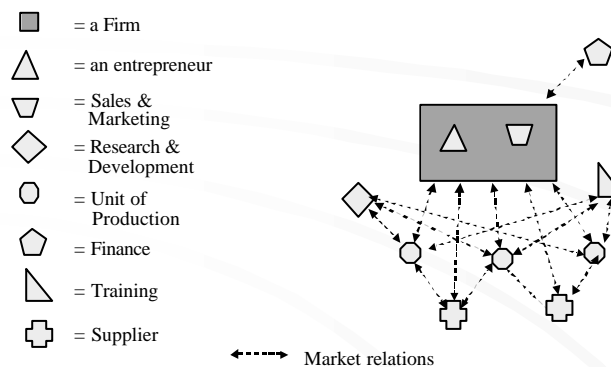
¹⁰ The separation between informal and formal institutions for North lies in the fact that the former are devised by some organization while the latter are perpetuated through cultures, or even potentially subcultures.

within a multi-broker network may coordinate a particular activity for all the members of a network. These brokers can sometimes be institutions that are not directly affiliated with a particular firm. For example, research and development can occur through one organization that works solely for a particular network. Technological change within the firms of a particular network can be coordinated by one particular broker for that particular function. The figures below illustrate the difference between coordination within a firm, coordination within broker coordinated networks and multi-broker coordinated networks.

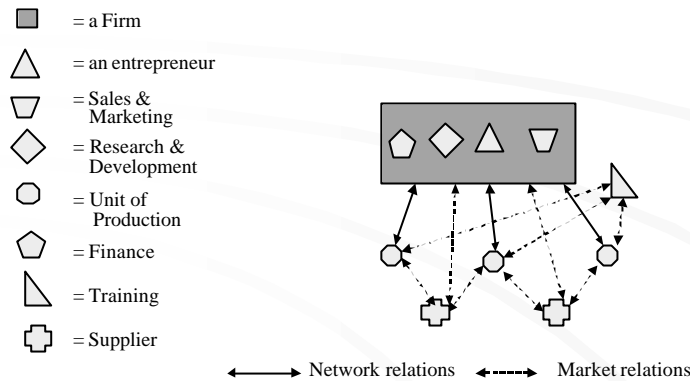
The Structure of a Typical Hierarchical Organization



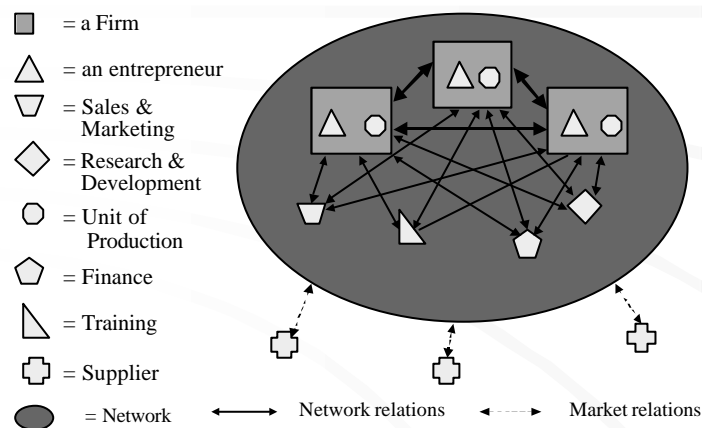
A Typical Structure for a Pre-industrial Merchant-based organization



A Typical Structure for a Broker coordinated Network



The Structure of a Typical Multi-broker Coordinated Network



The multi-broker coordinated networks approach builds on the work in flexible specialization but focuses specifically on how financially independent firms cooperate to coordinate their activities in a network. While the work of Piore and Sabel (1985) provides a detailed description of how the division of labor and economies of scale for the production of a particular product can be spread across a multitude of firms, they neglect to examine how coordination between actors in this process occurs. It appears

that coordination does not occur through concrete organizations with concrete rules but rather through social-coordinated networks or markets. In the end they are not explicit about how coordination occurs or how conflicts are resolved. One could be lead to believe that social relations are sufficient to coordinate activities and resolve problems. We are skeptical that this is possible in such networks. We should remember that issues of coordination, planning and conflict resolution are center stage in the study of business administration. Regretfully, little attention is paid to the competencies firms need to operate in such networks. They are clearly different from that which management literature normally addresses. Although the field of supply-chain management has drawn attention to the need for coordination between large companies and their suppliers¹¹, this issue is not addressed for smaller firms operating in networks.

The distinguishing feature of multi-broker coordinated networks is the manner in which key functions that key functions are coordinated between a limited set of actors who choose to work together in closed groups that have their own rules and requirements for membership. Outsiders can not partake of this coordination.¹² The same can be said for broker coordinated networks. The broker decides with whom it will share information. It is important to emphasize in this context that the broker decides who will share in information. The suppliers have no real power in this area. In multi-broker networks all firms in a network share these resources and it is the decision of the members of the network what they will actually share.

Many multi-broker networks firms share purchasing operations. Many times networks emerge out of such agreements. Suppliers negotiate with the network rather than with an individual firm. In this manner they can deal with uncertainty and frequency. Polo Grafico, a multi-broker network of printing companies in Buenos

¹¹ "Partnerships" in terms of Lambert, D. (2004).

Aires, Argentina started with this function. Then, they began marketing and selling their products abroad. Lately, the companies within this network have started to specialize in certain forms of production. Nevertheless, they remain competitors in the domestic market. Although social relations between these firms clearly provides a mechanism for organizing their activities, this multi-broker network does not rely solely on this mechanism for coordinating their activities. On the contrary, they have formal monthly meetings to discuss how to jointly administer their affairs.¹³

Multi-brokered coordinated networks closely resemble cooperatives they share activities among a group of firms. However, there is one critical difference. Members of a cooperative are required to buy raw materials from it and sell their products to it with the profits being divided amongst the members of the cooperative. In stark, contrast multi-broker networks do not require their members to do anything nor do they share profits. Each company remains a juridically separate company. Polo Grafico, for example, does not require its members to either buy raw materials through the network or to participate in joint arrangements to sell their products abroad. Although many companies do chose to participate in efforts to export with this network, it is important to point out that they actually remain competitors domestically.

Nevertheless, some of the benefits of multi-broker networks are similar to the benefits found in cooperatives. In both of these organizational forms companies can benefit from sharing functions that otherwise would be prohibitively expensive either to do in-house or to buy on the free market, in this manner overcoming the problems associated with high asset specificity. Paradoxically, both cooperatives and multi-broker networks can share the advantages of economies of scope usually only thought to

¹² We would like to thank the participants of our internal seminar at the Universidad de San Andrés for helping us to realize this important attribute of such networks.

exist in multi-divisional firms. Pedro Escudero, a subsecretary for industry in the Ministry of Production in the Province of Buenos Aires in Argentina, contends that multi-broker networks, or what they call simply industrial districts, provide SMEs the types of advantages that are usually only available to large multi-divisional companies.¹⁴ In many ways the type of coordination that occurs within networks resembles the type of coordination that occurs within the head office of a multi-divisional firm. The only critical difference that seems to exist between these two types of organization is the issue of property. One important issue which has to be left to investigation is the degree to which firms within a network are actually able to compel or convince each other to do things. Clearly, one advantage of a hierarchy is the power of fiat. Nevertheless even within multi-divisional firms fiat is always tempered by social relations and the desire to have a workforce that does not resent management.

The fact that the study of the organizational structures underlying the connections between firms in multi-broker networks has not been studied up until this point, could lead to the unwarranted conclusion that transactions between firms within such networks are largely governed by some combination of market forces and social relations. Porter (1990) highlighted the importance of the “clustering” of firms in certain regions without probing the extent and degree of connections between them. Instead he contends that groups of firms located in the same region tend to perform better overall because of the competition that emerges between them. The possibility that firms within a particular region would chose to cooperate is simply overlooked in his analysis. In essence by using the term multi-broker coordinated networks instead of cluster we are placing emphasis on the manner in which activities across companies

¹³ Based on an interview conducted with Roberto Candiano, Executive Director of the Guttenburg Foundation in Buenos Aires. This foundation formed Polo Grafico. The interview was conducted on December 20, 2004.

¹⁴ Based on an interview conducted by Daniel Friel with Pedro Escudero on September 30, 2005.

within the same region are coordinating their activities without sharing a common hierarchy. The mere fact that a group of firms located in the same region should not lead scholars to automatically assume that they will cooperate. Saxenian (1996) contends that industrial companies located along route 128 in Boston perform relatively poorly because they do not cooperate. Mere proximity does not naturally lead to cooperation between firms. At the same time, the coordination which occurs between firms in a broker coordinated network and in a Multi-Broker Coordinated Network does not have to occur within the same region. Many large companies, for example, have networks that span the world.

Multi-broker networks are beginning to gain strength in Argentina. The Ministry of Production for the Province of Buenos Aires organized a workshop on development of industrial district within this province. In this workshop they describe the operation of nine industrial districts. Four of these districts are in the textile industry, one in the furniture business, one in the footwear business, one in woolen products and one in the production of agricultural machinery. The ministry is currently helping 16 other groups of producers to form similar districts. In this context it is important to point out that this ministry defines an industry district much along the lines of what we have termed multi-broker networks. This ministry defines an industrial district as “regional systems of production constituted by groups of highly specialized companies that have a certain geographic proximity, similar or complementary production problems and that associate with each other to achieve competitive advantages”.¹⁵ One of the most developed industrial districts within the province of Buenos Aires, namely the furniture district, is actually coordinating the production of

¹⁵ This sentence was translated by Daniel Friel, one of the authors of this article. The original sentence in spanish was: “son sistemas productivos regionales, constituidos por agrupaciones de empresas altamente especializadas, que tienen cierta proximidad geográfica, problemáticas productivas similares o complementarias y que se asocian para lograr ventajas competitivas.”

one product across different companies within the industrial district, thereby enabling the firms in this district to realize economies of scale and helping them overcome problems associated with asset specificity. Paolo Rossi, one of the Italian experts who has helped firms in Buenos Aires form these districts claims that one of the main goals of such districts is to enable firms to manufacture products cooperatively in this manner.¹⁶

Conclusion

The demise of the organizational dinosaur has led to the emergence of new organizational forms. These new organizations have emerged as a result of climate change, namely the increasing importance of heterogeneous goods and declining product lifecycles. While leaner and meaner monsters still dominate many industries in Europe and the United States, it does not necessarily follow that companies in emerging markets like Argentina have to seek to grow internally at a time when their international competitors are actually shrinking and relying increasingly on broker coordinated networks. The lack of developed capital markets and access to capital at reasonable rates in countries like Argentina would seem to provide a substantial hindrance to consolidation through mergers and acquisitions. At the same time, one of the major problems facing such countries is the inherent difficulty of conducting market operations in an environment with high uncertainty and low enforcement. The transaction costs of using the market in this context are simply too high.

By joining together in multi-broker networks firms have the possibility to share resources and economies of scope, and potentially economies of scale, without having to go it alone through the creation of their own “hierarchy”. Hence, such networks may

¹⁶ Paolo Rossi made these comments at the first annual conference on industrial districts organized by the Ministry of Production in the Province of Buenos Aires. This event took place on December 2, 2004. Jornada Anual de Distritos Industriales Cancilleria Argentina Esmeralda 1212 Sector C, entrada Esmeralda

actually offer a viable alternative for growth in such countries. This type of network can enable firms to reduce transaction costs without incurring the usual costs associated with the internalization of activities into a firm's own hierarchy. Paradoxically, such multi-broker coordinated networks are closer ancestors to the traditional conglomerate of old in the sense that they are less likely to rely on the open market for stages of their production process than their larger relatives of today.

Khanna and Palepu (1997) have argued that business groups in emerging markets have distinct advantages over smaller firms largely because the lack of institutions to process reliable information, train workers, enforce contracts in such countries. Yet, such business groups will not necessarily dominate emerging markets like the dinosaurs of old. Multi-broker coordinated networks are an alternative as they can perform the same activities usually only afforded by business groups in emerging markets albeit within the confines of a network rather than within the walls of the same juridical entity.

Future research in this area should focus on how coordination within multi-broker coordinated networks actually occurs. The fact that research in this area seems to have been largely neglected should not lead us to the unwarranted conclusion that such coordination does not occur or that such coordination merely occurs through what we have termed social-coordinated networks. Discovering viable alternatives for development may actually depend on such research.

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